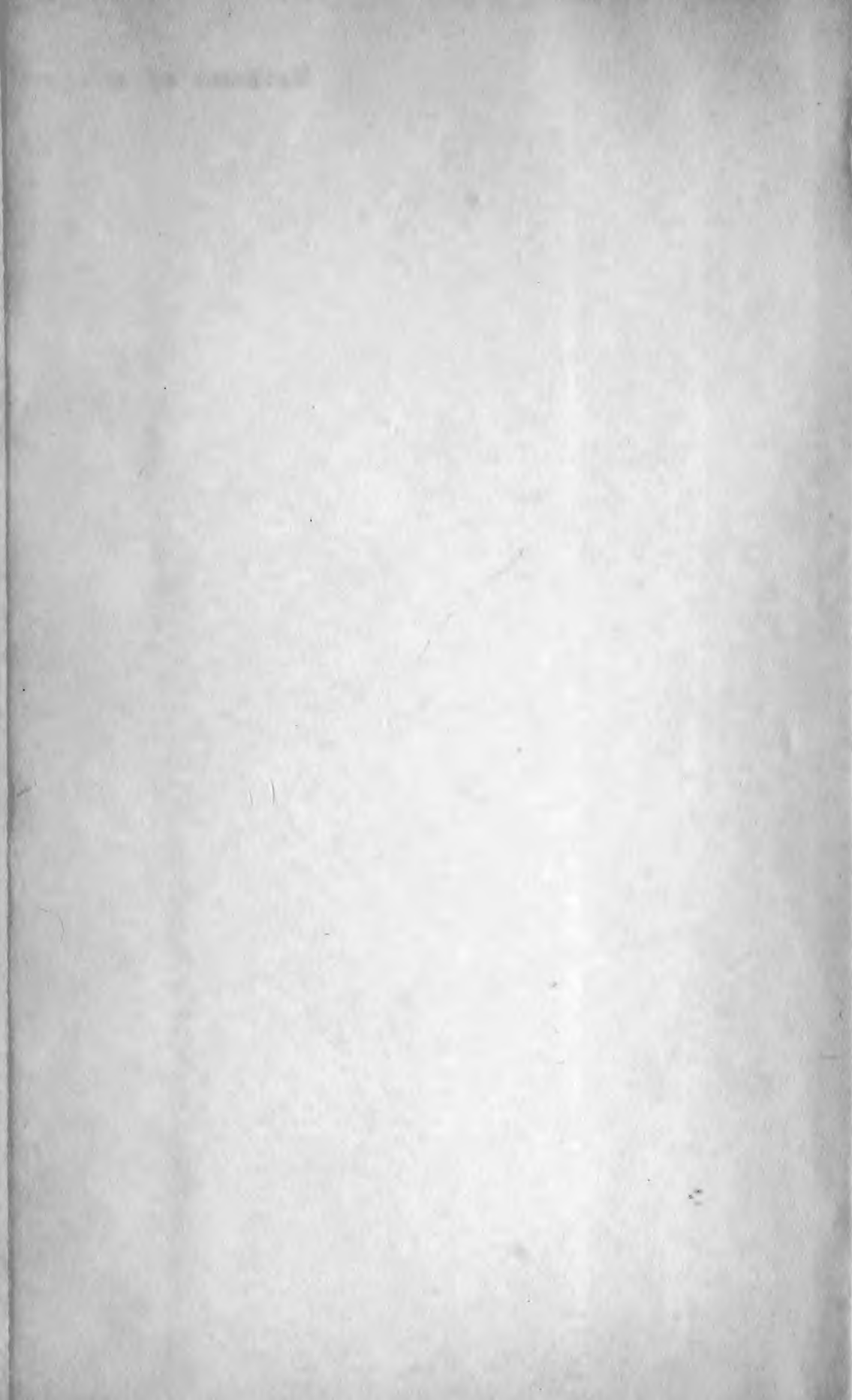
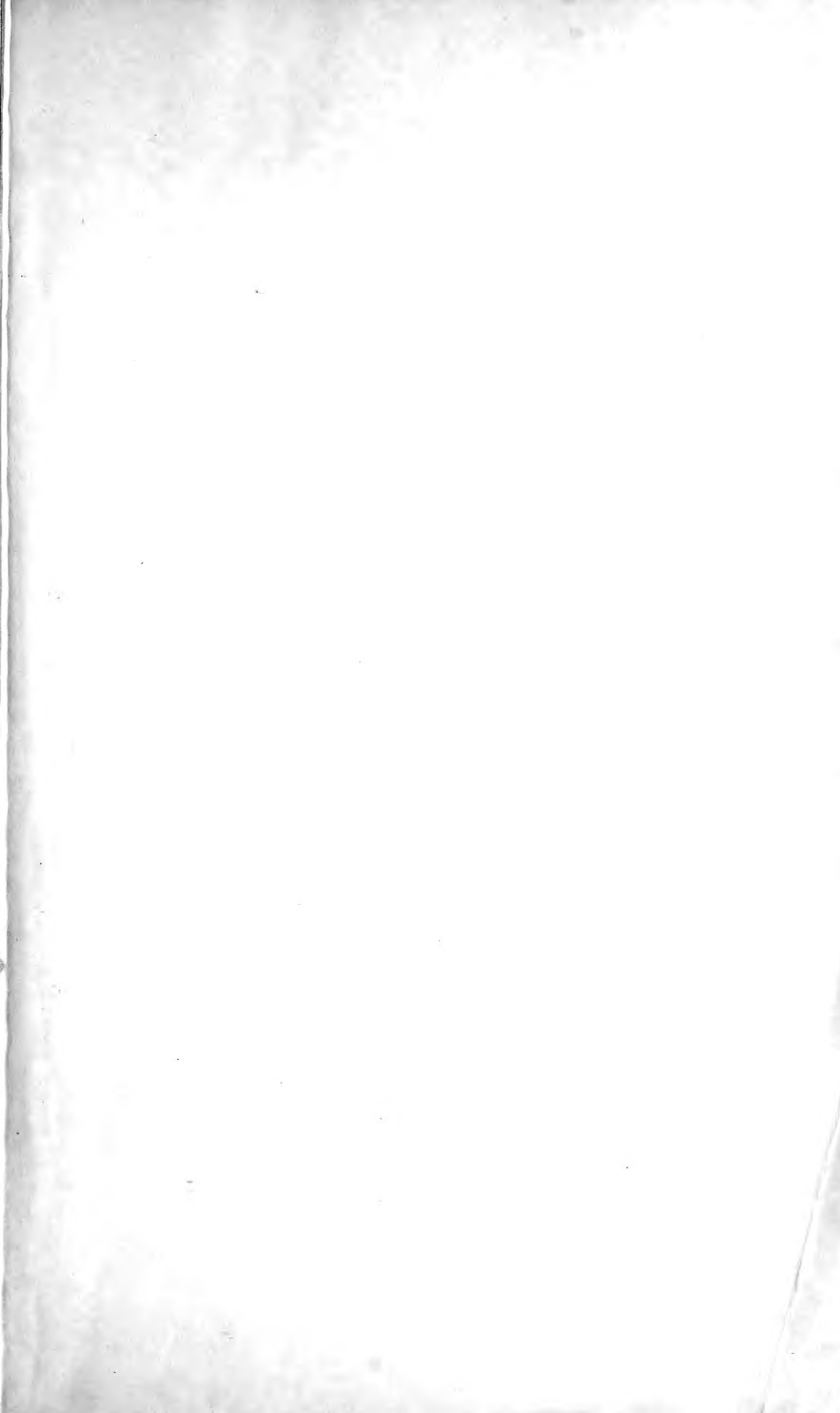


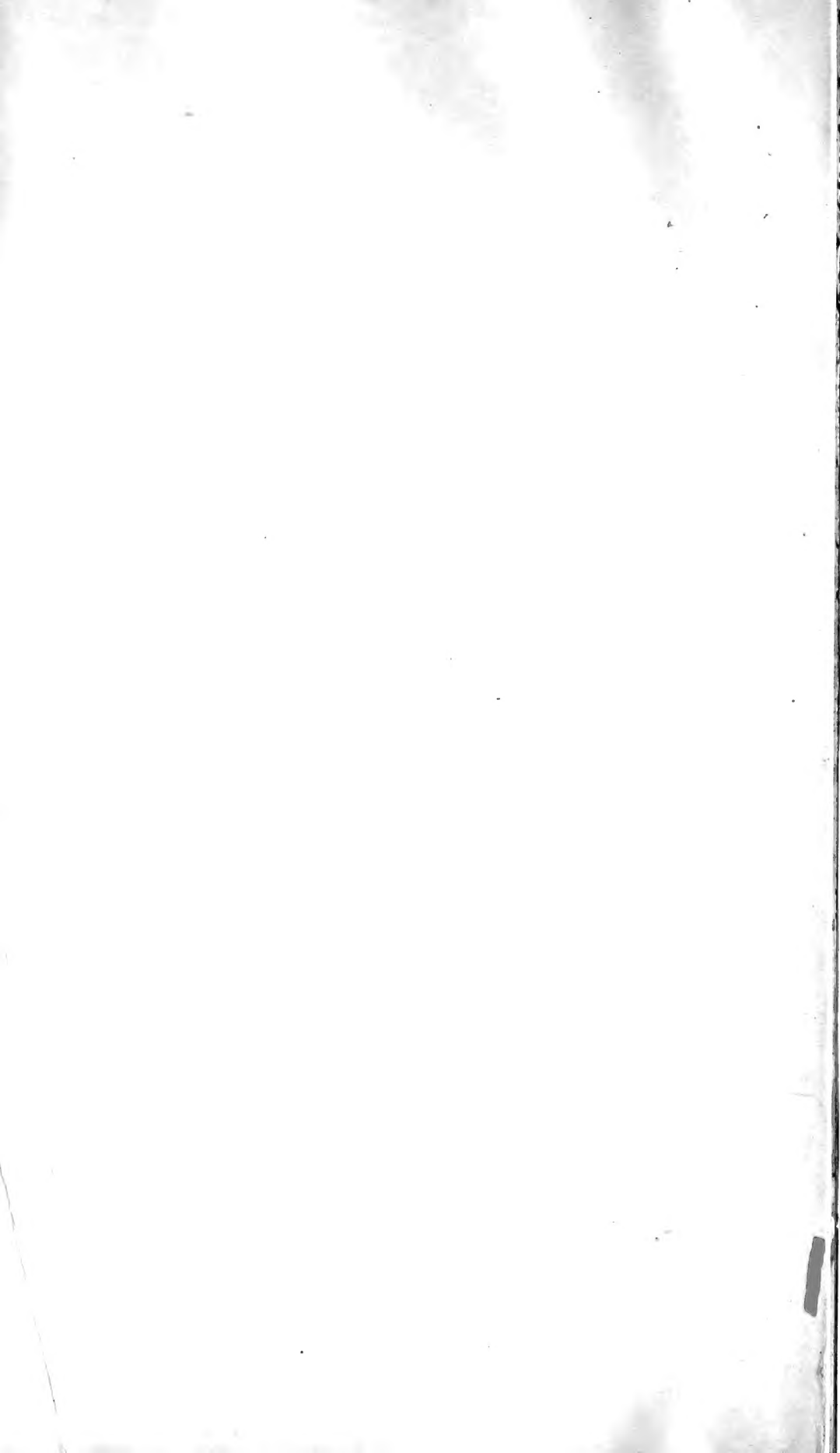


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Birds

THE

BIRDS

This book was published in parts.

Part I, May, 1875. Contains Birds of prey "nearly to" end of Owls. pp. 1-80.

Part II Oct. 1875. Carried nearly to the end of the Cuckoos. pp. 81-160. 2 plates.
See this, 1876, 272.

Part III, Aug. 1876. pp. - 236 at least
pp. 161 -

Part IV, March, 1877. *April*
See Zool. Record, Saricola shelleys,
S. anderssoni, Drymœca
hypoxantha, and Acrocephalus
fulvo-lateralis are described
as new? pp. - 336.

Part V, April, 1882. carried into but not through
the Alaudidae. Laniarius
blewfordi + L. ussheri are
the only new species. pp. 337-528. *2 pl.
Part VI, April, 1884, finishes the work. pp. 529 -
p. 526 as in this part

*Reviewed in
Zoolist for July, 1882.*



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THE
BIRDS

OF

SOUTH AFRICA,

BY

EDGAR LEOPOLD LAYARD,

C.M.G., F.Z.S., M.B.O.U.,

H.B.M. Consul at Noumea, New Caledonia.

NEW EDITION.

Thoroughly revised and augmented

BY

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§ Birds

TO
EDGAR LEOPOLD LAYARD,
WHO,
IN CEYLON, IN BRAZIL,
IN SOUTH AFRICA,
IN FIJI, AND IN NEW CALEDONIA,
HAS EVER PROVED HIMSELF
AN ENERGETIC AND CAPABLE
ORNITHOLOGIST,
THIS SECOND EDITION
OF HIS
"BIRDS OF SOUTH AFRICA,"
Is Dedicated by
THE EDITOR.

PREFACE.

THE few prefatory remarks which I have to make will be simply in the form of an apology to everyone whom this work concerns, on account of the unfortunate delay which has attended its production. To Mr. Layard himself I make my apologies for having been so long in bringing a second edition of his most useful book before the public. To my publisher, Mr. Quaritch, I am grateful when I find that his patience has not been entirely exhausted, and that he has not before this closed the publication of the book, in despair of its ever being completed. And lastly to the subscribers, who have not entirely lost faith in me, and who have been most patient and uncomplaining during the nine years which have elapsed since I issued my first part. I can only say in excuse that the great pressure of my work at the British Museum has left me little leisure for private enterprise, and has occupied the bulk of the time at my own disposal.

I am fully aware, from the reviews which have appeared in various ornithological periodicals, that the plan of the work, as altered by me, has not met with the unqualified approval of my brother ornithologists, and many field-collectors will doubtless miss the descriptions of the families and genera of birds which were furnished by Mr. Layard in the first edition. It was, however, impossible on the extended basis which I proposed to myself for the second edition, if it was to be published at a price within reach of field-collectors, to include these descriptions of families, &c., and it will be seen that the book has already reached a somewhat unwieldy size.

By treating of the avifauna of South Africa according to what I consider to be its natural limits, the area known as the South African Sub-region extends to the Zambesi River on the east coast, and to the Quanza River on the west, and this has resulted in a large increase in the number of birds to be described. I have, therefore, endeavoured to make the geographical distribution of South African birds a feature of the present edition, and in some instances, such as in the Woodpeckers, Grass-Warblers, Wheatears, and Larks, a complete revision of the families has been attempted and new descriptions supplied. In most cases, however, I have retained the original descriptions given by Mr. Layard, inasmuch as they were compiled by a first-rate field-ornithologist for the benefit of field-ornithologists, and because they had proved eminently successful in the first edition.

I have to thank all the kind friends who have assisted me in the production of the present volume, and I must mention more particularly the names of Captain Shelley, Mr. J. H. Gurney, Mr. J. E. Harting, Mr. Howard Saunders and Canon Tristram, who by the loan of specimens, or by actual assistance in the revision of certain groups of birds of which they possess special knowledge, have considerably lightened the labour of preparing the second edition of the "Birds of South Africa."

R. BOWDLER SHARPE.

March 24, 1884.

INTRODUCTION.

ALTHOUGH several species of birds from South Africa were known to the early writers, and are to be found figured and described in the pages of Brisson, and Linnæus, Sparrmann, Gmelin, and Latham, it was not until the beginning of the present century, when Levaillant published his "Oiseaux d'Afrique," that any connected history of the ornithology of Africa was attempted. Levaillant resided principally in the southern portion of the Cape Colony, and many of his accounts of the habits of the birds are exceedingly good, and evidently taken from personal observation, but it is greatly to be regretted that his work contains a large number of species introduced into the book as African which are in reality inhabitants of totally different countries; in fact, on many occasions he admits the circumstance. The late M. Jules Verreaux, who knew Levaillant personally, told us that it was quite by accident that these extraneous species were introduced into his work, that his intentions were perfectly honest, but that many of his specimens were lost, and were not at his disposal when he wrote his book in Europe. He consequently figured many species in his book which he fancied that he had seen in Southern Africa, and that he had no deliberate intention to deceive. In the case of several species which were made up of two or three different kinds of birds, Verreaux stoutly held that Levaillant was himself deceived, and that he really believed the specimens placed in his hand to be individuals of some species which he remembered to have seen in South

Africa. The late Professor Sundevall has published an elaborate review of Levaillant's six volumes, which enables the ornithologist so to study the work that all the species, whether truly South African or not, can be easily made out. We have found little to dissent from in Professor Sundevall's admirable treatise.

A work of a much more genuine character was commenced when Sir Andrew Smith began to investigate the Zoology of South Africa. In the *South African Quarterly Journal* from 1829 to 1834, we find a descriptive account of the birds of South Africa, which, however, never seems to have proceeded beyond the Birds of Prey ; and in the same journal, there are several scattered descriptions of other kinds of birds.

In 1836, a separate Report of the expedition into Central Africa was published by Sir Andrew Smith, and this was in every respect a most important contribution to the avifauna of the South African region. It was followed by his great work, the "Illustrations of the Zoology of South Africa," in which no less than 114 plates of birds were published. These were drawn by the late Mr. Ford, and although this admirable artist was by far the best draughtsman of reptiles and fishes that science has ever known, his efforts with regard to the birds were not so successful, and considerable confusion, especially in the case of the smaller Warblers and Larks, has followed from the difficulty of identifying Mr. Ford's plates.

Excepting descriptions of various South African birds in the works of Burchell, Temminck, Swainson, Gray, Bonaparte, and others, nothing of any importance appears to have been published until Sundevall's account of Wahlberg's collections made its appearance in the Stockholm *Æfversigt* for 1850. Wahlberg penetrated into the Transvaal, at that time included under the general heading of "Caffraria." He procured many interesting species, both from Natal and the Transvaal State ; and he afterwards visited Damara

Land, where he was unfortunately killed by an elephant. A short paper of his with descriptions of new species was published in 1855, up to which time we had known nothing of the avifauna of that part of South-western Africa, beyond the scanty descriptions of species given by Mr. G. R. Waterhouse in the Appendix to Sir J. Alexander's Expedition, and a short paper by Messrs. Strickland and Selater, published in the "Contributions to Ornithology" for 1852. Then followed a more elaborate essay by Grill on the birds collected by Victorin at the Knysna and in the Karroo country; this was issued in 1858. About this date, moreover, several excellent ornithologists were hard at work in the South African region. Mr. Layard was collecting materials for a history of the Birds of South Africa, Mr. Andersson was working well in Damara Land and Namaqua Land, Mr. Ayres had commenced his useful labours in Natal, while Mr. Monteiro had already begun his career as a naturalist in Angola. Mr. Layard's energy soon met with an adequate response from naturalists both in Europe and at the Cape, and the publication of his "Birds of South Africa," in the year 1867, will mark for ever an epoch in the natural history of the continent; and from this book commences the great progress which has lately been made in our knowledge of South African ornithology. In deference to the intentions of his friend, the late Mr. C. J. Andersson, who intended to publish a work on the birds of South-western Africa, Mr. Layard confined his researches to the species occurring south of the twenty-eighth parallel of south latitude, although he was fully aware that this was but an artificial boundary, and not a natural one. Mr. Andersson did not survive to carry out his proposed work, but this was undertaken by Mr. J. H. Gurney, who, in 1872, produced an excellent edition of Mr. Andersson's "Birds of Damara Land," which has been of great assistance to us in the preparation of the present work. Mr. Gurney has also published from time to time a considerable number of papers on the ornithology of Natal

and the Transvaal, founded upon the collections made by that excellent collector, Mr. Thomas Ayres. It is difficult to put too high an estimate upon the field work which the last-named naturalist has done during the last five-and-twenty years. On changing his residence to the Transvaal, he continued his natural history labours in that State, and has published many interesting essays on its ornithology. It is indeed to be hoped that either Mr. Gurney or Mr. Ayres himself will gather together these scattered memoirs, and give them to us ere long in a connected form. The corrections in nomenclature have been somewhat numerous, and we fear that some of them have escaped our eyes, scattered as they are through many volumes of the *Ibis*.

Our knowledge of the ornithology of Natal has also been increased by Captain Shelley in his paper in the *Ibis* for 1875, and excellent lists of the birds met with by Mr. T. E. Buckley during his journey to the Matabele country in 1873, as well as by Mr. Barratt on his excursions between Bloemfontein and the Lydenburg Gold-fields have been given in the pages of the *Ibis*. A very important work was achieved by the late Mr. Frank Oates on his journey to the Zambesi, and a full list of his collection was given by ourselves as an Appendix to his posthumous work, "Matabele Land and the Victoria Falls," edited by his brother, Mr. C. G. Oates. In the pages of the latter work frequent mention is made of the name of Dr. F. Bradshaw, a zealous collector, who resided for some years in the Makalaka country and the Zambesi region, but whose large collections were unfortunately dispersed before any connected account had been taken of them. Some few specimens were secured by the South African Museum; others passed into our charge at the British Museum; whilst a large number are in the collection of Captain Shelley.

Dr. Bradshaw has for some time held an appointment as Surgeon to the Northern Border Police, and he has favoured us with a list

of the birds observed by him on the Orange River, which we have had great pleasure in including in our "Appendix." In 1882 three very important memoirs on South Africa appeared. One of these, by Captain Shelley, contains an account of the birds collected by Mr. Jameson, in his expedition to Mashoona Land, with excellent field-notes by that veteran naturalist Mr. T. Ayres. A second paper by Majors Butler, Feilden, and Captain Reid, published in the *Zoologist*, gives an account of their ornithological collections made in the upper districts of Natal; while Dr. Holub and Herr von Pelzeln published, under the title of "Beiträge zur Ornithologie Süd-Afrikas," a very elaborate work of 385 pages, profusely illustrated with plates and woodcuts, principally of the nests and osteology of South African birds.

We must not omit to mention the excellent paper by Sir John Kirk on the birds of the Zambesi region, published in the *Ibis* for 1864; while a vast amount of useful information will be found in the "Vögel Ost-Afrikas," written by Drs. Finsch and Hartlaub, in 1870. In this work are enumerated all the species collected by Dr. Peters during his expedition to Eastern Africa, the descriptions of which are spread over several years of the "Journal für Ornithologie."

Besides the elaborate work of Mr. C. J. Andersson on the birds of Damara Land, the late Mr. Monteiro made important collections in Benguela and Angola. His work as a pioneer has been, however, largely supplemented by the vigorous efforts of Senor Anchieta, a Portuguese naturalist, who has travelled extensively for the Lisbon Museum in the provinces of Mossamedes and Benguela, and who penetrated to the Cunene River, a locality reached by Mr. Andersson shortly before his death. More than twenty elaborate papers by Professor Barboza du Bocage have been published on the collections which Senor Anchieta sent to Europe, and recently a large work on the ornithology of Angola

has been published by Professor Bocage, wherein will be found a full account of Senor Anchieta's labours. We cannot too warmly express our thanks to our excellent friend above mentioned, who has sent us over from Lisbon many rare species to aid us in the preparation of the present work.

Finally, we have deemed it of some advantage to future students of South African ornithology to give a list of the principal papers published in the *Ibis* which relate, more or less, to the subject of the present book; and we only regret that space has not allowed us to give more than the present slight sketch of the labours of our predecessors in the field of South African ornithology.

R. BOWDLER SHARPE.

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SOUTH AFRICAN BIRDS
PUBLISHED IN THE "IBIS."

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- On some additional Species of Birds received in Collections from Natal.—*Ibis*, 1861, pp. 128-136.
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- LAYARD, E. L. Further Notes on South African Ornithology.—*Ibis*, 1869, pp. 361-378.
- TRISTRAM, H. B. Notes on some African Birds.—*Ibis*, 1869, pp. 443-438.
- SHARPE, R. B. On the Oriolidæ of the Ethiopian Region.—*Ibis*, 1870, pp. 213-229, pls. 7, 8.
- AYRES, THOMAS. Additional Notes on the Birds of the Territory of the Transvaal Republic.—*Ibis*, 1871, pp. 147-157, 253-270, pl. 9.
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- MURIE, J. On the genus *Colius*; its Structure and Systematic Position.—*Ibis*, 1872, pp. 262-280, pl. 10.
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- BUCKLEY, T. E. List of Birds collected or observed during a Journey to the Matabili Country in 1873.—*Ibis*, 1874, pp. 355-391.
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265, 349-368, pl. 7.
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from Natal.—*Zoologist*, 1882, pp. 165-171, 204-212, 243-258, 297-
303, 335-345, 423-429, 460.
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in Natal.—*Ibis*, 1883, pp. 331-337.
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foregoing paper.—*Ibis*, 1883, pp. 337-345.

SYSTEMATIC LIST

OF THE

BIRDS OF SOUTH AFRICA.

Sub-Class Carinatae.			PAGE
Order ACCIPITRES.			
Sub-order FALCONES.			
Fam. Vulturidæ.			
			PAGE
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11.	<i>Circus pygargus</i> (L.) . . .	12,	795
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13.	„ <i>ranivorus</i> (Daud.) . . .	14,	795
14.	„ <i>ærginosus</i> (L.) . . .	16	
15.	<i>Melierax canorus</i> (Risl.) . . .	17,	795
16.	„ <i>polyzonus</i> (Rüpp.) . . .	18,	795
17.	„ <i>gabari</i> (Daud.) . . .	19,	795
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57.	„ <i>ruficollis</i> , Swains. . . .	60,	800
58.	<i>Cerchneis tinnunculus</i> (L.) . . .	60,	800
59.	„ <i>rupicola</i> (Daud.) . . .	62,	800
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61.	„ <i>tinnunculoides</i> (Temm.) . . .	64,	800
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ERRATA.

Page	89, line 19, for	"Pumbamba" read "Lumbamba."
.. 291,	" 35, "	"specimen" read "species."
.. 351,	" 11, "	"(Ball)" read "(Pall)."
.. 565,	" 30, "	"Rufus-headed" read "Rufous-headed."
.. 566,	" 9, "	"Turtas" read "Turtur."
.. 587,	" 8, "	"Pernistes" read "Pternistes."
.. 606,	" 27, "	"adamsoni" read "adausoni."
.. 615,	" 2, "	"Fam. Charadriidæ" read "Fam. (Edicnemidæ)."
.. 705,	" 1, "	"Anovs" read "Anous."
.. 789,	" 3, "	"demarsus" read "demersus."
.. 793,	" 14, "	"Fielden" read "Feilden."

LIST OF PLATES.

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|--|---|
| I. <i>Baza verreauxi</i> . | VII. <i>Nectarinia talatala</i> . |
| II. <i>Falco biarmicus</i> . | VIII. <i>Drymœca flavicans</i> . |
| III. <i>Carine capensis</i> . | IX, fig. 1. <i>Hirundo semirufa</i> . |
| IV, fig. 1. <i>Merops bullockoides</i> . | " " 2. " <i>atrocærulea</i> . |
| " " 2. " <i>nubicoides</i> . | X, fig. 1. <i>Batis molitor</i> . |
| V, fig. 1. <i>Centhochares australis</i> . | " " 2 and 3. <i>Batis pirit</i> . |
| " " 2. " <i>aereus</i> . | XI. <i>Laniarius quadricolor</i> . |
| VI. <i>Chatops aurantius</i> . | XII. <i>Podica petersi</i> . |

BIRDS OF SOUTH AFRICA.

ORDER ACCIPITRES.

SUB-ORDER FALCONES.

Fam. VULTURIDÆ.

1. GYPS KOLBII. South African Griffon Vulture.

Gyps fulvus, Layard, B. S. Afr. p. 6 (1867).

This Vulture is now recognized as distinct from the ordinary Griffon of Europe, and when seen alive by the side of that bird is at once recognisable by its general paler coloration when adult, and uniform under surface. Although pretty generally distributed through the colony, it appears to become rarer towards Damara Land, as Mr. Andersson writes that it is only sparingly found there. "I have only observed it," he says, "in the vicinity of the sea, above Oosop rocks, on the lower course of the Swakop River." Farther north on the west coast it is not known to occur, as Señor Anchieta, who is travelling from the northward into Damara Land, has not yet succeeded in finding it. On the eastern coast, however, it is much more common. Mr. Rickard notices it from Port Elizabeth and East London, and it is plentiful in Natal according to Mr. Ayres. The latter gentleman found it very numerous during his journey from Potchefstroom to the Limpopo River, and it is doubtless this species which was met with in the Zambesi delta during November and December, by Dr. Kirk (cf. *Ibis*, 1864, p. 314). During his journey through the Matabili country Mr. T. E. Buckley says it was not a very common species.

The present bird is one of the typical South African species, being, as far as we know its range, confined to the limits adopted for the present work. Its nearest ally is *G. himalayensis* of Hume from the

Himalayas and Turkestan. Beyond the next species to be considered, it is probably the only Griffon Vulture found in South Africa, for it is unlikely that the specimen of the true *Gyps fulvus* in the British Museum, which was purchased from Leadbeater, did really come from the Cape of Good Hope, as it was said to have done.

The Griffon Vulture is found throughout the Colony and Natal, and still lingers even in the neighbourhood of Cape Town. They breed in the most inaccessible precipices, depositing a few sticks in some hollow of the rock, on which they lay one egg, which is of a dirty white, more or less blotched and speckled with very light brown, particularly at the obtuse end. Axis, 3'' 9'''; diam. 2'' 10'''; weight 9.03. It is usually laid in June.

Mr. Henry Buckley, who has kindly furnished much interesting matter to this work, writes as follows:—"My eggs were taken at Nel's Poort, June, 1868. They vary from 3.72 × 2.75 to 3.62 × 2.58. They are white in colour, with faint brown spots and streaks, which however may be only nest stains."

At Nel's Poort* is a breeding place of these birds. It is situated half way up a vast inaccessible precipice, and is their constant resort at all times of the year. It is frequented by great numbers of birds, and their dung whitens the cliff to such an extent, that the spot is visible many miles off. They have bred in this place from time immemorial, and from it they range over the surrounding country. On killing a springbuck or any animal, it is curious to see how they come trooping in a lengthened string from this place to their anticipated banquet. Though not one may be visible when the shot is fired, in seven or eight minutes hundreds will be gliding to the spot.

The *Chumie Banner* has the following:—"We are informed by Mr. M'Alister of the Bontebok Flats, that a little while ago he was surprised by 'Aasvogels' making an attack on his flock of sheep. Two persons were on the spot trying to stop these avaricious birds, but in vain. It was not until Mr. M'Alister arrived that they were made to leave their prey, after killing and devouring two full-grown sheep. They even attacked two herds with daring courage, caring for nothing." The editor has also been informed of an attack made by Vultures on a flock of sheep near Colesberg, and that it really was a Griffon, and no Eagle which was the robber. Specimens are

* For an account of a successful raid on the Vultures "Krantz" in the Nel's Poort Mountains, see *Ibis*, 1869, p. 68.

promised for the national collection, so that the species will doubtless soon be identified.

General colour fulvous; head and neck covered with short dirty whitish hairs; lower part of cervix bare and bluish; lower part of throat and middle of breast covered with short grey-brown feathers: whitish down on the rest of throat, sides of neck and upper part of cervix; a ruff of short white feathers on the back and lower part of neck; wing and tail feathers very dark-brown. Length, 3' 9"; wing, 2' 4"; tail, 12".

Fig. Sharpe, Cat. B. pl. 1.

2. GYPS RUEPELLI.

Rüppell's Griffon Vulture.

Gyps vulgaris, Layard, B. S. Afr. p. 7 (1867).

Mr. Jules Verreaux informs us that this Vulture is only found accidentally to the south of the Orange River, its head-quarters being to the northward. It is, however, undoubtedly a rare species in Southern Africa. The Norwich Museum contains a specimen from this locality, besides the example procured by Mr. Ayres in Natal. The late Mr. Andersson collected a single one shot at Ondonga, and these notices seem to include all the occurrences of Rüppell's Griffon Vulture within the region of which this work treats.

The following description is from the British Museum 'Catalogue.'

Nearly adult. Down on head golden yellow; ruff yellowish white; interscapular and scapular feathers dark brown, with a conspicuous crescentic edging of fulvous white; wing-coverts creamy white, the brown bases showing plainly on the median and greater series, the latter conspicuously tipped with creamy white, as also are the inner secondaries; quills black, primaries washed with chocolate-brown; lower back and rump dark brown, narrowly edged with creamy white, the upper tail-coverts more broadly; tail black, slightly shaded with chocolate-brown; crop-patch deep chocolate-brown; under surface dull creamy buff, some of the flank-feathers showing the brown bases; under wing-coverts dark brown, with cream-coloured tips; bill black; cere black; feet black; iris nearly black.* Total length about 40 inches, culmen 3·8, wing 25·5, tail 11, tarsus about 4·7, middle toe 5·3.

Fig. Cretzschm. in Rüppell's Atlas, taf. 32.

* The iris varies much in colour, perhaps according to age. Cf. Gurney, *Ibis*, 1860, p. 207.

3. *OTOGYPS AURICULARIS*.

Eared Vulture.

The Black Vulture is generally distributed, but is not seen in such large flocks as the Griffon, from which it keeps aloof, sailing round in enormous circles, at a great altitude. It usually hunts in pairs, and seems to have dominion over the common species.

Le Vaillant states that the eggs are white; but those which we have obtained from the Frenchhoek mountains, about 50 miles from Cape Town, are of a dirty white ground, profusely blotched and speckled with deep red-brown (dried-blood colour), especially at the obtuse end, where the blotches become confluent. Axis, 3" 9"; diam., 2" 9", weight 9 oz. Another specimen is nearly spotless, and throughout of a dirty white. In the Zwartberg mountains this species builds on dense, flat-topped bushes, forming a vast accumulation of sticks, so closely matted together that a single nest will hold and sustain the weight of several men. This is resorted to for several years, until the lice and insects generated in the mass become unbearable to the parent birds. I have never heard of more than one egg in a nest. It lays in June. Mr. Atmore says the young remain in the nest nearly a year.

Mr. Andersson states that it is the 'commonest species of Vulture in Damara and Great Namaqua Land, and is also found in all the parts bordering those countries.' Mr. Ayres likewise records it as inhabiting Natal, where however it is more wary and difficult to procure than the Griffon. He has also found it breeding in Transvaal. It extends as far as the Zambesi, being noticed by Dr. Kirk in that district, although no specimens were preserved by him.

Mr. Buckley writes:—"An egg in my collection measures 3.48 x 2.76 inches. In colour it is dirty white marked all over with small reddish-brown marks, which become more numerous, larger and more defined at the smaller end. This egg was taken about June 1870, in the Salt River Vley, within fifty miles of the Nieuwveldt Mountains, from a nest which was placed at the top of a mimosa tree. The bird only lays one egg."

The Eared Vulture of North-eastern Africa is supposed to be a different species from that inhabiting the Cape, and Mr. Gurney has the following remarks in his excellent catalogue of the birds of prey in the Norwich Museum:—"Many of the specimens of this Vulture, killed in South Africa, are found to be destitute of the peculiar fold

of the skin on the sides of the neck, which produces the ear-like flaps that give to this Vulture its specific name; and north of the equator, the great majority of examples seem to be destitute of this appendage. Some observers have even stated that this peculiar fold of the skin is never found in the more northern specimens of this bird, and many naturalists have therefore considered that these more northerly specimens in reality belong to a distinct species, which has received the name of *Vultur nubicus* (Smith). I have not as yet adopted this distinction, considering that further observation is indispensable before the question can be considered as satisfactorily determined; and I may also observe that the Abyssinian specimen in the Norwich Museum certainly shows traces of the folds in question on the sides of the neck." In the British Museum are three birds from Shoa, obtained by Sir W. C. Harris, which have also slight ear-lappets, but decidedly less developed than in the South African bird. Dr. A. Brehm has recently insisted (J. f. O. 1872, p. 71.) on the northern and southern birds being considered distinct species.

General colour above, brown; head and neck bare; upper part of breast covered with short brown feathers, surrounded by a ring of white down; feathers of abdomen elongated, dark-brown in the centre, light-brown at the edges; thighs covered with thick white down. Length, 4'; wing, 2' 7"; tail, 13''.

Fig. Temm. Pl. Col. 426.

4. LOPHOGYPS OCCIPITALIS.

White-headed Vulture.

Vultur occipitalis, Layard, B. S. Afr. p. 5 (1867).

This Vulture was first discovered in South Africa by Dr. Burchell on the Makwarin River. We received two specimens from the late Mr. R. Moffat, jr., which were killed at Kuruman, where Mr. James Chapman tells us they are plentiful, and that their habits assimilate to those of the common Vulture. It is possible that the late Mr. Chapman, who was more of a sportsman than a naturalist, has made a mistake in the above identification, as his remarks are somewhat at variance with those of other observers. It hardly appears to come within the boundaries of this colony, and in Natal Mr. Ayres says it is much rarer than the other Vultures, 'only going in pairs, and generally coming to feed when the other kinds of Vultures are not present.' Dr. Kirk mentions this species as having been doubtfully

identified on the Zambesi, but no specimens were preserved by him or by Dr. Dickerson. Mr. Andersson obtained it in Great Namaqua Land and also near the Seco-Kaama Hill, S.W. of Lake Ngami. It is further known from north-eastern Africa and Senegambia.

General colour above, blackish brown; thighs, under part of body, and neck white; quill feathers of wing and tail black; bare part of neck, space round eyes, and base of bill white; bill and feet flesh-coloured. Top of head covered with white down in the adult and brown in the immature plumage, which at the back is elongated and reversed. Length, 3'; wing, 1' 11"; tail, 9".

Fig. Temm. Pl. Col. 13.

5. NEOPHRON PERCNOPTERUS.

Egyptian Vulture.

At this end of the Cape Colony this is decidedly a scarce species; but few specimens have reached our hands. We saw a single bird feeding on a dead horse, off which it drove three hungry white-necked Crows not far from the Paarl. It is very abundant at the Cape de Verde Islands, breeding in the rocky precipices in St. Vincent's, at the back of the town, off which the steamers lie to coal. We ascended to their nests, which were vast masses of sticks; but were, we believe, too late (December) for their eggs. Mr. Atmore has found it breeding about Swellendam, and Mr. A. F. Ortlepp near Colesberg. The latter gentleman writes that beneath the nest he found "vast numbers of the crania of small Rodents."

A couple of magnificent eggs were sent to me from the neighbourhood of Hopefield in the Malmesbury Division, taken from a nest in a krantz, which is said to be tenanted yearly by a pair of these birds. Mr. Rickard has procured the species at East London, and informs us that it is also said to frequent a krantz on the Buffalo river where *Gyps kolbi* breeds.

Mr. Andersson records it as "not uncommon in Damara Land and Great Namaqua Land and the parts adjacent, more especially in the neighbourhood of the coast." The Leiden Museum also possesses an example from Benguela. On the eastern part of South Africa it is decidedly a scarce species, being very rare in Natal according to Mr. Ayres, and in the Zambesi district it was only once observed in the mountains to the South of Nyassa by Dr. Kirk, who says:—"It is a rare bird and was nowhere else obtained." Mr. T. E. Buckley found it rare in the Matabili country.

Mr. Henry Buckley sends the following note:—"My eggs vary from $3\cdot04 \times 1\cdot98$ to $2\cdot43 \times 1\cdot88$ inches. They differ much in size and shape, but are usually a broad oval. They vary much in colour, from dirty white with faint markings of brown to others richly coloured all over with reddish brown, and frequently splashed with darker markings of the same colour. (I have no South African specimens.)"

General colour dirty white; feathers of nape narrow, elongated, and pointed; quill feathers of wings black; secondaries greyish black; tail white; bill long, slender, horn-coloured at the tip, yellow at the base; space round the eyes, cheeks, ears, chin, and part of throat bare and yellow. Length, $2' 3''$; wing, $1' 10''$; tail, $1' 11''$. The young bird is wholly of a dirty dark-brown.

Fig. Gould, Birds of Eur. Pl. 3.

6. NEOPHRON PILEATUS.

Hooded Vulture.

We have not ourselves met with this species, but have been informed that there are two Vultures of this genus inhabiting the country North of the Orange River and Damara Land. One of them is the common *N. percnopterus*; the other probably the present species. Mr. Andersson says it is not common in Damara Land, but becomes more numerous as one approaches the Orange River. Mr. Ayres states that he has seen but few in Natal, but it is more plentiful towards the Zambesi, for Dr. Kirk writes:—"The common Vulture, called 'Deze,' of which no specimen was prepared, is universal; it is a *Neophron*, resembling the common brown Vulture at the Cape."

It must be remarked that the Hooded Vulture of the countries north of the Equator is always a much smaller bird, although this is usually the case when Cape species occur in northern or western Africa. The Vulture from the latter parts shows the feathers of the hind neck ascending towards the nape, which has been made its claim to specific distinctness in a catalogue of the Birds of Prey in the British Museum, recently published by the editor.

Plumage brown, variegated with fulvous on the thighs; tarsi black; top of head, cheeks, and front of neck entirely bare; lower part of neck and posterior portion, almost to the hind-head, covered with a close greyish down. Length, $2' 2''$; wing, $19''$; tail, $7''$.

Fam. FALCONIDÆ.**Sub-fam. POLYBORINÆ.****7. SERPENTARIUS SECRETARIUS. Secretary Bird.**

Serpentarius reptilivorus, Layard, B. S. Afr. p. 33 (1867).

This bird is widely distributed all over South Africa, and is met with throughout the Cape Colony. Victorin found it from March to September at the Knysna. Mr. Rickard informs us that it is found both near Port Elizabeth and East London. Mr. Ayres has met with it in Natal, where, however, he says it is rare near D'Urban; and more recently he has procured it in the Transvaal territory. Mr. T. E. Buckley observes:—"I only met with this bird on two or three occasions in the Transvaal, and I saw one pair on the Limpopo." Respecting its distribution in the Zambesi country Dr. Kirk writes as follows—"Not observed on the lower Zambesi, nor in the vicinity of the Nyassa. One specimen alone was seen on the plain between the Zambesi and Batoka hills, about the confluence of the Kafne. By the natives it is respected from the nature of its food, and from its killing snakes."

The late Mr. Andersson records the Secretary Bird as "found sparingly in Great Namaqua and Damara Land, and on the plains of Ondonga in the Ovampo Country; it also occurs about Lake Ngami." It has recently been procured still further to the northward on the west coast, for the Lisbon Museum has received two examples, one from Huilla in the Mossamedes district, collected by Señor Anchieta, and another from Benguela procured by Señor Freitas Branco.

When a pair establish themselves in any locality, they speedily drive out all others of the same kind, and will breed in the same nest for a long period. The latter is a huge structure, added to yearly, placed sometimes in a low bush, sometimes in a thick thorny mimosa. We are told they never lay more than two eggs, which are of a dirty dull white, profusely dotted with light, brownish-red blotches at the obtuse end, and sparsely over the whole shell: axis, 3" 1"; diam., 2" 4". The young utter a guttural, rattling cry, precisely resembling the call of the Stanley Crane. They are a long while ere they can walk, as their legs seem unable to support the weight of their bodies, and snap with the least exertion. One which we were

rearing for the Acclimatization Societies of Melbourne and Sydney trod in a small wooden bowl sunk in the ground, and instantly fell, breaking his leg* and wing. We spliced them both, but he died in ten days. We are informed that the texture of the nest is so loose, that the legs of the young hang through the interstices until they acquire sufficient strength to be bent under them, but this we have not found to be the case. [Mr. Atmore writes, "I have seen several encounters between the Secretary Bird and snakes. If the snake bites a feather the bird pulls it out immediately. On one occasion I saw one leave off fighting and run to a pool of water, where he suddenly fell down and died: on examining him I found the snake had drawn blood from the point of the pinion. They eat everything, rats, lizards, locusts, snakes, tortoises, etc."] Mr. H. Jackson says they sometimes lay three eggs, and that the nest is firmly built and lined with hair and wool.

Mr. Henry Buckley says that the eggs in his collection vary from 3.07 × 2.23 inches to 3 × 2.38, are pear-shaped and of a dirty white colour.

Head, neck, breast, and mantle greyish-blue, slightly shaded with reddish-brown on the wing-coverts. Larger quills black. Throat white; under part of tail white, tinged with russet. Thighs black, tinted brown. Tail-feathers very long, black at the base, then paling into grey, and tipped with white; two long central tail-feathers bluish-grey, tipped with black and white. Crest of ten feathers arranged in pairs, the lesser ones at the top black and grey, the others black. Legs very long, toes short, claws blunt. Length, 48"; wing, 27"; tail, 26".

Fig. Vieill. & Oud. Gal. Ois. I. pl. 260.

Sub-fam. ACCIPITRINÆ.

8. POLYBOROIDES TYPICUS.

Banded Gymnogene.

Specimens of this curious bird have been procured in various parts of the colony—by Mr. Gird, at the Paarl; Mr. Cairncross, at Swellendam; and Mr. Atmore, in the George district. Mr. Chapman also found it in the interior. Mr. Gird observed his specimen beating over a marsh abounding in snipe. The stomach of one we

* All who have tried to rear these birds notice this brittleness in their bones. We have, since the above was written, lost several more from similar causes, and have known them snap a leg if suddenly startled into a quick run!!

opened contained the remains of lizards. Mr. Gird's bird was probably engaged in the pursuit of frogs. It is found also near Grahams Town.

Mr. Atmore writes:—"Meiring's Poort: Got a fine adult female of *P. typicus*. She was full of frogs. This accounts for their sitting so long on stumps, etc. by pools of water. They are very easily procured; not at all shy but scarce."

Mr. Ayres has obtained the present species in Natal, and it was met with on the Zambesi by the late Dr. Dickerson, who collected two specimens there. Dr. Kirk, however, did not meet with it. Andersson did not find the bird in Damara Land, but Señor Anchieta has sent to the Lisbon Museum a single example from Gambos in the Mossamedes district.

Adult. General colour rusty pearl-grey, with a row of large black spots from each shoulder; head crested, and with throat and chest bluish. Flanks, thighs, belly, and vent profusely barred, black and white; * wing and tail feathers black, and tipped with white, the latter with a broad white bar across the centre; bare space round the eye, cere and legs light-yellow. Iris dark-brown. Length, 2' 1"; wing, 1' 6"; tail, 12".

Young. General colour brown, with rather paler margins to the feathers, which are whitish at base; quills blackish brown; the secondaries paler brown, like the back, the latter much mottled with white near the base; all the quills barred across with dark brown; tail brown, tipped with fulvous, and crossed with five bars of darker brown; head much crested, all the feathers fulvous at their base and on their margins, brown in the centre, somewhat tinged with rufous, especially on the sides of the crown and of the neck; forehead whitish, slightly streaked with dark brown; a few feathers under the eye and on fore part of cheeks black; throat and breast buffy white, the feathers mesially streaked with dark brown and washed with sandy rufous; the lower breast sandy rufous, with fulvous tips; the abdomen, thighs, and under tail-coverts barred with fulvous and sandy rufous, the latter with dark brown; under wing-coverts fulvous, mottled with rufous or rufous brown; the lower ones brown at tips, like under surface of wing. (*Sharpe, Cat. B. I., p. 49.*)

Fig. Temm. Pl. Col. 307.

* Mr. Gurney writes:—"It should be noted that these bars are narrower in the old female (= *P. malcazii* of Verreaux) than in the male."

9. CIRCUS MACRURUS.

Pallid Harrier.

Circus swainsonii, Layard, B. S. Afr. p. 34 (1867).

This Harrier has a wide range in South Africa, though doubtless occurring, as Mr. Ayres states, only in our summer months, when it arrives from the north, and makes South Africa its winter quarters. Smith says he saw a few specimens near Cape Town, Natal, the mouth of the Orange River, and the Tropic of Capricorn. Mr. Jackson sends it from Nel's Poort, and we have shot it near the Observatory, Cape Town, in company with *C. ranivorus*. Dr. Atherstone also has procured it near Grahams Town. Our excellent correspondent, Mr. Rickard, has also sent us word that he procured one specimen near East London, and marks its occurrence near Port Elizabeth as probable, but not yet thoroughly identified. Although not recorded from Natal, Mr. Ayres has met with this Harrier in the Transvaal territory, where, he says, it is seen "only during the summer months and then not plentifully. They skim quietly about amongst the trees and houses of Potchefstroom." On the west coast, according to Mr. Andersson, it is "migratory, appearing towards the return of the rainy season in Damara and Great Namaqua Land."

Its food consists of small quadrupeds, reptiles, birds, etc.; it prefers a low damp locality.

According to a note received from Mr. Henry Buckley, who has Indian specimens in his collection, the eggs vary from 1.56 inch \times 1.23 to 1.64 \times 2.3, and are bluish-white in colour.

The following descriptions are extracted from the editor's 'Catalogue of Birds':—

Adult male.—Above pale bluish grey, the crown and interscapular region very slightly darker; lores, a distinct eyebrow and sides of face white, the ear coverts slightly streaked with ashy; under surface of body white with a slight greyish shade on the facial ruff, on the sides of the breast, and on the greater under wing-coverts; quills blackish brown, primaries externally washed with ashy grey, the secondaries entirely of the latter colour and tipped with white; primaries white at base of inner web, the rest of the quills entirely white underneath, the secondaries with a nearly obsolete greyish sub-terminal band; upper tail-coverts white, barred across with ashy grey; middle tail-feathers uniform ashy grey, the rest white with seven or eight bars of ashy grey, all tipped with white, under surface of tail entirely white, the bars less distinct. Bill black; feet yellow;

iris yellow. Total length 17·5 inches, culmen 1·15, wing 13·2, tail 8·8, tarsus 2·65.

Adult female.—Above brown, the head and hind neck streaked with tawny fulvous, with which most of the feathers of the upper surface are margined and tipped, the small wing-coverts especially broadly; frontal feathers, a superciliary line as well as a spot below the eye white; cheeks and ear-coverts dark brown, very slightly streaked with tawny; facial ruff dark brown, plainly streaked with creamy buff; wings nearly uniform sepia-brown, tipped with buffy white, primaries externally shaded with ashy grey; primaries plainly, secondaries obsoletely barred with darker brown, plainer underneath, where the inner webs are creamy buff; upper tail-coverts white, barred across or diamond-spotted with dark brown; tail pale tawny, crossed with four broad blackish bars, the interspaces inclining to white on the outer feathers, the black bars replaced by rufous on external rectrix, the two centre feathers ashy brown, with six blackish brown cross bars, the subterminal one broadest; under surface of body creamy white, with broad longitudinal streaks of brown on chest, becoming narrower and more rufous on lower breast and abdomen; under tail-coverts clearly rufescent; under wing-coverts creamy buff, with diamond-shaped spots and streaks of brown, the lower series barred across with blackish; axillaries brown, inclining to rufous, with large oval spots of fulvous on both webs; cere greenish yellow; bill horny black, gape dull greenish; feet yellow; iris dark hazel. Total length 20·5 inches, wing 14·7, tail 10·5, tarsus 2·9.

Young.—Brown, like the old female, but not so much variegated above, with tawny margins to the feathers; under surface entirely pale fawn-colour, the facial ruff of this same colour, and therefore contrasting in marked prominence with the dark brown cheeks and ear-coverts, the flank-feathers and axillaries with indistinct brown central streaks; frontal feathers, superciliary streak, and spot under the eye whitish; upper tail-coverts white, spotted with pale rufous; tail much as in old female, but the dark bars only five in number.

Fig. Gould, B. Eur. i. pl. 34.

10. *CIRCUS PYGARGUS.*

Montagu's Harrier.

Circus cinerascens, Layard, B. S. Afr. p. 34 (1867).

Montagu's Harrier is rare in South Africa. Mr. Atmore procured a fine adult male at Swellendam, and we shot an adult female and a

young bird near the Observatory at Cape Town, below which is a marsh much frequented by Harriers of several descriptions. It has also been procured at Tharfield, near the Kowie, by Mr. Holden Bowker.

It preys upon reptiles, mice, and small birds, remains of which we found in the stomach of those procured. Mr. Atmore writes: "This fellow hunts his ground like a pointer, and drops suddenly on its prey, which, from his minute inspection of fences, I suspect to be mice."

Concerning its appearance in the Damara country Mr. Gurney has the following note:—"I have seen specimens obtained by Mr. Andersson at Objimbinque in Damara Land and at Ondonga, Ovampo Land."

Adult Male. General colour of upper parts, neck, and breast light bluish-grey; the quill-feathers of the wings inclining to black; belly and thighs white, the latter with the flanks longitudinally streaked with bright rufous. Tail pearl-grey above, white beneath, the inner webs obscurely barred. Two outermost feathers on each side barred with rufous, which is deepest on the basal part of the feathers. Irides, legs, and feet fine yellow. Length, 17"; wing $14\frac{1}{2}$ "; tail, 9".

Female and immature Male. General colour umber-brown above; below pale rufous-yellow, faintly streaked along the shaft of each feather with a darker tint; collar round the neck rufous. Outer tail-feathers white, the rest barred distinctly white and brown. A young female shot by ourselves on the Cape Flats is very dark-brown above, many of the feathers being edged with bright rufous; below bright rufous, streaked with black.

Fig. Gould, B. Eur. pl. 35.

11. CIRCUS MAURUS.

Black Harrier.

This bird has been more than once confounded with the black variety of Montagu's Harrier which not unfrequently occurs in Europe, but this idea is erroneous, for it is a good species, distinct in all its plumages.

It is not at all uncommon in the neighbourhood of Cape Town, and it is also found about Grahams Town;—indeed throughout the Colony. Mr. Rickard tells us it is not very common near Port Elizabeth but very plentiful at East London. Victorin procured it both in the Karroo and at the Knysna. Although common enough

within the limits of its range, the latter is very restricted, for it is not known either to inhabit Natal or the Transvaal, as far as the researches of the indefatigable Mr. Ayres have shewn. It occurs as far north as the Orange river, whence a specimen collected by M. Jules Verreaux is to be found in the Leiden Museum. Andersson says:—"I have observed this bird in Little Namaqua Land, but am not aware that it is an inhabitant of Damara or Great Namaqua Land."

It is generally seen in pairs, beating the bushes for prey and quartering the ground with the regularity of a pointer-dog. After a few heavy flaps with its wings, it sails along with its pinions elevated, swaying to and fro like a clock pendulum; suddenly it checks itself, lets fall a leg, clutches up a cowering lark or unsuspecting gerboa, and flies away with it to the nearest termite heap, on which it perches and commences its repast. If accompanied by its mate, a shrill stridulous cry soon brings it to its side, and the dainty morsel is shared between them.

It breeds among reeds, making a thick heavy nest on any elevated root that may lift it above the water. The eggs are usually whitish, rather rough, and three or four in number; they are also often mottled and clouded with reddish brown.

At the Berg river we found many nests in September; they were always on the ground in the marshes, unlike *C. ranivorus* which bred high up on the rushes. We found white and coloured eggs in the same nest, and observed that when the birds laid again after we had robbed the nest the eggs were always whiter than at the first laying. In size they agreed with those of *C. ranivorus*.

Mr. Henry Buckley writes of the eggs of this Harrier:—"They vary from 1.38 × 1.34 inch to 1.57 × 1.5, and are of a bluish-white colour, marked all over with small brown marks."

General colour black, tinged with rufous; rump white; tail on the upper side with four broad bars of grey, which below show white; inside of wing more or less white, upper side grey; a few white spots on the belly and flanks: cere of bill, legs, and irides bright orange-yellow; claws black. Length, 20"; wing, 13" 6"; tail, 9" 9".

Fig. Smith, Ill. Zool. S. Afr. *Aves.* pl. 58.

12. *CIRCUS RANIVORUS.*

South African Marsh-Harrier.

This is a resident bird and is at present not known to extend its range beyond the limits of the South African subregion. It is not,

however, found in the western portion, for Mr. Andersson says:—"I do not recollect to have met with this Harrier in Damara or Great Namaqua Land: specimens were collected in the Lake-country by Mr. James Chapman." It is nowhere very abundant in the lower Zambesi country, according to Dr. Kirk, who observed it in the Elephant Marsh on the Shirè River. Mr. Ayres has procured it in Natal and Transvaal. He writes:—"A nestling sent to me in January was stated to have been taken in the swamp near Potchefstroom." Mr. Rickard has procured it at Port Elizabeth and East London, and throughout the whole colony it may be considered plentiful, frequenting marshy places. It feeds chiefly on frogs and small aquatic birds, and sometimes fish. The nest is built amongst rushes, and is made with the stalks and heaped-up leaves of water-plants. Eggs three or four, of a dull white: axis, 1" 10''; diam., 1" 6''.

The marsh below the Observatory is a favourite breeding-place for these birds, and several nests are annually made among the rushes. We found it very abundant at Zoetendals Vley, and saw it even in the dry Karroo country about Beaufort West.

At the Berg river it is very common, constructing a large nest of flags and rushes on the bent down tops of the rushes which line the river banks. On the 11th of September we took ten eggs all fresh and unincubated; on returning to the nests a few days after we again found many of them re-occupied.

Mr. Henry Buckley's notes on the eggs are as follows:—"They vary from 1.76 × 1.42 inch, to 1.91 × 1.53, and are of a bluish-white colour, faintly marked and stained with brown, which appear chiefly nest stains."

Adult.—All the upper parts of the body earthy-brown, that is, all the visible parts of the feathers; the hidden parts are white on either side of the quill. Throat and cheeks thinly sprinkled with whitish feathers, with a brown band; lower parts clear-brown, slightly mingled with white. On the legs rusty red feathers, edged and spotted with white; wings brown, with transverse white bars on the under sides. Tail rufous-brown, and banded. Length, 19"; wing, 15"; tail, 9".

Young.—Neck, throat, and anterior part of breast deep-brown; lower parts reddish-brown; shoulders in two shades of brown. Fore part of neck and breast white, or reddish-white; wings deep-brown,

with pale tips. Tail deep-brown, with pale bands and tip. Iris brown-yellow.

Fig. Levaill, Ois. d' Afr. i. pl. 23.

13. *CIRCUS ÆRUGINOSUS.*

Marsh Harrier.

The Marsh Harrier of Europe has only recently been identified as an inhabitant of South Africa, and is doubtless only an occasional visitant. A single specimen was procured by Mr. Ayres at Potchefstroom in the Transvaal in December, 1869. On the western coast, however, it has twice been procured by Señor Anchieta, at Huilla and on the Rio Coroca in the Mossamedes district. I may add that the late M. Jules Verreaux told us that it had occurred to him at the Cape during his fifteen years sojourn there.

Young.—Nearly uniform chocolate brown, the feathers of the upper surface washed with rufous on their margins; the upper tail-coverts and under surface more decidedly rufous-brown; crown of head, throat, and cheeks more or less entirely creamy buff, the feathers of the hinder neck, wing-coverts, and centre of breast often showing margins of this colour, giving a streaked appearance and indicating approaching adolescence; wings brown, the primaries much darker; tail uniform brown, very slightly mottled with rufous.

Adult male.—Above dark brown, with slight remains of rufous margins to the feathers of the upper surface, the least wing-coverts buffy white with dark brown centres; outer greater coverts, primary coverts, and secondaries bluish-ashy, with very slight white tips; the innermost secondaries brown, more or less washed with ashy-grey; primaries blackish-brown, much paler at the tips, creamy-white at base of inner web, increasing in extent towards the secondaries, which are entirely light-ashy below; upper tail-coverts white, somewhat washed with grey and tinged with rufous; tail uniform bluish ash-colour, paler and a little more fulvescent beneath; entire head and neck creamy-buff, streaked with dark brown, the interscapular region also slightly streaked; facial ruff indistinct, being coloured like the rest of the head and neck; sides of face and throat white with narrow streaks of dark brown, the hinder margin of ear-coverts nearly uniform brown; under surface of body creamy buff, the breast longitudinally streaked with brown; the abdomen and thighs more decidedly rufescent, but appearing partially streaked by reason of the fulvous margins to the feathers; under wing-coverts

and axillaries uniform buffy white, the latter with a narrow longitudinal shaft-line of brown; cere greenish yellow; bill blackish; feet yellow; claws black; iris straw-yellow in adult male; dark yellowish-brown in female and immature male. Total length 22·5 inches; culmen 1·55; wing 16; tail 10; tarsus 3·4. (Sharpe, Cat. B. i. p. 69.)

Adult female.—Slightly larger than male. Total length 23 inches; wing 17; tail 11; tarsus 3·8.

Fig. Gould, B. Great Brit. pt. xiii.

14. MELIERAX CANORUS.

Chanting Goshawk.

Melierax musicus, Layard, B. S. Afr. p. 31 (1867).

This is also a species whose range is at present confined within the limits of this work. It is generally distributed over the colony, being very abundant in the Karroo, but it does not occur in the Knysna according to Victorin, nor have we received any notice from Mr. Rickard of its capture near East London or the adjacent parts. Mr. Atmore's recent collections near Eland's Post did not embrace an example. Writing in 1868 Mr. Gurney observes:—"The geographical range of this strictly southern bird is singularly limited. I have never seen it from any locality north of the Tropic of Capricorn. Mr. Ayres has not met with this species in Natal, but he obtained it in the bush country on the Limpopo River, where it is very numerous." Neither Dr. Kirk nor the late Dr. Dickerson appear to have met with the species in the Zambesi district, and it is doubtless replaced along the Eastern coast of Africa by *M. poliop-terus* of Cabanis.

Mr. Andersson says that it is "common in Damara and Great Namaqua Land, where it is seen throughout the year: it is particularly abundant about Walvisch Bay, and is usually found in open country." Señor Anchieta has likewise procured it at Caconda in the Mossamedes district.

It devours quails, partridges, and other small game, reptiles, and locusts; builds either in the fork of a tree or a thick bush. The eggs are four, oval, and white: axis, 2" 4'''; diam., 1" 9'''. Mr. Henry Buckley informs us that examples in his collection vary from 2·03 × 1·7 inches, to 2·15 × 1·6 and are of a blueish white colour. Mr. H. Jackson says they never lay more than three eggs and generally

only two, but Mr. Atmore affirms that he has taken from two to five eggs out of nests of this species. It occurs on the eastern frontier and about the Berg river.

Le Vaillant states that the male sings for hours together in the twilight of morning and evening, and sometimes through the night. This we never noticed at Nel's Poort, where it is very abundant, as it is throughout the Karroo. It will perch on the top of a high tree, utter its mellow piping whistle, and fly off again. We have sometimes heard it call while on the wing, as also has Mr. Atmore.

Upper parts and breast pearly-grey; belly white variegated by many brownish-blue lines; shoulders light grey; rump white. Larger wing-feathers black; the tail dusky, tipped with white, and crossed by broad white bars, except upon the two middle feathers. Cere and legs red. Irides orange, according to Mr. Atmore dark-brown. Length, 24''; wing, 13'' 6''; tail, 12''. The young bird of the first year is brown above, the secondaries being edged with rufous and white, upper tail-coverts pure white. Below it is white, the throat and chest being longitudinally striped with rufous brown; breast, belly, vent, and thighs transversely barred with broadish rufous bars.

Mr. Ayres (Ibis, 1869, p. 219) gives the following details of the soft parts of an immature male. Iris yellow; bill black at tip, yellow at base; cere yellow; tarsi and feet red.

Fig. Levaill. Ois. d' Afr. pl. 27.

15. MELIERAX POLYZONUS.

Many-banded Goshawk.

Only one specimen of this bird has as yet been known to occur within our limit. Mr. Gurney thus records the circumstance:—"An adult male of this species was obtained by Mr. Andersson at Elephant's Vley, on November 10th, 1859, and is preserved in the Norwich Museum. I know no other instance of this species occurring so far south; and it is remarkable that it should have been obtained at the same spot, and within fifteen days of the same date as the specimen of *Asturina meridionalis*.

Adult male.—Above light bluish slate colour, the sides of the face and region of the eye a little darker; lesser wing-coverts coloured like the back, the greater ones rather lighter and slightly freckled externally with white; primaries blackish, externally shaded with ashy grey, the secondaries pale greyish, freckled with white, the inner

secondaries entirely grey, like the back, none of the quills barred; upper tail-coverts white, crossed with numerous bars of slaty grey; tail blackish, white at the immediate base, and at the tips, the three outermost feathers plainly crossed with four white bands, the next more indistinctly, and the middle ones not at all barred; under surface of tail whitish, the bands very distinct; lores rufescent; throat and chest ashy grey; rest of the body white, minutely barred with ashy grey, scarcely less thickly on the under tail-coverts, but much fewer on the under wing-coverts, which are therefore purer white; cere vermilion; bill horn-black, vermilion at base; feet vermilion; iris pale umber brown. Total length, 20·5 inches, culmen, 1·4; wing, 12·5; tail, 9; tarsus, 3·5. (Sharpe, Cat. B. p. 89.)

Adult female.—A little larger than the male. Total length, 21 inches, wing 13·4.

The immature bird resembles the young of *M. canorus*.

Fig. Rüppell, Neue Wirb. taf. 15.

16. MELIERAX GABAR.

Red-faced Goshawk.

Examples of the present bird from South Africa are generally larger and more coarsely barred than those from the northern parts of the same continent, but after comparison of a large series the editor has been unable to separate them specifically.

It is of general distribution in the colony, though not found near Cape Town, frequenting the wooded banks of rivers and kloofs in mountains, preying on small birds and reptiles. Victorin procured it in the Karroo, and we have a note from Dr. Exton, that it is found near Kanye in the Bechuana country. Mr. Ayres has shot this bird in the Transvaal, where, he says, it frequents the thick bush, and on the Zambesi, the late Dr. Dickerson procured specimens at Chibisa, while the British Museum also contains several examples shot by Dr. Kirk at Tete during the Livingstone expedition.

Mr. Andersson observes that it is "common in Damara and Great Namaqua Land, as well as in the Lake-region. Partially migratory in Damara Land." Señor Anchieta has also met with the species at Humbe on the banks of the Cunene River.

Mr. Atmore states that they whistle very much, and better than *M. musicus*. The nest is a cup made of sticks and lined with wool in the middle of a mimosa tree. Eggs dull white, axis 1'' 8''' Diam.

1' 3½'''. Le Vaillant found one white egg, and three young birds in a nest, in a mimosa tree, built of flexible twigs and thorns, lined with feathers.

All the upper parts and head grey, darker on the mantle and occiput. Throat and breast blue-grey; belly white, barred with grey. Large wing-feathers brown, the centre ones tipped with white. Upper and under tail-coverts white. Upper tail-feathers clear-brown, barred with dark-brown: lower feathers barred, black and white. Cere and legs red. Iris, according to Mr. Atmore, bright crimson in adult, yellow in young bird. Length, 14''; wing, 8''; tail, 7' 6'''.

The plumage of the immature bird is brown as in the two preceding species, but the pure white of the upper tail coverts is conspicuous in all stages.

Fig. Levaill, Ois. d'Afr. pl. 33.

17. MELIERAX NIGER.

Black Goshawk.

Sir Andrew Smith procured this species in South Africa, and his specimens are still in the British Museum, but he does not state the exact locality. In Damara Land, Mr. Andersson says:—"It is rather scarce; I do not recollect having seen it in Great Namaqua Land, but it is found to the north as far as the Okavango, and eastward to the lake, though nowhere numerous." Señor Anchieta has procured it in Mossamedes, at Gambos and Huilla. In the Zambesi country Dr. Dickerson found it at Magomero.

Adult male.—General colour black; tail-feathers each with three white spots above and four below. Primary quill-feathers greyish white, with small black and ashy-coloured spots. Total length, 11·3 inches; wing, 7·1; tarsus, 1·75.

Adult female.—Similar to the male, but larger. Total length 13 inches; wing, 9·1; tarsus, 2·15.

18. ASTUR TACHIRO.

African Goshawk.

We have received specimens of the young bird from several of our correspondents, who tell us it is not uncommon in the forest districts; birds in adult stages of plumage are, however, very scarce. Victorin procured it in the Karroo and in the Knysna, where it appears to be plentiful. It is not included in Mr. Rickard's East

London list: but Mr. Ayres has procured it in Natal, whence we have seen many specimens. Mr. Ortlepp writes that it is by no means rare in the woods skirting the Orange River, and easy of approach—feeding on small birds, beetles, &c. We believe it is generally distributed over all the forest country, being essentially a tree-loving species. It seems to be much more plentiful in the eastern districts of South Africa, for it is pronounced to be “common all along the Shirè Valley,” by Dr. Kirk, but Andersson states that it is very rare in Damara Land. One specimen has been procured by Señor Anchieta at Biballa in Mossamedes, which Professor Barbaza du Bocage refers to *A. zonarius*, but which the editor fancies must be the true *A. tachiro*, as the other species (or subspecies, for it is only a brighter and darker form of the South African bird) has never been known to occur below Gaboon.

An adult female in Norwich Museum, from the Zambesi, is remarkably pale and very large. *Vide Ibis*, 1868, p. 144.

Mr. Ayres says that this species lives entirely in the bush, especially frequenting the neighbourhood of wooded streams, and feeds on small birds, but he also met with remains of a frog in one specimen and of limpets in another. Le Vaillant, who first figured the young bird under the name of *Le Tachiro*, describes its eggs as white, blotched with red and three in number. His testimony on this point must be taken for what it is worth.

Adult.—Above uniform ashy-brown; throat whitish, finely rayed transversely with brown; anterior part of neck, breast, and belly dull white, regularly rayed with transverse brown, or pale rufous bars; vent and under tail-coverts white, with some fine transverse brown lines; wing-feathers light brown, banded with dark brown, inner vanes marked with white towards the quills. Tail long, beneath ash-white, with transverse brown bands; above brown, with darker bands; tips white; iris light yellow in a female assuming adult dress. (*Ayres*). Length, 15''; wing, 8'' 3''; tail, 7½''.

Young.—Above brown, each feather margined with rufous, and usually with white at the base; beneath pale isabella colour, with numerous large oval dark-brown blotches; thighs transversely barred. Legs yellow. Iris dark greenish brown. (*Ayres*.)

Fig. Levaill. Ois. d'Afr. pl. 24 (juv.). Rupp. Neue Wirb. taf. 18 (*ad.*)

19. *ASTUR POLYZONOIDES*. Many-banded Goshawk.

Of all the little Goshawks which are included as races or subspecies under the title of *Astur badius*, this is the most distinct, by reason of the number and narrowness of its breast-bands. It cannot be plentiful in the Cape Colony, for it is not included in Victorin's Knysna list, and has not come under our notice from any part of the colony itself. Sir Andrew Smith originally discovered the species about lat. 26° S. In the Zambesi country, Dr. Dickerson procured it at Chibisa, but Mr. Ayres has not found it in Natal, though more recently he has met with it in the Transvaal. Mr. Andersson writes that it is "rather rare both in Damara and Great Namaqua Land. It is migratory, arriving in Damara Land after the first rains have fallen, and retiring again on the approach of the dry season." Dr. Smith says that it feeds on small birds and prefers the neighbourhood of rivers.

Adult.—Above pearl-grey, shaded with brown; throat speckled with light-brown; all under parts of body white, closely banded with small wavy, brown bars; under tail-coverts white; back and upper sides of wings deep grey; inside of wings greyish-white, with small dark bars. Tail grey, with about six dark-brown bands; tips of feathers white. Tail long, slightly rounded. Cere of bill and legs yellow. Iris orange in adult; yellow in immature bird, but subject to much variation. (*Vide* Ayres, *Ibis*, 1869, p. 288.) Length, 11½"; wing, 7" 9"; tail, 6".

Fig. Smith, *Ill. Zool. S. Afr. Aves*, pl. 11.

20. *ACCIPITER RUFIVENTRIS*. African Sparrow Hawk.

This is the common Sparrow-hawk of South Africa, and is the representative of the European species, to which it bears a close affinity in form. It is found generally, though sparingly, throughout the colony, and was obtained by Victorin at the Knysna. Mr. Andersson says it is common to the south of the Orange River, and in various parts of the Cape Colony, but is scarce in Damara and Great Namaqua Lands. In Natal Mr. Ayres found it rare, though not shy. It does not seem to occur as far north as the Zambesi, but is met with in North-Eastern Africa.

Two eggs, said to be those of the present species, were forwarded to us from Tulbagy: they are of a dirty white colour, irregularly and obscurely blotched here and there with pale blood-coloured marks;

axis, 1'' 9''' ; diam., 1'' 5''. Mr. Henry Buckley, however, possesses less typical eggs, which are of a dirty white colour, and measure 1.72 inch long, and 1.44 inch broad.

We have shot this species in the act of hovering like a Kestrel, and as it preys much on birds and small quadrupeds, particularly field-mice (*Mus pumilus*), we do not so much wonder at this habit. At other times we have seen it glance like lightning through a copse, and whip off a bird from a branch in passing. It will also eat coleoptera and white-ants. We saw a pair constructing a nest of sticks in a thick fir-tree. It was placed over an horizontal forked branch, cleverly supported by two large sticks across the foundation, but we were too early for the eggs.

Mr. Grill, in his account of Victorin's collection, mentions a Sparrow-hawk procured at the Knysna, which he refers to a variety of the European species. We are not aware that any further notes have been published on this specimen.

In the adult bird the upper parts are brownish-blue, glossed with purple, chiefly on the head and neck, ear-coverts, and all the lower parts of the body and thighs, mottled with reddish orange and white. Tail above barred in shades of brown; all the feathers tipped with dull white; under tail-coverts white. The plumage of the young bird is of a much browner tinge throughout. When folded, the wings reach to the middle of the tail. Iris and feet yellow, claws very long, slender, and curved. Female more rufous on the shoulders and back; mottled on the breast. Length, 16½''; wing, 10''; tail, 8''. The male is smaller, being about 13'' in length.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 93.

21. ACCIPITER MINULLUS.

Little Sparrow-Hawk.

We have not procured this bird ourselves in South Africa, but Victorin shot it in the Knysna. Our esteemed correspondents, the Messrs. Atmore, procured a single specimen near George, and inform us that at one farm in Outeniqualand, three of them killed all the young ducks, striking them in the water-slught. It has been found near Grahams Town, and like *A. tachiro* is a forest loving species. In the British Museum there is a specimen collected by Mr. T. C. Atmore, near Elands' Post in S.E. Africa. Mr. Ayres has procured it in Natal, and Dr. Dickerson shot a specimen at Chibisa in the Zambesi. An unusually pale coloured adult ♀ from the Zambesi is

in the Norwich Museum, (*Vide Ibis*, 1868, p. 144.) Mr. Andersson writes:—"To the best of my recollection I have never met with this bird either in Damara or Great Namaqua Land, though I have observed it sparingly in the lake-regions, and near the river Okavango." It has not occurred to Señor Anchieta in the Mossamedes country, but Mr. Monteiro procured a young male in Angola, which is now in the British Museum. Being immature, it is a difficult thing to determine whether this should be referred to *A. minullus* or to *A. erythropus*, but from its pale colouration it seems to be the southern bird, which probably goes to Angola with *Cossypha natalensis* and other true South-African species. *A. erythropus* is confined to the Gold Coast, and is little more than a dark race of *A. minullus*, affording an analogous case to *A. tachiro* and *A. macroscelides*.

According to Le Vaillant (who states that it inhabits the country between the Gamtoos River and Kaffraria), it is a bold and fearless little hawk, preying on small birds or insects, hunting in pairs, and breeding in trees. The eggs are five, spotted with brown at the ends. Mr. Andersson gives an instance of a daring attack made upon him by one of these little hawks; and Mr. T. C. Atmore sent with the young male bird which he shot at Elands' Post, a specimen of *Hyphantornis spilonotus* which it had in its claws: this is a large quarry for so small a bird to capture.

Young.—Upper parts dark-brown; throat and chin white; sparsely streaked with brown; under parts very much blotched with dark-brown; the markings here and there edged with rufous; thighs rufous-brown; tail above brown, faintly barred with a darker shade, but below these bars show plainly on a grey ground. Length, $10\frac{1}{2}$ " ; wing, 6" ; tail, 5".

Adult male.—Above deep slaty black, the hind neck slightly mottled with white; sides of face and neck uniform with the crown; the upper tail-coverts white at base, the lower ones also conspicuously tipped with white; tail blackish brown, tipped with white, with two faintly indicated bands of paler brown, the line of these cross bands being indicated by two large spots of white on the inner web; under surface of tail paler brown, barred distinctly and tipped with white, the outermost feather entirely ashy white, with eight or nine bars of dark brown; under surface of body white, the sides bright chestnut, the lower throat and under tail-coverts indistinctly but the breast plainly though narrowly barred with rufous, most of the bars having

a conterminous line of dark brown; under wing-coverts deep ochre, streaked or barred with dark brown; iris and legs yellow. Total length 9·7 inches, culmen 0·7, wing 5·8, tail 4·6, tarsus 1·7.

Adult female.—Similar to the male, but larger. Total length, 11·5 inches; wing, 6·6; tarsus, 1·75.

Fig. Levaill, Ois. d'Afr. pl. 34.

22. ACCIPITER MELANOLEUCUS. Black-and-white Sparrow-Hawk.

Astur melanoleucus, Layard, B. S. Afr. p. 27 (1867).

Among the many good things sent to the South African Museum by Mr. Jackson, of Nel's Poort, appeared a young female individual of this rare bird. While staying with him during the month of December, 1863, we saw, just out of gunshot, a bird which we feel sure was an adult specimen. He also informed us that he had frequently seen a similar bird, but could never get within range of it.

It has been obtained at "Table Farm" near Grahams' Town, but it is a rare species in that neighbourhood. Mr. Atmore shot a pair near Blanco. In the Leyden Museum is a specimen from Sunday River. Captain Shelley's collection contains a bird from the Knysna, and Victorin procured it at the same locality in the month of June. It is rare in Natal, according to Mr. Ayres, but more numerous from November to March than at other seasons; it has not been met with to the northward in the Zambesi country, nor did Andersson ever meet with it during his travels in Damara Land. It is found, however, on the Gold Coast and the Niger. Mr. Atmore tells us that his birds had proved very destructive to poultry in their neighbourhood. Their nest, in a large tree, contained three young birds and an egg just hatching.

The head, neck, and breast dark brownish-black; back pale-brown; shoulders much diversified with white; body, tail, and thighs white; tail-feathers equal, usually dashed with red. Length, 20". (*Sir A. Smith.*)

A fine pair of these hawks, male and female, shot by Mr. Atmore and his son George near Blanco, differ materially from the phases of plumage described by Dr. Smith. The male is throughout of a rich brown-black; the chin and vent are white, with streaks and blotches of the prevailing colour. Length, 18"; wing, 11' 5"; tail, 9½".

The male resembles the female on the upper side, but below she is

white, blotched with the prevailing colour on the sides of the chest; two large patches of the same are over the head of thigh-bone, the thighs themselves being of the same colour, mottled with white. Her length is $21\frac{1}{2}$ " ; wing, $13'' 9''$; tail, $12''$.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 18.

Sub-fam. BUTEONINÆ.

23. BUTEO JAKAL.

Jackal Buzzard.

This Buzzard is very common throughout the colony, and its well-marked colours are plainly distinguishable at a great distance; it is therefore easily recognized. Many specimens were procured by Victorin at the Knysna, and Mr. Rickard tells us it is very plentiful both at East London and Port Elizabeth. In Natal, according to Mr. Ayres, it is "shy, but not rare." The following notes are from Mr. Andersson's book:—"To the best of my belief this Buzzard has never been observed in Damara Land; and it is scarce in Great Namaqua Land, where, indeed, I have only occasionally seen it in the southern parts, usually in the neighbourhood of rocks." It has not yet been found farther to the north either in the Zambesi country or in Benguela. It appears to capture its prey more by surprise and stealth than by hunting, sitting motionless on a bush, or tree, till some unsuspecting *Jerboa* or Sand-rat (*Bathyergus*) emerges from its hole, when down swoops the Buzzard, clutches the victim in its claws and bears it away, to be devoured at leisure. It is a heavy-flying bird, but sometimes ascends to great altitudes, wheeling in vast circles, and uttering a shrill, stridulous cry. An accomplished observer, whose name will often appear in these pages, writes as follows: "This bird, as you very justly observe in your book, is 'common throughout the colony.' It frequents rocky or partially wooded localities, and occurs always in pairs. It hunts by sight, hovering over rocky or grassy vallies, and poising itself in the air for a minute or two at a time, probably over some doubtful object, which it will either leave or pounce down upon with the greatest rapidity, or it will station itself upon some prominent rock or tree and there motionless will watch for hours together, waiting for 'something to turn up.' The food of this Buzzard consists of rats, mice, reptiles and insects, and some assert that it preys also upon birds, such as the young of the partridge, pheasant, &c. but this I greatly doubt,

for a tame one in our possession refused to eat birds that had been shot for it, and although the species is frequent around homesteads it has never been known to plunder the hen-wife of her chickens, or poultry of any description; but it destroys great numbers of reptiles, such as lizards and snakes of various kinds, especially of the last-named, for it will attack and kill the largest of our serpents. A neighbour of ours (Mr. Joseph Wilmot), saw one of these birds doing battle with a large snake. After watching this singular affray for some time he went up to the spot to see what snake the bird was fighting with, and found a large 'Ringtals,' quite 'hors de combat.' Fearing that it might recover and creep away he dispatched it at once. After some time had elapsed the bird returned and carried the snake away to its nest on a neighbouring tree."

"The cry of this species is singularly like that of the common Jackal (*Canis mesomelas*) whence its name, and when its wings are expanded shewing the light colour, together with the reddish-brown breast-feathers, they greatly resemble the colours and markings of a jackal's skin; moreover this bird occupies just about the same position in the tribe of rapacious birds as the jackal fills in that of rapacious animals, and its name is therefore a most appropriate one."

It builds in August or September on trees, or in thick, high bushes. The nest is composed of small sticks and moss, thickly lined with feathers and wool. Eggs two or three, rarely four, of a dirty white colour, coarse in texture, and very thickly spotted, at the obtuse end in particular, with dry-blood-coloured blotches and stains. Axis, 2'' 5''; diam. 1'' 10''; specimens, however, vary much both in size and colour. Mr. Henry Buckley writes:—"The eggs are white, handsomely marked, generally all over, with large brown blotches. Those in my collection vary in length from 2.32 to 2.44 inches, and in width from 1.82 to 1.96, the average being 2.39×1.92 inches."

Its chief hues are red and brown-black, the latter preponderating on the head, neck, and mantle. The throat is enlivened by white, which gradually deepens to rust-red on the breast. Under-wing feathers nearly white; under tail coverts black, mingled with red; tail feathers deep red, each with a black spot towards the tip. Bill, cere, and legs yellow, irides ochreous grey. Length, 1' 8''; wing, 15'' 8''; tail, 9'' 3''.

Fig. Levall. Ois. d'Afr. pl. 16.

24. BUTEO AUGUR.

Augur Buzzard.

The only claim that this species possesses to be inserted in the present work is the occurrence of two specimens in Mossamedes, where they were shot by Señor Anchieta at Capangombe and Huilla. Excepting these examples, which were kindly forwarded for inspection by Prof. Barboza du Bocage, we have never seen an example from any locality away from North-Eastern Africa, and the capture of these specimens so far south of their ordinary habitat is of great interest, when considered along with the occurrence of *Melierax polyzonus* in Damara Land. The notice of this Buzzard will be found in Bocages' fifth list of birds procured in the Portuguese possessions of Western Africa.—(Jorn. Lisb. 1871, p. 335.)

As it is possible that this species may have occurred in South Africa more often than has been supposed, the editor has added the description of the plumages published by him in the British Museum "Catalogue of Birds."

Young.—Above uniform dark brown, the nape streaked with white; sides and hinder part of neck streaked with rufous buff; lores whitish, sides of face and under surface of body creamy-buff, much marked with brown on the throat and cheeks, forming a distinct moustachial indication on the latter; sides of breast and abdomen, as well as under wing-coverts, distinctly marked with dark brown; thighs uniform ochraceous buff; upper tail-coverts ashy-brown, tipped with rufous; tail ashy brown, with a whitey brown tip, and crossed with twelve or thirteen bands of darker brown; quills ashy brown, externally ashy near the base, and barred with dark brown, the inner web of quills white, the tips black both above and below, secondaries with more or less distinct bars of dark brown below; iris umber-brown.

Adult male.—Above black, pure white below and on sides of neck; cheeks, ear-coverts, and throat black, the latter somewhat streaked with white, the flanks slightly marked with black; upper tail-coverts rufous with black tips; tail bright tawny, with a blackish patch towards the tip of outer web; quills black at tip, ashy grey near the base, the secondaries paler and more silvery grey, all crossed with black bars; under wing-coverts white, as also the inner web of the quills; cere and feet yellow; iris yellowish brown.

In the foregoing stage, which does not occur in the allied *Buteo*

jakal, the under tail-coverts always incline more or less to rufous, which sometimes extends halfway up these coverts. Although, through the progress to maturity, the plumages are so different, yet in the fully adult black dress it is almost impossible to distinguish the present bird from *B. jakal*; and the only difference we can see is, that in the latter species the silvery grey on the wing is lighter, while the tail is darker and more decided chestnut. *B. jakal* generally has a rufous breast or 'apron,' but not always. The black markings on the tail of the latter never reach quite to the end but are always subterminal, and form a more or less perfect band.

Old male.—Black, the base of the quills externally ashy grey with black bars; the tail rufous, with black markings near the tip. Total length, 20 inches; culmen, 1.55; wing, 16.3; tail, 7.5; tarsus, 3.6.

Old female.—Similar to the male, but a little larger. Total length, 24.5 inches; wing, 18.75; tail, 9; tarsus, 3.6.

Fig. Rupp. Neue Wirb. taf. 16.

25. BUTEO AUGURALIS.

Salvadori's Buzzard.

Specimens of this Buzzard have been procured in Mossamedes and the interior of Benguela by Anchieta and Freitas Branco. Neither the author nor the editor are personally acquainted with the species, and the latter has, therefore, deemed it advisable to translate the full descriptions given by Professor Barboza du Bocage.—(Jorn. Lisb. II. p. 336).

Adult male.—Above dusky blackish, with a white nape-spot, the feathers of the back and wings margined with brown; sides of head and a cervical collar varied with rufous; forehead, loreal space, and throat white; lower throat and breast uniform with back; flanks and abdomen white, with large cordiform spots and streaks of black; under wing-coverts white spotted with black; quills dusky blackish, the inner webs white towards the base; primaries blackish at tip, secondaries banded with blackish; tail above rufous with a broad subterminal band of black, underneath greyish; cere and feet yellow; iris white.

Young male.—Above dusky rufous, the feathers dusky, edge with rufous; the hind neck more rufous, with a white but less conspicuous nape spot; underneath rufous white; forehead white, streaked with dusky; throat white; a large patch on each side of the breast dusky rufous; flanks and belly with large cordiform spots and streaks of

blackish; lower abdomen, vent, and under-tail coverts unspotted; quills dusky greyish, the inner webs white towards the base; tail above rufous, marked with eight transverse bands of black, underneath greyish; bill blackish; cere and feet yellow.

Adult female.—Above dusky, the feathers of the hind neck and of the back margined with rufous, the margins of the wing-coverts paler; forehead white, streaked with black; nape spot white; below rufous white, the sides of the breast more decidedly rufous, and marked with large dusky spots; flanks streaked with dusky; tail above rufous, the terminal half obsoletely banded, the two bands before the tip more distinct, below greyish; bill blackish; cere and feet yellow.

Since the above was written, Count Salvadori has kindly communicated the following diagnosis of the species, which has, moreover, been recently figured in the work on the birds of Bogos by the Marquis Antinori and himself.

Buteo B. auguri affinis, sed crassitie minori, capite supra ac dorso summo pulchrè rufis, brunneo mixtis; area cervicali nigricante; tectricibus alarum brunneis (nec nigris); pectore brunneo; gula albicante; abdomine pure albo, maculis subcordatis brunneo-nigris ornato, prorsus diversus.

Fig. Antin. & Salvad. Viagg. Bogos, tav. I.

26. BUTEO DESERTORUM.

Rufous Buzzard.

This bird is not common in the Cape Colony, but appears to be widely distributed. It frequents open country dotted with jungle, and is found also in the forests about George and the Knysna. Victorin procured it in the latter district in August. It appears to be absent in the eastern districts, as neither Mr. Rickard met with it near Port Elizabeth nor has Mr. Ayres procured it in Natal. The late Mr. Andersson, however, states that it is not uncommon in Ondonga, and Señor Anchieta obtained it at Caconda in Benguela. A specimen from the province of Duque do Braganza in Angola was at first referred to this species by Prof. Barboza du Bocage, but has been more recently determined by him to belong to *B. auguralis*.

The note of this bird is a weak stridulous scream. A specimen lived for some time in our taxidermist's work-room, and would eagerly answer to his name when called, by day or night. He would come to the hand and take from our fingers the bodies of the birds

skinned for mounting, or pounce from his perch upon any stray mouse that ventured near him. This bird we afterwards sent home to the Zoological Society, and after its death it passed into the collection of the British Museum.

Upper parts brown, each feather having pale edges and a black shaft. Head, pale fulvous, streaked with brown. Wing feathers dark-brown. Tail feathers fulvous, inclined to rufous, and narrowly barred with brown; the broadest bar at the tip. Under parts, pale fulvous, almost white on the chin and throat, streaked on the two latter, and blotched on the former with brown. Thighs rufous, faintly blotched with fulvous. Vent feathers pale fulvous. Length, 1' 8"; wing, 14"; tail, 7". Irides yellow.

Fully adult birds become throughout of a deep rufous-brown, blotched with dark markings. In this stage they constitute Le Vaillant's species, called *Le Rougri*, Ois. d'Alf., Pl. 17.*

It is a noteworthy fact however that Indian examples never put on the bright rufous phase of the African birds, nor are the young so white underneath. Mr. Hume (Rough Notes, II. p. 268,) in speaking of the Indian bird, writes:—"My own private belief is that ours is a larger bird."

Fig. Levaill. (jun.) Expl. Sci. Alger. Ois. pl. 3:

27. BUTEO FEROX.

Long-legged Buzzard.

Prof. Schlegel, in his catalogue of the Leyden Museum, gives this species as an inhabitant of South Africa on the authority of a female specimen procured in Caffraria by Van Horstock. Although the validity of this determination has never been called in question, the editor thinks it possible that the example in question may ultimately turn out to be referable to *B. jakal* or *B. desertorum*, which greatly resemble *B. ferox* in some stages of plumage.

* The late M. Jules Verreaux was of opinion that the "Rougri" of Le Vaillant is the ♀ of *Cerchneis amurensis*. Mr. Gray in his "Hand List" separates *B. desertorum* from *B. capensis*, but Mr. Gurney writes, "In my opinion there is no specific distinction between them: the birds are undistinguishable when adult, but when young the Cape specimens have often more white underneath, and some are also a trifle smaller." He has also expressed his opinion in the Birds of Damara Land that there is only one species to be recognised under the name of *B. desertorum*, though he does not fail to notice some differences.

The following description is extracted from the British Museum Catalogue:—

Adult male.—Above brown, all the feathers broadly margined with tawny rufous, except on the lower back and rump, where the feathers are uniform brown; entire head and neck tawny, with narrow brown streaks down the centres of the feathers, more distinct on the nape; sides of head and ear-coverts whitish, with narrow rufous shaft-lines; entire under surface rich tawny, deepening into chestnut on the abdomen and thighs, the throat and chest narrowly shafted with dark brown, a little broader on the breast and decidedly more distinct on the thighs, where the centres to the feathers are also brown; under wing-coverts and axillaries rich tawny, the outer median ones externally, and the greater coverts brown; upper wing-coverts brown, edged with rufous like back, the least ones more broadly; quills dark brown, the primaries externally shaded with silvery grey, the secondaries a little paler, especially the inner ones, which are light brown like the back, the primaries pure white for greater part of inner web, secondaries mottled and broadly barred with brown: upper tail-coverts brown, the external ones bright tawny; tail pale rufous, with white shafts, and inclining to whitish towards base of centre feathers, the two outer ones externally shaded with ashy grey, and marked near the end with an irregular spot of brown; cere yellowish green; orbital ridge dusky greenish; bill brownish plumbeous, yellow at gape, tip black; feet grey, or pale lemon yellow; iris brownish yellow. Total length 26 inches; culmen, 1·9; wing, 17·7; tail, 10·5; tarsus, 3·75.

Adult female.—Similar to the male, but slightly larger. Total length, 26 inches; culmen, 1·6; wing, 18·4; tail, 10·5; tarsus, 3·5.

Fig. Cretzschm. in Rüpp. Atlas, taf. 27.

Sub-fam. AQUILINÆ.

28. *GYPÆTUS OSSIFRAGUS.* Southern Laemmergeier.

This noble bird is locally distributed in the hilly parts of the colony. We have seen it often in Bain's Kloof, near Wellington; also in the high mountains round Mr. Jackson's residence at Nel's Port, near Beaufort, and at Swellendam. From this gentleman we have received sundry specimens, and he informs us that several pairs constantly breed in his neighbourhood; also that they will kill

lambs and sickly sheep. A pair of young birds was sent to the South African Museum from Graaff-Reinet by Mr. Ziervogel, the member for that division, who tells us that it is a constant (though rare) resident there. Mr. Ayres writes:—"Not at all plentiful in Natal. The only locality in which I have yet seen them, has been amongst the rocky hills of the Inanda location." He has more recently obtained it in the Orange Free State on a range of hills near Eland's River.

Mr. H. Bowker, Commandant of the Frontier Armed and Mounted Police, writes in *epistolâ*: "Do you know the story of the 'Arend' among the Dutch? It is supposed to be the Raven let out of the Ark, and it is considered very unlucky to do it any injury. Family sickness, insolvency, loss of cattle or sheep, are amongst the evils which will fall on the unfortunate wight who may interfere with them, so take care how you shoot one now that I have warned you!"

Adult.—Top of head dirty white, bill black; circle round the eyes, space between them and bill covered with black stiff hair, which extends on each side to the base of the lower mandible. A tuft of similar hair, of considerable length, projects outwards from under the bill. Back, wings, and tail dark blackish ash, each feather being light in the centre and darker on the edges, with white shafts and blotches. Shafts of wing and tail feathers white: tail wedge-shaped. Under parts white, tinged and coated with a reddish substance, which can be scraped off; iris pale yellow; sclerotic membrane blood red. Length, 3' 10"; wing, 2' 8"; tail, 1' 9".

Young.—Quite different from the adult, being brown, the whole of the head blackish; quills and tail paler than the adult; iris very bright greyish brown.

Fig. Rüpp. Syst. Uebers, pl. 1.

29. AQUILA VERREAUXI.

Verreaux's Eagle.

Mr. Andersson found this Eagle nesting in Little Namaqua Land on lofty rocks, but he adds:—"I cannot specify an instance of its occurrence to the northward of the Orange River."

Although it is found in North Eastern Africa, the limit to its range in the southern part of that continent as above given by Mr. Andersson seems to hold good.

Verreaux's eagle is not uncommon throughout the colony, wher-

ever rocky precipitous mountains are to be found. In these it fixes its eyrie, sallying out daily at early dawn in quest of food, and returning in the evening. One pair had their haunt in some of the rocks of the "Devil's Hill," near Cape Town, and sailed over the "Camp Ground" to and fro, night and morning, with the regularity of clock-work, to their hunting grounds somewhere on the Cape flats. We have never ascended Table Mountain without encountering a pair near the gorge which opens on to the top, but they never suffered us to get within range.

It is called "*Dassie Vanger*" (Coney-eater) and "*Berghaan*" (mountain-cock) by the colonists, from feeding principally on the coney, or rock-rabbit (*Hyrax capensis*). It also attacks the klip-springer antelope (*A. oreotragus*), darting at them when perched on pinnacles of the rocks (their favourite position), and hurling them headlong into the abyss below, into which they descend to feed on them at their leisure. They are also accused of killing lambs and sickly sheep, and carrying off the smaller antelopes from the low country.

Mr. Atmore writes, July 21st, 1864: "Fancy my knowing of two nests of *A. verreauxii*, but in such inaccessible places that no one can get at them. Large nests in rocks about 1000 feet high, just on a ledge 300 or 400 feet from the top." Messrs. H. Jackson and A. F. Ortlepp have both sent eggs of this fine eagle. The latter writes: "These birds lay about the beginning of July, on ledges of steep precipices, though not always, as I have heard of their nests in 'Paijbos'-bushes (*Rhus lucida*) along the Zeekoe river. Eggs two. For some time after leaving the shell, the young birds are quite white, more like balls of swan's down than birds. All our eagles are here called 'Lammerfangers.'"

An egg brought to us by Mr. Hugo, of Fransch Hoek, is chalky white, mottled throughout, and especially at the obtuse end, with rust-coloured and light-coloured spots. Axis, 3'' 5''; diam. 2'' 4''.

The title of *Aquila verreauxi* must be retained for this Eagle in preference to the unsatisfactory one of *vulturina* of Daudin. The latter name was bestowed on the "Caffre" of Levaillant. He apparently founded the "Caffre" on the present bird, and enters into a long description of habits which the bird does not follow. In fact, he never obtained a specimen: only saw it at a distance, and invented his account. Had he secured one, he never could have stated that

its talons were not fitted to carry away its prey: a single glimpse of the powerful, curved, sharp claws is enough to dispel this illusion.

Adult.—Jet black, with half the back and rump white; legs feathered to the toes, which are bright yellow; claws black, very strong, and curved. Length, 2' 9"; wing, 2' 1"; tail, 13". The young bird is fawn brown, inclining here and there to black, according to its age.

Fig. Des Murs in Lefebvre, Voy. Abyss. Zool. pl. iv.

30. AQUILA RAPAX.

Tawny Eagle.

Aquila senegalla, Layard, B. S. Afr. p. 10 (1867).

This bird seems to be very common at Kuruman, Colesberg, Nel's Poort, Beaufort, and the Karroo generally.

Mr. Rickard notes it from Port Elizabeth, but Mr. Ayres says that it is rare in Natal; the same gentleman has met with it in the Transvaal territory. According to Mr. Andersson, it is not uncommon in Damara Land, and Great Namaqua Land, and Senor Anchieta has obtained numerous examples at Huilla in the Mossamedes district.

I should fancy, from the behaviour of one which we kept for some time in confinement, and which went to the Zoological Gardens, Regent's Park, that it would make a good hunting eagle. Mr. Arnot, of Colesberg, from whom it was received, tells us that it became quite as tame with him as with us. We have been informed by the Messrs. Jackson, of Nel's Poort, that these birds constantly accompany persons in pursuit of game, and have been seen by them to carry off wounded Vaal Knoorhaans (*Otis vigorsii*) and hares. Their depredations on the flocks cause them to be killed on all occasions; but they are still very numerous in the Karroo. We found a nest, evidently inhabited by young birds, in the month of January. It was a large mass of sticks in the top of a high, scraggy, and to us inaccessible tree, on the banks of the Dwass River, near Mr. Jackson's residence. Mr. H. Jackson subsequently took two eggs from this nest in the middle of June. They were of a rounded oval, white, more or less spotted and blotched with dry blood-coloured spots and patches. Axis, 2'' 9''; Diam. 2'' 1''. Mr. Henry Buckley writes: "They vary from 2·82 × 2·17 inches to 2·70 × 1·52. In colour they are white, blotched with faint ashy grey." One that

we killed near the same place had frogs and fish in his throat: he was sitting by the river, close to the water's edge, evidently fishing.

Mr. Artlepp writes (July, 1868): "A few weeks ago, a pair darted down on a flock of merino ewes and lambs, and only flew off after having despatched forty of the latter! At the time this happened, the sheep were in charge of a small bush-boy in a secluded kloof, far away from the homestead. They quite disregarded the boy, and were only put to flight when the unfortunate owner made his appearance with a gun."

General colour rufous-brown; tail and wing feathers dark-brown; the former tipped with rufous. Eyebrow and hairs covering the space between the eye and the bill very dark brown, almost black; from the angle of mouth on each side of chin, a dark rufous patch. Bill black; cere and toes yellow; irides the same. Legs feathered to the toes. Length, 2' 8"; wing, 1' 11"; tail, 12½".

Mr. Gurney observes:—"The great peculiarity in the adult of this Eagle is that most of its feathers are parti-coloured—a portion of the feather being rich rufous and the remainder dark purplish brown.

"This peculiarity does not exist in the plumage of the young bird, which is also much paler than that of the adult. Andersson says that the iris in adults is pale yellow freckled with brown, and in immature birds brown—a young specimen killed by Ayres had the iris light brown."

Fig. Lilford, *Ibis*, 1865, pl. 5.

31. *AQUILA WAHLBERGI.*

Wahlberg's Eagle.

This species was first discovered by Wahlberg in Caffraria, but only one example has ever fallen under our notice, having been obtained at Kuruman by our friend, Dr. Exton. Senor Anchieta has, however, met with it very plentifully at Huilla in Mossamedes, and also at Humbe, on the river Cunéné.

Exton's specimen was throughout of a dark coffee-brown, variegated on the crown of the head, with light brown, wing and tail feathers shot with purple; legs, feathered to the toes; head, with a slight occipital crest. Length, 24"; wing, 17"; tail, 10" 2'''.

Fig. Gurney, *Trans. Zool. Soc.* Vol. iv. pl. 77.

32. NISAETUS PENNATUS.

Booted Eagle.

Aquila pennata, Layard, B. S. Afr. p. 10 (1867).

Le Vaillant found this species only in the forests of Outeniqualand, perching on the summits of high trees, and shy and difficult of approach. Dr. Smith cites it as from near "Heeren Logement," in Clanwilliam. A young bird, shot by Mr. Jackson at Nel's Poort, is entirely of a dark-brown colour, in some places inclining to black. He tells us he was attracted to it by its peculiar cry, and has never seen another.

We have procured it at Saldanha Bay on the West Coast, and found it breeding on the Berg River in the month of September. It has also been obtained near Grahams-town, but has not yet occurred to Mr. Ayres in Natal or the Transvaal, though Dr. Dickerson procured a single example at Chibisa in the Zambesi district. Mr. Gurney also states that Mr. Andersson's last collection contained one of these Eagles obtained in Ondonga, Ovampo Land.

The nests are placed in trees, very similar to those of *Buteo jackal*; the eggs are generally two, of a dirty white ground, more or less blotched and smeared with light reddish-brown; axis, 2" 5''; diam., 1" 10''. Our son also found a nest containing a pair of eggs at Grootevaders-bosch, near Swellendam. The nests we examined all contained green leaves. Mr. Henry Buckley sends the accompanying note:—"An egg of this species sent me by Layard from South Africa is white blotched with light brown, and measures 2.17 × 1.78. Eggs from Spain measure 2.03 to 2.24 long by 1.7 to 1.82 broad (*Vide Ibis*, 1866, p. 389). Hume (*Scrap Book*, p. 187) records an Indian egg measuring 2.13 × 1.78."

Above brown; the shoulder feathers margined with white; ears and space behind the base of the lower mandible brown-black; under parts white; the breast and anterior part of belly streaked with brown-black; tail nearly even, black-brown, variegated with narrow, irregular, wavy bars of a darker tint, and all tipped with obscure white; legs feathered to the toes. Length, 20"; wing, 14"; tail, 8".

Fig. Dresser, B. of Eur. part xxxii.

33. NISAETUS SPILOGASTER. African Hawk-Eagle.

Aquila bonellii, Layard, B. S. Afr. p. 11 (1867).

Spizaetus spilogaster, id. t. c. p. 14.

This species bears so close a resemblance to *N. fasciatus* of Europe, that it has on more than one occasion been confounded with it. According to recent determinations, however, that bird is not an inhabitant of South Africa, and it is probable that the young specimen procured by Senor Anchieta at Biballa, and determined to be *N. fasciatus*, is really not that species but the present one.

Only two examples are known from the Cape Colony. One was taken alive in the neighbourhood of Cape Town, probably wounded by a gun-shot. He lived a few days in our possession, and was remarkably bold and fearless. He eat everything thrown to him—raw meat, birds, rats, and even fish.

Another was shot at Wynberg, in Mr. Trotter's garden, after having made considerable havoc among the fowls in two previous visits. Mr. Andersson procured several specimens, and informs us, *in epistolá*:—"Its flight is heavy, but when once risen to a certain height it soars powerfully. It perches on trees or rocks; but to the best of my belief roosts only on the latter: its food consists of small quadrupeds."

Mr. Ayres met with it in Natal and further north Dr. Dickerson obtained three specimens in the Zambesi region at Magomero and Chibisa. Mr. Andersson writes:—"I have obtained examples of this Eagle at Objimbinque, the mouth of the Onanès River, Bull's Port, the Omaruru River, and Ondonga." More recently Senor Anchieta has procured it at Gambos, in Mossamedes, and at Humbe, on the river Cunéné.

General colour above dark-brown, approaching to black, mottled throughout with white; below white, blotched longitudinally on the breast and belly with dark-brown; vent white, tinged with chestnut. Tail ashy-grey with a broad black bar at tip. Legs white, feathered to the toes. Length, 2'; wing, 17"; tail, 11". Irides yellow; cere and base of mandibles greenish-yellow; anterior portion dark horn-colour.

Young.—Differs from the adult in being browner, and is uniform tawny rufous underneath: tail-feathers ashy-grey with seven ill-defined blackish cross-bands.

Fig. Müll. Beitr. Orn. Afr. taf. 1. Gurney, Ibis, 1862, pl. 4.

34. SPIZAETUS CORONATUS.

Crowned Hawk-Eagle.

This is a rare bird in South Africa, and very few examples have come under our notice. One was trapped in the mountains near Fransch Hoek, about fifty miles from Cape Town, and another was shot at the Knysna by Mr. G. Rex, while the Grahams-town Museum contains a fine female, which we describe below. Mr. Ayres has procured it in Natal, but it never occurred in any of Mr. Andersson's collections, though he believed that he saw it in Damara Land on at least two occasions. The Lisbon Museum contains a specimen from Angola, and it is known from various localities on the west coast as high as Senegal.

Mr. W. Atmore writes :—" This species prefers thickets of mimosa-trees, and is very destructive to geese and young lambs. It makes a large nest in a mimosa, and lays two large white eggs, much pointed at the small end."

One of these eagles, shot by Mr. Ayres had just killed a monkey (*Cercopithecus lalandii*).

It is easily distinguished from *S. bellicosus*, and the other more common species, by the comparative roundness and shortness of the wings, and great length of tail. A fine adult female in the Grahams-town Museum may be thus described :—

General colour of upper surface a rich warm dark brown approaching to black. Head crested—crest coloured like the upper parts; cheeks below the eye and sides of neck lighter brown; below this a black collar; chest rufous; belly and under tail-coverts white, transversely crossed by bold broken black bars. Legs feathered to the toes, profusely mottled black and white; on the inner sides the black spots are smaller in size than on the outer, where they assume the form of blotches. Inner surface of wing along the shoulders and ramus deep rufous edged with black followed by a broad band of brown; primaries greyish-white crossed by four bands of grey brown, the two nearest the quills more or less indistinct and broken, the next narrower but more defined, the outermost very broad and distinct; tips of feathers grey-brown. On the outer surface of the wing these bands appear black on a reddish, or greyish-brown, ground. Tail beneath greyish-white crossed by five black bars, that nearest the tip being the broadest; above the same but darker. Upper tail-coverts black tipped with white.

Irides yellow; bill and claws horn-colour; toes yellow. Length, 3'; wing, 1' 9"; tail, 1' 3".

Immature birds are much paler than the adults, and are almost entirely white underneath.

Fig. Smith, Ill. Zool. S. Afr. pls. 40, 41.

35. SPIZAETUS BELLICOSUS.

Martial Hawk-Eagle.

This species is very scarce in the colony, only two specimens having fallen under our notice. One was procured at the Knysna by Mr. George Rex, the other at Colesberg by Mr. Arnot.

Mr. Guenzius procured a specimen in Natal, which was shot with "a young goat in its talons," and Mr. Rickard has obtained it at Port Elizabeth. The latter gentleman writes:—"Mr. Hallack informs me that a fine male was killed at Betheledorp in May, 1869." Mr. Baines shot one between Mount Lubels and Mount N'guiba, twenty or twenty-five miles south of Lake N'gami. Regarding its occurrence in Damara Land, Mr. Andersson observes:—"I never identified but one pair, which I found close to Objimbinquo and the female of which I killed."

It is of this species that Mr. Atmore writes, *in epistolá*:—"Just as we were leaving the Knysna, we heard of an eagle's nest in the forest, and under the tree the person who found it counted 95 heads of the little 'Blue Buck' (*Cephalophus cerula*)." Mr. Tom Atmore informs us that the tree was an enormous "yellow-wood," quite inaccessible; and the nest a huge mass of sticks impervious to a bullet. The Hon. Mr. Vigne informs us that one of these birds attacked his sheep-kraal and killed the lambs. It was ultimately caught in a steel trap placed near the kraal,

Mr. Harford gives me the following description obtained from Mr. T. Ayres of the egg of this species:—"Chalky white, faintly spotted and blotched with light reddish brown, shape roundish. Axis, $3\frac{5}{16}$ in.; diam. $2\frac{9}{16}$ in. The nest was taken in the Orange Free State, June 10th, 1870, placed in a large tree, old and gnarled, on the side of a rough pyramidal granite hill. It was about five feet in diameter, composed of the usual rough sticks, and lined with fresh green twigs. It contained one egg only, and that much incubated." This egg and the old bird are now in the collection of Canon Tristram.

Adult.—General colour above, chest and neck dark grey-brown; beneath white, spotted with very dark-brown; thighs barred with the same; large wing feathers, dark brown: the lesser ones and tail transversely barred with grey. Talons black, much curved and strong; legs feathered to the toes. Length, 2' 7"; wing, 1' 11"; tail, 12".

The young bird is pale brown, and is much lighter everywhere than the adult, the under surface being almost entirely white.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 42 (*adult*). Levaill. Ois. d'Afr. pl. 1 (*young*).

36. LOPHOÆTUS OCCIPITALIS.

African Crested Eagle.

Spizaetus occipitalis, Layard, B. S. Afr. p. 13 (1867).

This beautiful Eagle is a bird of the eastern districts, being decidedly more common there than elsewhere. Victorin procured it at the Knysna in July, August, and October, and Mr. Atmore, to whom we are indebted for specimens, describes it as not uncommon in the neighbourhood of Traka.

We saw it in some abundance in the forest country about the Katrier, Kowie, Fish-river, &c. It did not appear to be shy, but allowed us to ride past it on several occasions.

Dr. Atherstone notes it from the neighbourhood of Grahams-town, and Mr. T. C. Atmore procured it near Elands' Post. Mr. Rickard states that he got three specimens at Port Elizabeth, and found the bird very plentiful at East London. Mr. Ayres records it as common in Natal, and Dr. Kirk informs us that in the Zambesi country it "frequents the neighbourhood of rivers. It was not observed in the mountains, but was common in the Shiré and Zambesi Valleys."

It has not been recorded by Mr. Andersson from Damara Land, nor has Senor Anchieta met with it in Benguela, but a specimen from Angola is in the Lisbon Museum.

Mr. Atmore writes:—"The crested Eagle is a gentleman of low tastes. One was eating an owl (*S. capensis*) the other day. Tom could easily have shot him, but mistook him for a *Butco jackal*. He is not uncommon about George, and not at all difficult to get at: sits for hours on a naked pole. I saw several during my survey, and might have bagged at least four, but had no gun with me." Mr.

T. C. Rickard writes :—" In the stomach of one I found a full-grown rat, eleven young ones, and a mouse."

Dr. Atherstone remarks of a specimen which he had alive :—" He used to walk up and down the river's bed catching frogs, and afterwards was so mean as to kill our pet toads and lizards on our grass plat." Le Vaillant says they build on lofty trees, and line their nests thickly with feathers and wool : lay two round eggs, blotched with brownish-red.

Upper parts glossy-brown, approaching to black, darkest on extremities of wings and tail, and lightest on the shoulders and cheeks. Tail barred more or less faintly with white on the upper side, the wings with black. Head crested ; crest-feathers very long, and nearly black ; feathers of head minutely tipped with white. Under parts almost black ; legs feathered to the toes, and nearly pure white ; inside of quill feathers of wings and tail silvery-grey ; barred with deep-brown. Iris bright yellow. Length, 25" ; wing, 16" ; tail, 9" 9'" ; length of crest, 5" 6".

Fig. Levaill, Ois. d'Afr. pl. 2.

37. *ASTURINULA MONOGRAMMICA.*

African Buzzard Eagle.

The appearance of this bird is of interest as connecting the Avifauna of Southern Africa with that of the more northern portions of the continent. Dr. Hartlaub has described the Angolan bird as distinct from the ordinary form of Western Africa and in his catalogue of the Accipitres (p. 277) the editor was inclined to recognise this fact and separated it as *Asturinuia meridionalis* (Hartl.), but having recently examined a series along with Mr. Gurney, he has come to the conclusion that the difference may be sexual, as he found a closely-barred specimen from West Africa. We therefore extract from the above-mentioned work a description of the Gambian bird, remarking at the same time that *A. meridionalis* was separated from *A. monogrammica* on account of its having the bars on the lower parts much broader and darker, especially on the thigh feathers, and the white band on the tail much narrower. These characters were maintained both in the typical specimen from Angola as well as in a Zambesi skin in Shelley's collection.

The African Buzzard Eagle only just enters the country treated of in the present work, and never seems to come as low as the Cape Colony or even into Natal, as far as we know at present. Captain Shelley possesses a Zambesi specimen, and here it would seem to be

tolerably common, as Dr. Dickerson procured four specimens, at Quilimane, Magomero, and Chibisa: Dr. Kirk also states that it is found in the open forests of the Shiré Valley. On the western side it has been shot once in Damara Land by Andersson, who obtained a single example at Elephant Vley on the 26th of October, 1859. Senor Anchieta has likewise killed it at Capangombe in the interior of Mossamedes.

The following description is from the British Museum Catalogue:

Adult.—Above dark slaty grey, the head and sides of the face lighter, the wing-coverts also a little paler grey, the edge of the wing white, with which colour the outermost of the upper primary coverts is edged; quills blackish, all tipped, and the outermost edged, with white, the secondaries ashy grey like the back and more broadly tipped; all the quills white at the base of the inner web, extending in notches for some distance up the feather; lower back and rump blackish; the upper tail-coverts and immediate base of tail white, forming a broad band; tail blackish, broadly tipped with white, and having one conspicuous white band across the centre; lores and feathers in front of the eye whitish; throat white, with a very broad streak of black down the centre; fore neck, sides of neck, and chest ashy grey; rest of under surface, including the flanks and axillaries, thickly barred with white and ashy brown; under wing- and tail-coverts white; cere, orbits, and base of lower mandible bright cinnabar-red; bill dark leaden horn-colour; feet vermilion; iris umber-brown. Total length, 12 inches; culmen, 1·1; wing, 8·9; tail, 5·8; tarsus, 1·95.

Adult female.—A little larger than the male. Total length, 13·5 inches; culmen, 1·2; wing, 9·5; tarsus, 2·1.

Fig. Swains. B. W. Afr. i., pl. 4.

38. CIRCAETUS CINEREUS.

Black-breasted Harrier-Eagle.

Circaetus thoracicus, Layard, B. S. Afr. p. 15 (1867).

This fine Eagle is generally distributed in the Colony, although rather rare. Mr. H. Gird, M.L.A., obtained a noble pair on his farm, Oliphant's Fontein, which are now mounted in the Museum at Cape Town. Victorin procured it in the Karroo, and Mr. Henry Jackson says that in this locality they are always found near water and not in the mountains. We ourselves found it breeding at the Berg river and we also saw it about Grahams-town and the Kowie mouth.

Mr. Ayres states that it is not rare in Natal, but extremely wild, and he has also procured it in the Transvaal. One specimen was shot in the Zambesi country by Dr. Dickerson at Chibisa, and we saw several pairs on the East Coast of Africa, and shot two at Fazy, a native village within a degree and a half of the Line; here they seemed quite fearless and allowed an easy approach. Senor Anchieta has obtained it at Biballa and Huilla in Mossamedes, and also at Humbe on the River Cunéné. Mr. Andersson writes: "On March 1st, 1865, I observed an adult soaring very low, just in front of my window [probably at Objimbinque] and I have subsequently killed this bird in Damara Land."

In the colony it frequents mountain ravines clothed with timber, and keeps to the same spot for many successive years: shy and suspicious, it rarely falls to the gun. Mr. Ayres (*Ibis*, 1860, p. 203) says that the stomach of one he killed contained the remains of lizards and of a poisonous snake, which could not have been less than seven or eight feet in length. "This snake," he adds, "is called by the Caffres '*Armaumbak*.' A favourite dog of ours, bitten last year by a snake of this species, died from the effects of the poison in less than an hour."

Mr. Henry Jackson has sent an egg of this fine bird from Nel's Poort. He says that they nest in the top of a high tree and lay but one egg: the latter is pure white and its axis measures about 3·1 inches, the diameter being 2·4. At the Berg river we found that they bred yearly on the tops of dense bushes in the month of September. Some of the eggs procured by us and by Mr. J. Kotze were slightly spotted. Mr. Henry Buckley writes: "The egg of this species is pointed, white, and is 2·75 inches long by 2·27 broad."

Adult.—Head and neck blackish-brown, tinged with grey; back and shoulders of the same colour, each feather tipped with white. Throat black and white; breast brownish-black; lower parts white; tail grey, crossed with broad black bands, tipped with white. Length, 29 inches; wing, 21; tail, 11; tarsus, 3·85; iris pale straw-yellow; cere and gape olive-yellow; bill blackish.

Young.—Above brown; the feathers of the head and upper surface broadly margined with light tawny or pale fulvous; quills blackish, the secondaries browner, all broadly margined and tipped with pale tawny, inner webs white below; the secondaries ashy grey towards their tips; tail brown, tipped with fulvous and crossed with three

indistinct bands of ashy grey; head and neck tawny, with narrow central shaft-stripes of dark brown, much broader on hind neck; lores whitish; over the eye a narrow line of black feathers; ear-coverts a little browner than the head, washed with tawny and narrowly streaked with darker brown; under surface of body light orange tawny; the throat whitish and streaked with narrow shaft-lines of dark brown extending on to the chest, but absent on breast and abdomen, which are much varied with white bases and bars to the feathers; the under tail-coverts white, with broad bars of tawny.

The description of the young bird is from the Museum Catalogue. It should be noted that the adult form of this Harrier Eagle with the black breast-band and white under-surface has not yet been met with north of the Equator, and it is considered by some ornithologists that two species are confounded under the name of *C. cinereus*.

Fig. Rüpp. Neue Wirb. pl. 14.

39. CIRCAETUS FASCIOLATUS.

Banded Harrier-Eagle.

This species, which is quite a distinct one, does not appear to come within the limits of the Cape Colony, and as far as we know at present is confined to Natal. Mr. Gurney, writing in 1868, says: "It appears to be very rare, and I have only seen three examples of it, which were all obtained in the Colony of Natal." Mr. Ayres states that it inhabits the dense bush along the coast. Mr. Gueinzius found the stomach of one full of termites.

General colour above brown; below, throat and chest light brown; chin white; belly, breast, and flanks white banded with brown; tail yellowish brown with four bands of dark brown, tip edged with white; irides, legs and cere yellow. Total length, 25 inches; wing, 14.6; tail, 10.5; tarsus, 3.4.

Fig. Gurney, Ibis, 1862, pl. 3.

40. GYPOHIERAX ANGOLENSIS.

Vulturine Sea-Eagle.

The occurrence of this bird below the River Quanza, which we have assigned as the northern limit of this work, compels us to include it here, but it is strictly a West African bird, and cannot be found in any numbers below the above-mentioned river. Nevertheless, Heer Sala, a Dutch collector, obtained an example at Kattenbella in Benguela on the 10th of December, 1868. In recording this specimen in a paper on Angolan birds forwarded by Mr.

Monteiro, the editor was induced to accept from Mr. Keulemans an apparently circumstantial account of its breeding in the Cape Verde Islands. Hearing from many reliable authorities that only the common *Neophron percnopterus* was found in these islands, the editor has repeated his enquiries of Mr. Keulemans as to his being sure of the identification of the species, and he has lately admitted that he believes the account of the breeding-habits refer to *N. percnopterus* and not to *G. angolensis*. Much as he regrets the publication of these notes, the editor believes that any one would have followed his example in accepting such a detailed account of the breeding of this rare species. The following description is from the Museum "Catalogue."

Adult male.—General colour white, the following parts black: scapulars except the very highest, which are mottled with white; quills, the primaries for the most part white, excepting the tips which are black, and the outer web which is more or less mottled with black, the inner web less so; tail black with a very broad white tip forming a terminal band; all the rest of the body white; head slightly crested; cere grey; bare skin of face flesh-colour; feet rosy flesh-colour; iris light yellow. Total length, 23 inches; culmen, 2·5 wing, 17·2; tail, 8·8; tarsus, 3·35.

Adult female.—Similar to male, but larger. Total length, 24·5 inches; culmen, 2·7; wing, 17·0; tail, 9·5; tarsus, 3·5.

The young bird is brown, resembling in general appearance the immature Egyptian Vulture.

Fig. Wolf, Zool. Sketches, pl. 38.

40. HALIAETUS VOCIFER.

African Sea-Eagle.

This fine Sea-Eagle is found generally in pairs, frequenting the embouchures of rivers, lakes, and other parts of the colony, where wood and water afford a congenial home.

Le Vaillant procured it on the Orange River. Mr. Chapman brought it from the Zambesi, and we saw it as far North as Fazy. It is common at the Knysna, forming an enormous nest of sticks and rubbish. Victorin also appears to have met with it in great numbers at the latter place. Mr. Rickard notes it from East London where it is called the "Rock-Eagle." He writes: "A pair or two are generally seen near the mouth of the Buffalo: they are said to breed in the large Euphorbiæ on the river banks."

In Natal, according to Mr. Ayres, it is found frequenting the bays and lakes along the coast, and the same gentleman has recently obtained specimens in the Transvaal.

Dr. Kirk gives the following note: "On the lakes and rivers; common among the mangrove creeks of the coast; on the Zambesi, above the great falls, and on Lake Nyassa; in fact, wherever the forest comes down to the shore, or high rocks overhang it." Mr. Andersson writes as follows: "It is not an inhabitant of either Damara or Great Namaqua Land, but is tolerably common in the Lake-region and its water-sheds, and also along the course of the Okavango." Senor Anchieta has quite recently procured it at Humbe on the River Cunéné.

This species feeds on fish, crabs, and reptiles, and will not refuse carrion sheep, &c. (Le Vaillant says he has found antelope bones in their nests), resorting usually to some bare rock or dead tree to devour its quarry.

Mr. W. Atmore records that they destroy lambs, and while on a visit to Mr. John Van der Byl's farm, Nacht-wacht in the Strand-Veldt, we found a young bird just shot. It was still in the immature brown plumage, but had committed terrible depredations on our friend's young lambs, slaughtering one or two daily. He was shot in the act and we had him to skin.

Le Vaillant says the eggs are white, and shaped like those of a turkey, only larger. One was sent to us by Mr. A. F. Orllepp taken from a nest in the head of an old pollard willow growing on an island in the Orange River. It was white, but not so pointed as the egg of a Turkey.

Adult.—Head, breast, and top of back and tail pure white; wings and back nearly black, the larger feathers edged with white; upper parts of the wing reddish-brown. Belly and thighs deep-reddish brown. Cere and legs yellow. Irides yellow. Length, 2' 8"; tail, 11".

Young.—Differs from the old bird principally in being more dingily coloured and in not showing the contrast of colours as in the adult; thus the whole of the head, neck, and breast are more or less brown in the young, though generally giving indications of approaching whiteness, especially about the ears and lower breast, the crown being the last to change; least wing-coverts blackish, with rufous margins, the rest dark brown, but the greater ones for the most part

white, causing a large patch across the wing; lower parts of the belly brown, more or less varied with white, the thighs inclining to rufous; tail ashy white, brown at the tip, and more or less brown on the rest of the feather; gape whitish yellow; orbits and cere dusky; bill dusky bluish; iris darker hazel than in the adult.—(Sharpe, *Cat. i.*, p. 311).

Fig. Des Murs, *Iconogr. Orn.* pl. 8.

42. HELOTARSUS ECAUDATUS.

Bateleur Eagle.

This Eagle is not very common in this colony, single pairs frequenting high mountain ranges near Caledon, and a few other spots. We saw several along the East Coast of Africa, and obtained a living specimen from the Governor of Mozambique, which lived with us upwards of two years. It fed voraciously on carrion of all kinds, including fish, but never molested living things—indeed, we kept him for a long time in the fowl-house with the fowls, but had to turn him out, as he devoured the eggs as fast as they were laid by the hens.

I have seen a specimen from Lake N'gami, procured by Mr. Chapman; and Mr. Atmore killed another with a stick in a wood at the Knysna. He also found it about Blanco. He writes, May 25, 1864: "We are going to lay wait for an 'Arend' to-morrow evening. He always sits on one particular yellow-wood tree in the forest; but he examines the premises very closely before he perches. What a beautiful flight they have, sailing about without even flapping a wing; and when they stoop they come out of the sky like a lightning flash. There are several here, and we know of a nest; but they breed late, so no chance of eggs; but we will give it a look up on our return trip." He further declares that it kills its own food and never, in the wild state, touches carrion, but Mr. Ayres states that it feeds on carrion, moles and snakes.

The latter gentleman writes: "It is found in Natal and also in the Transvaal." Mr. Gurney has seen two young birds of this species which were obtained from a nest situated in a lofty and rocky precipice by the side of a river, a few miles above the town of D'Urban. Dr. Kirk says it was frequent in the marshy lands of the River Shiré.

Mr. Andersson observes that it is probably the most common Eagle in Damara and Great Namaqualand; it is usually found in

plains. Several pairs bred in the neighbourhood of my place at Objimbiqué." Senor Anchieta has obtained it at Gambos in Mossamedes and at Humbe on the river Cunènè.

Adult.—Head, neck, and nearly the whole of the upper and under parts of the body black; back and tail deep-red; lesser wing-coverts rufous; head crested and frilled; cere deep-orange; feet crimson. Length, 2'; wing, $16\frac{1}{2}$ "; tail, $5\frac{1}{2}$ ".

Some specimens are found with a cream-coloured back (*H. leuconotus*), but whether this plumage indicates an adult *H. ecaudatus*, or a distinct species, it is difficult to say. A specimen of this light-backed race is in the British Museum from South Africa, so that it occurs along with the ordinary Bateleur in the southern part of the continent.

Fig. Heuglin, Orn. N. O. Afr. pl. ii.

43. MILVUS ÆGYPTIUS.

Yellow-Billed Kite.

Although a rare bird within the colony, so much so that it does not occur in Victorin's list, nor in the collections of our excellent correspondent, Mr. Rickard, this species is more plentiful in South Africa than the Black Kite. Mr. Ayres records it as common in Natal and Transvaal, and Dr. Kirk says that it "arrives in the Zambesi Valley from the north in August, and is very abundant along the river." Mr. Andersson shot it at Ondonga, and notes that it is "more common than the Black Kite in Damara and Great Namaqua Land, whence it migrates from the neighbourhood of the Equator." (Cf. Gurney in Anderss. B. Dam. Ld. p. 23.) Senor Anchieta has procured it in many localities during his travels in Mossamedes, viz., at Biballa, Quillengues, Caconda, and Ambaca, and more recently at Humbe, on the Cunènè River.

Le Vaillant states that it inhabits Great Namaqua Land, builds amongst trees or rocks, but prefers marshy ground, where it makes its nest on some raised spot amongst the reeds. Eggs four, white speckled with red. It is a bold and hardy bird, pursuing its prey even in inhabited places.

In November, 1863, we observed a single specimen flying over the village of Ceres, in the Cold Bokkeveld. We have also received it from Kuruman, and observed it along the East Coast as far as Fazy. A pair frequent the homestead of the Honourable T. H. Vigne, at Tyger Hoek, River "Zonder End" (1865). The flight and habits of

this species differ in no way from those of the Common Kite of India; indeed, until we shot one, we did not discriminate that any difference existed. Eggs procured by Mr. J. Kotze and ourselves at the Berg River are dull white, sparsely spotted, blotched and streaked generally at the thick end with dry blood-coloured markings. Axis, 2" 3''; Diam. 1" 9''.

The whole of the upper parts tan-brown, each feather with a paler edge; breast tan-brown; top of head, neck, cheeks, and throat whitish or light brown; the centre of each feather being dark-brown inclining to black, gives a striped appearance. Lower part of body, thighs, and under part of tail cinnamon-colour. Wings very long and pointed, tail deeply forked. Legs and bill straw yellow in the adult bird, and dark yellowish-brown in immature specimens; iris brown, cere yellow. Length, 21''; wing, 17''; tail, 10''.

Fig. Levaill. Ois. d'Afr. 1, pl. 22.

44. MILVUS KORSCHUN.

Black Kite.

Milvus ater, Layard, B. S. Afr. p. 25 (1867).

Although not migrating as far south as Cape Town itself, this Kite is by no means uncommon in Southern Africa. We first received it from Mr. Arnot, of Colesberg, who shot it in a street of that town. We have since had specimens from the Zambesi, brought down by Mr. J. C. Chapman. Mr. Andersson writes:—"It appears in Damara and Great Namaqua Land with the first rains, or even before."

From Mr. Chapman's descriptions, it appears to resemble in habits *M. govinda* of India and Ceylon, frequenting by preference the neighbourhood of native towns, near water, and feeding upon offal, particularly that of fish. It wheels round in large and easy circles, rising and falling, without flapping its wings, for an immense length of time. It catches up its food with its foot, and eats it in the air, bending the head down, and bringing up one or both feet to meet it. Eggs in our possession are of a dull white, with here and there coarse dry blood-coloured dots. Axis, 2" 2''; diam. 1" 9''.

Mr. Ortlepp says this species has long been known in Colesberg, where it is called "*Kuikenduif*" (chicken thief). Mr. H. Bowker says "it is probably so called from the fact that it has never been seen to touch one unless thrown away dead! While hunting near Bloemfontein in the Free State, I have suffered from their stealing

the Biltong (dried flesh) and whatever they could get hold of from the waggon—in fact they will sweep down at the fireplace, and before you know where you are, carry off a piece of meat. One day we came home from hunting, and were getting our dinner at the fireplace—a fine wildebeest's tongue was taken out of the pot and placed to cool on a flat stone about a yard from where we sat—down came a fellow, and though there was a rush and a scramble from the nearest man, it was too late, and the Kite carried off the prize to a koppie about 300 yards off and ate it at his leisure. On another occasion I saw one swoop down and take a piece of raw meat from a Kaffir girl's head which she was carrying to her hut."

"The nest from which I took the eggs sent was in a large pollard willow on the banks of the Caledon river, made of dry willow-sticks, and lined on the inside with hair chiefly from the hairy *exuviae* of dogs and other animals. The old birds were very bold almost striking my hat off while at the nest. In blowing the eggs I found a considerable difference in the size of the young birds, that in the white egg being almost ready to hatch, the other in the egg slightly coloured next in size, while that in the deeply marked one was but just formed."

Dr. Exton writes :—" *Milvus korschun* is said by the Matabili to be the "King's bird," and is respected by them. One of the King's sons examining my specimen said that they never killed that bird. It does not seem very choice in its food, as the gizzards of those I examined contained both locusts and lizards, and I have seen family parties dining after the manner of Vultures off the putrid carcase of an ox. They breed about the time the locust *larvæ* become developed, the young birds just taking wing when the "hoppers" are becoming strong on the ground. They then congregate in flocks and I have counted between eighty and ninety hovering over an army of infant locusts and have seen them in still greater numbers, some on the ground busily devouring the hoppers, and others perched on the neighbouring trees gorged with a full repast. The Matabili name is "Mezwazwa."

Mr. Henry Buckley sends us the following measurements of Spanish eggs of the present species :—"They vary from 2·15 × 1·57 inches to 2·28 × 1·69, and in colour they are white, spotted or blotched with brown."

General colour deep hair-brown, tinged with rufous on the under

parts, particularly on the flanks, thighs, and under tail-coverts; each feather has a black shaft. Tail much forked, and barred with grey-brown. Bill black at all ages. Iris brown. Length, 21''; wing, 18''; tail, 10''.

45. *ELANUS CÆRULEUS*.

Black-shouldered Kite.

Elanus melanopterus, Layard, B. S. Afr. p. 26 (1867).

According to our own experience in South Africa this is a migratory species, appearing about Cape Town in the month of May. Victorin, however, procured it in the Karroo in January and February, and at the Knysna in April, May, July, August and December. Mr. Rickard states that it is common at East London, and Mr. Ayres records that it appears to be equally distributed throughout Natal and Transvaal. Dr. Kirk notes it as very common both on the Shiré and Zambesi.

Mr. Andersson writes as follows: "Rare in Damara Land, and is only found about the estuaries of some of the large periodical water-courses; but it is not uncommon at Lake N'gami and its watersheds." Senor Anchieta has procured it in Mossamedes at Ambaca and Biballa, and Mr. Monteiro in Angola.

According to Le Vaillant, it builds in the fork of a tree; the nest large, lined with feathers and moss. Eggs white; four or five in number. It perches on the tops of trees or bushes, and utters a frequent and very piercing cry, especially when in flight. Its food consists of insects. We have also found it devouring small birds and reptiles. It is a bold and fearless bird, and generally allows of approach within gunshot. It is migratory, appearing about Cape Town in the month of May. To a certain extent this species is gregarious: we counted nine roosting in one tree at Eerste River, and several more were flying about close by: they had probably been attracted by an exodus of white ants which had taken place that afternoon. Mr. Atmore confirms Le Vaillant's statement that it lays white eggs, and sent us one taken by himself. We fancy, however, that these must be exceptionable instances, for Mr. Kotzé and ourselves found them nesting in abundance at the Berg River in September and October in trees and high bushes; the eggs varied, the ground colour ranging from white to dull red and the marking also being sometimes blotchy and smeared like those of the English

Sparrow-hawk, at other times finely sprinkled on the surface. Axis, 1'' 8''; Diam. 1'' 4''.

Mr. Buckley writes: "The eggs vary from 1.46 × 1.16 inches to 1.68 × 1.26. The ones in my collection agree in coloration with those described by Mr. Hume in 'Stray Feathers,' (p. 25), as received from Mr. Blewitt, but in my specimens I do not perceive the pale sea-green colour of the shell referred to by him. I agree with Hume that the eggs figured by Bree do not appear to belong to this species."

Adult.—Upper parts bluish grey, under parts pure white. Fore-head whitish. Tail white on the upper side, slightly tinged with grey. Eye-brows black; shoulders black. Feet bright yellow. Eyes carmine in adult; bright-yellow in the young bird. Length, 12"; wing, 10" 9"; tail, 5" 6". The young birds are more or less mottled with brown.

Fig. Dresser, B. Eur. part xxxv.

46. PERNIS APIVORUS.

European Pern.

The 'Honey-Buzzard,' as it is familiarly called, can be considered only a rare winter visitant to South Africa, having but twice been obtained in Natal by Mr. Ayres, though figured by Levaillant as 'Le Tachard.' It is, however, more often procured on the Gold Coast during the winter months, and probably does not always migrate to South Africa. Sir Andrew Smith procured a young specimen in Madagascar, which is still preserved in the British Museum.

Tail with four broad and numerous small dusky bands; wings with two similar bands. Adult male with the anterior parts of the head brownish-grey, the upper parts deep-brown; the throat white, with longitudinal dark lines; the rest of the lower parts white, with broad bands and spots of brown. Female with the forehead bluish-grey; the upper parts deep-brown; the lower pale, yellowish red, with large reddish-brown spots. Length, 24½"; wing, 16" 9"; tail, 11½".

Fig. Gould, B. Eur. i, pl. 16.

Fam. FALCONIDÆ.

47. BAZA VERREAUXII.

Verreaux's Cuckoo-Falcon.

(PLATE I.)

Avicida verreauxii, Layard, B. S. Afr. p. 24 (1867).

The South African species of Baza is distinct from *B. cuculoides* of Western Africa and may be recognised by its lighter coloration, and paler grey breast, but more especially by the colour of the under wing-coverts which are uniform rufous in the West African bird.

It is only known from the eastern parts of South Africa, not having at present been obtained out of Natal. Here, Mr. Ayres says, "it frequents the dense bush and is extremely shy." Mr. Harford sent a fine female from Natal and writes as follows: "They are very fond of settling on the ground. This specimen was shot in the act of settling on an ant-hill. This morning I had the luck to kill a pair, both of them females, at a right and left shot. Three of them have been in the habit of passing below the house for the last two weeks. Out of a specimen I killed the other day I took several legs and wings of grasshoppers and mantidæ." Mr. Ayres likewise found in the stomach of one of these Hawks remains of a green Mantis, of locusts, and of a chameleon.

The figures given in the accompanying plate represent an adult and young bird in the British Museum, and the following descriptions are taken from the "Catalogue of Birds" (Vol. 1, p. 355):—

Adult male.—Above dark ashy grey, somewhat shaded with brown, crown and occipital crest dark ashy; quills brown, tipped with whitish, externally shaded with ashy grey; under surface of wing white for the basal, and shading into greyish white for the apical half; primaries crossed by a few bars of brown above and below, more indistinct on the inner ones, the secondaries with a broad subterminal bar of dark brown; upper tail-coverts ashy grey at base, brown at tip, appearing slightly banded; tail slaty grey above, conspicuously tipped with white, crossed by four bars of black, the subterminal one very broad, under surface whitish, the basal bars more indistinct and represented on the outer feathers by a black patch on the outer web, extending a little across to the inner one; sides of the face, throat, and chest clear grey; breast pure white, banded with pale rufous brown, a little broader on the





BAZA VERREAUXI.

sides of the body, and gradually decreasing in size towards the flanks and under tail-coverts, the latter of which are entirely white; under wing-coverts very thickly barred with pale rufous and fulvous; cere and orbits light yellow; bill black, bluish at base of under mandible; feet yellow; iris lemon-yellow. Total length, 17 inches; culmen, 1.05; wing, 12.7; tail, 7.9; tarsus, 1.4.

Adult female.—A little browner than the male, and not so clear grey; bars on the breast broader and more rufous, being equally distinct on the flanks. Total length, 17 inches; culmen, 1.15; wing, 12.6; tail, 7.9; tarsus, 1.45.

Young.—Brown above, the feathers narrowly margined with fulvous, much broader on the secondaries; quills and tail pale brown, banded with blackish brown, the latter tipped with fulvous, especially on the outer rectrix; sides of head and neck rufous brown, with dark brown centres to the feathers, giving rather a streaked appearance; under surface of body whitish, streaked on the throat and banded on the breast with pale rufous, the inner face of the thighs also rufous; on the breast and flanks some feathers with dark brown oval spots, less distinct on the under tail-coverts; crest less developed than in the adult and dark brown in colour; iris very light brown.

48. POLIOHIERAX SEMITORQUATUS.

African Falconet.

As duly stated by Sir A. Smith this species probably never reaches the latitude of the Colony and has never fallen under our notice. He writes as follows: "Only three specimens of this elegant little Falcon were procured by the expedition party, and those nearly in the same spot among some large mimosa trees a little to the eastward of Old Latakoo. None of them were ever observed soaring like other Falcons, and the few individuals that were seen were either perched upon the lowest branches of the trees or in the act of flying from one tree to another. Considering that this bird was never afterwards procured or even seen more to the eastward, it is probable that the proper habitat of this species will be found in the opposite direction, which I am more inclined to believe, as one of our party declared he had seen it on the borders of the Kalahari desert during an excursion we made to the westward of New Latakoo. In the stomachs of two were found the remains of small

birds, and in the third portions of a lizard and different parts of coleopterous insects."

Mr. T. Vanzeller has lately procured a specimen in the Transvaal, and Mr. Andersson gives the following note on the species in Damara Land:—

"This exquisite little Falcon may be regarded as very rare in both Great Namaqua Land and Damara Land, especially in the latter, where I have only seen it once or twice; altogether I have probably not come across above eight individuals, three-fourths of which I have secured.

"It is always met with in pairs and usually perches on bushes or on the lower and middle branches of small trees, though I have seen it on the topmost boughs of lofty trees. I never saw it soar like other Falcons; it is not shy, and when disturbed it never moves further than to the next conspicuous tree or bush. It feeds on small birds, mice, lizards, and coleopterous insects, the latter being, I apprehend, its chief food."

Adult male.—Above blueish-grey, the head darker, the hind neck and upper tail coverts pure white; quills and tail brown, spotted on the outer and barred on the inner web with white, the secondaries and tail-feathers also tipped with white; forehead, sides of face and underparts white; under-wing coverts white with indistinct brown cross-bars on some of the lower ones; bill yellow, horn-coloured at tip; cere, orbits and feet yellow, claws horn brown. Total length 7.5 inches; culmen, 0.45; wing, 4.6; tail, 3.2; tarsus, 1.2. (Sharpe, Cat. B. i., p. 370.)

Adult female.—Differs from the male in having the interscapular regions and scapulars deep vinous chesnut. Total length, 7.5 inches; culmen, 0.5; wing, 4.8; tail, 3.0; tarsus, 1.15.

The immature male resembles the female.

Fig. Smith, Ill. Zool. S. Afr. *Aves*, pl. 1, (*male*). Selater, Ibis, 1861, pl. xiii. (*female*).

49. *FALCO COMMUNIS.*

Peregrine Falcon.

Falco peregrinus, Layard, B. S. Afr. p. 19 (1867).

Mr. Selater quotes a single specimen as having been received from Natal; we have not seen it from within the limits of the Cape Colony, where the next species seems to take its place. Mr. Garney tells us, however, that the Norwich Museum possesses a specimen from

thence, as well as one from Natal, the latter being probably the same individual as that mentioned by Mr. Selater.

Prof. Barboza du Bocage states that it has been procured by Senor Anchieta on the Coroca River in Mossamedes, but he does not state whether it was the large Peregrine of Europe, or the small *Falco minor* of southern Africa, which some ornithologists do not consider specifically distinct from the ordinary species.

General colour above, deep blueish lead-colour, barred with black; crown of the head and upper part of neck nearly black; greater wing-feathers dusky, with oval white spots. Tail similar to the back, and much barred; beneath each eye a patch of black. Under parts, from chin to bottom of the breast, yellowish white, a brownish streak down the shaft of each feather. Thighs and remainder of body dirty white, barred with deep-brown. Bill blue; cere yellow; iris brown.

The description and measurement are taken from a fine European female in the South African Museum. A young male is more rufous on the back, and the under parts more mottled with brown. It is likewise much smaller.

Fig. Gould, B. Gt. Br. part 1.

50. FALCO MINOR.

South African Peregrine Falcon.

This Falcon seems to have a pretty general range over the colony, several specimens having reached us from different localities. We have likewise seen it on the wing several times near Cape Town, and purchased one in the flesh which was being carried through the town by a shooter. Mr. Atmore writes from Swellendam: "It is not rare about here, but very difficult to get, except in the breeding time, when they come after the poultry."

Victorin notices it from Rondebosch and also from the Knysna. Dr. Atherstone records it from the neighbourhood of Grahams-town, and a specimen was obtained by Mr. Gueinzius in Natal. Mr. Andersson writes:—"I never observed but one individual of this Falcon, which I obtained at Objinere about two days journey from Objimbinque;" but he subsequently obtained a specimen in Ondonga.

Mr. J. Kotze found this species at the Berg River nesting in trees. The eggs generally three, are more or less spotted and stained with dry blood colour on a dirty cream coloured ground; they however vary very much. Axis, 1'' 9''', Diam. 1'' 4'''.

The description given of *F. communis* will suffice equally well for this species, with the exception that all the specimens that have fallen under our observation seem to be duller-coloured, and the transverse dark bars on the abdomen of the adult bird are also closer together than in *F. communis*, in which respect *F. minor* resembles *F. melanogenys* of Australia.

Fig. Sharpe, Cat. B. i, pl. xii.

51. *FALCO BIARMICUS.*

South African Lanner.

(PLATE II.)

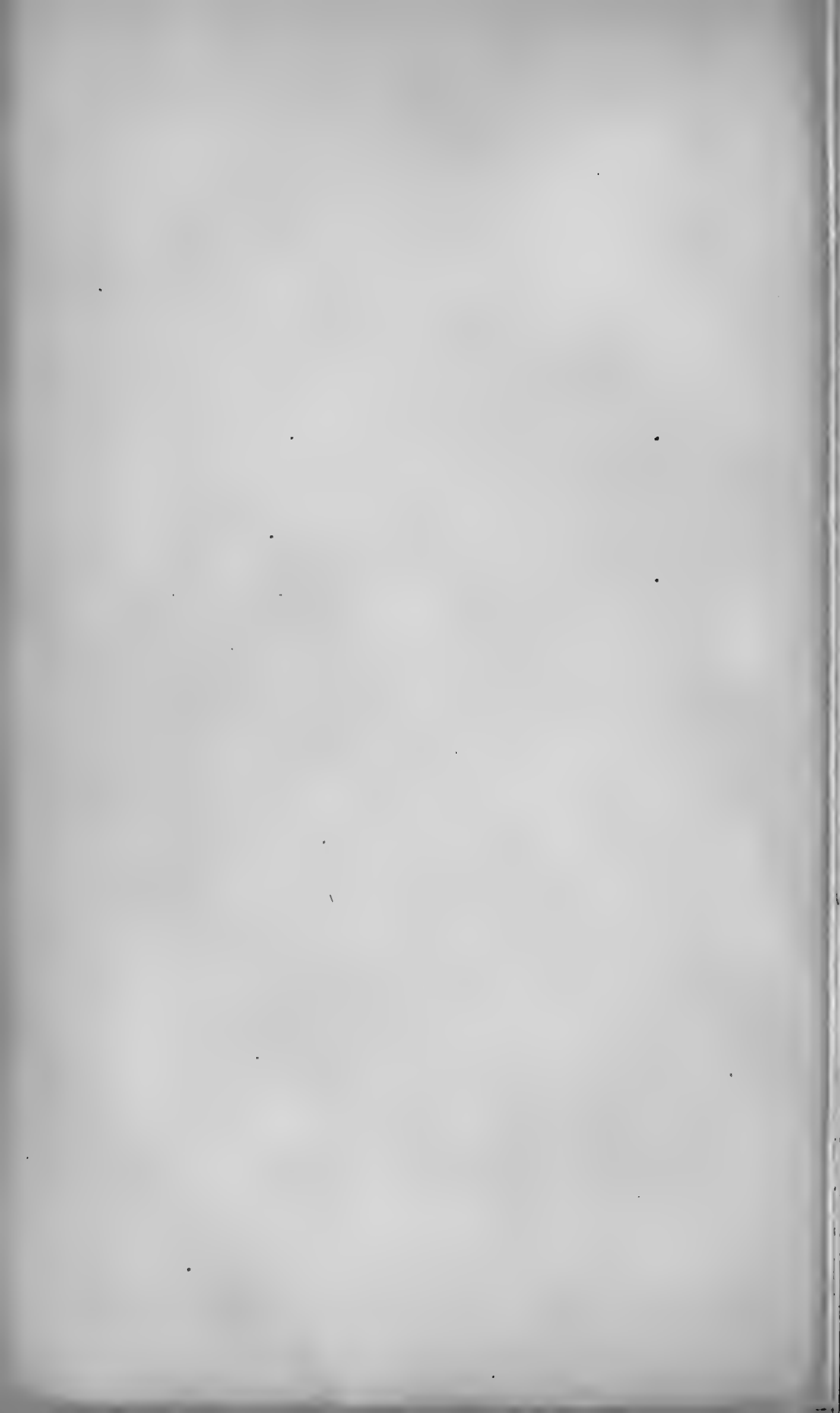
The present species, though closely allied to *F. tanypterus*, which it represents in South Africa, differs from that species and from the true Lanner of Europe in being perfectly uniform and unspotted on the under surface when adult. It is scattered throughout the colony, but is not common anywhere. Mr. T. Atmore procured old and young birds near Eland's Post. Both Mr. Ayres and Mr. T. E. Buckley have found this Falcon in Natal and the Transvaal, in both of which countries it is rare. Dr. Kirk did not meet with it in the Zambesi regions. Numerous specimens were contained in Mr. Andersson's collections, and he says that it "is to be met with from the Cape Colony in the South, to the Okavango River in the north, and as far eastward as Lake N'gami; it is particularly numerous in Little Namaqua Land, and also in the neighbourhood of the Okavango, and is occasionally seen along the sea coast." Senor Anchieta has met with it at Huilla in Mossamedes.

It is very rapid on the wing, and a great scourge to poultry and game of all kinds. It will not hesitate to dash at a flock feeding close to the door of a dwelling and in the midst of people working on the werf. Mr. Ortlepp writes, "I procured two parent birds and five nestlings ready to fly. The female resembles the male but she is larger (Length, 18''; wing, 14''; tail, 7½''). The nestlings were all mottled on the breast and belly. Found near Colesberg, feeding on small birds, reptiles and insects."

Adult male.—General colour above blueish ash; transversely barred with dark-grey; head clear rufous, marked on the forehead, side and nape with black; under parts clear vinaceous, marked on the thighs with a few black spots. Tail underneath grey and ash. Cere and legs yellow; eye light brown. Length, 17''; wing, 12½''; tail, 7'.



FALCO BIARMICUS.



A fine female is more rufous-brown in the general appearance, and is much mottled on the breast and belly, the latter character being in both sexes of this species a mark of immaturity.

52. FALCO SUBBUTEO.

Hobby.

The Hobby appears to be only a winter visitant in Southern Africa. Several specimens of this Hawk have been received from that locality, viz. :—a fine female from Swellendam ; a pair, from Mr. Jackson, at Nel's Poort ; one male purchased in the flesh in Cape Town. A rich-coloured male also fell to our own gun on Cape Flats ; and Mr. Atmore has procured it near Blanco.

It also occurs in Natal, as a specimen in the British Museum from that country is the *Falco cuvieri* of Mr. Gray's "Hand-list." Mr. Andersson states that it occasionally makes its appearance in Damara Land during the rainy season, and, as Mr. Gurney adds, it appears to occur in Ovampo Land as well as in Damara Land, a specimen from Ondonga being comprised in Mr. Andersson's last collection.

Senor Anchieta has procured it at Gambos in Mossamedes.

Head and upper parts of neck dark blue-grey ; rest of upper parts pale-blue. Shafts of all the feathers black ; over each eye a narrow rufous white stripe ; below each eye a black crescent. Sides of neck, throat, breast, and belly tawny-white. On the two last parts are many black blotches. Under tail-coverts and thighs rufous. Outer vanes of wings hoary-blue ; inner vanes dull-brown, crossed with white bars. All margined and tipped with white. Tail slightly rounded, the two central feathers blue-grey only ; the others blue-grey, banded with pale rufous, and tipped with white. Length, 14 inches ; wing, 10'' 9'' ; tail, 6'' 2''.

Fig. Sharpe and Dresser, B. Eur. part iv.

53. FALCO CUVIERI.

African Hobby.

This rare species is entirely confined to Africa, but it is only known from the Gold Coast and from the Cape Colony, in both of which places it appears to be somewhat scarce. Sir A. Smith, who described it, states that the typical specimen was obtained in Cafferland near to the Kai River, where it was said to be not unfrequent. It has been more than once received in Europe from South Africa,

but we have not been able to obtain any precise particulars of its capture ourselves.

Adult male.—Above dark slaty grey, inclining to black on the interscapular region, the scapulars and inner secondaries edged with paler grey; primaries dark brown; tail dark brown with a slight greyish shade above, barred with fulvous underneath on the inner web and tipped with pale rufous; forehead inclining to buffy white; fore part of checks as well as a short malar stripe and a line under the eye along the upper ear-coverts greyish black; rest of the checks and sides of neck and throat white washed with rufous; remainder of under surface rich rusty red, the thighs and under tail-coverts unspotted, the breast and sides marked with central streaks of black; under wing-coverts buff, streaked with black; cere, orbits and feet orange; bill dark horn-blue, yellow at base of lower mandible. Total length, 11 inches; culmen, 0·8; wing, 8·5; tail, 5·0; tarsus, 1·2. (Sharpe, *Cat. B. i*, p. 400.)

Fig. Schl. N. T. D. i, pl. 5.

54. *FALCO RUFICOLLIS.*

African Rufous-necked Falcon.

The only specimen of this elegant little Hawk that has fallen under our notice was shot by Mr. A. V. Jackson, at Nel's Poort, in the Beaufort division. Sir A. Smith procured it during the movements of the South African Expedition between the principal branches of the Orange River, and Mr. Ayres has met with it in the Transvaal, where he tells us it is not very common. It is not yet known from the Zambesi country, and, according to Mr. Andersson, it is rare in Damara and Great Namaqua Land, and in all other parts of South Africa which he traversed.

General colour above and below light blueish-ash, much barred with brown-black; tail tipped with white, and crossed near the end by a broad black band; head deep-rufous, with black eyebrows and moustache; chin white; throat and chest vinaceous; legs yellow; bill horn-coloured, yellow at base; iris dark brown. Length, 14''; wing, 9 $\frac{3}{4}$ ''; tail, 7''.

Fig. Sw. B. W. Afr. pl. 2.

55. *CERCHNEIS TINNUNCULUS.*

Common Kestrel.

Only one specimen of the European Kestrel is known as yet to have been shot in South Africa, and is recorded by Mr. Gurney in

the following terms: "The only South African example of this Kestrel which has come under my notice is a female killed at Objimbinque, Damara Land, on the 1st of February, 1865, and comprised in Mr. Andersson's last collection. This specimen, which is preserved in the Norwich Museum, is of the ordinary European type." As, however, the species may have been overlooked, a full description is here added, extracted from the Catalogue of Birds (I. p. 426).

Adult male.—Upper parts brick red, with a few arrow-head markings of black, larger on the inner secondaries; primary-coverts and quills dark brown, the former narrowly margined with rufous, the primaries notched white for about two-thirds of their length, the inner primaries and outer secondaries narrowly edged and tipped with buffy white; head and neck clear blue-grey with narrow black shaft stripes; forehead and narrow eyebrows buffy white; cheeks silvery grey, inclining to blackish below the eye and on the fore part of cheeks, forming a tolerably distinct moustache; lower back, rump, upper tail-coverts and tail clear blue-grey, the latter tipped with ashy white, before which is a broad subterminal band of black; throat and under tail-coverts buff, unspotted; remainder of under surface rufous fawn, the chest-feathers mesially streaked with black, these dark centres being larger and more oval in shape on the flank feathers, the thighs clear rufous, unspotted; under wing-coverts white, spotted with black; bill blueish horn-colour, black at tip, yellowish at base; cere, orbits and feet yellow; iris brown. Total length, 12·5 inches; culmen, 1·75; wing, 9·2; tail, 6·7; tarsus, 1·6.

Adult female.—Similar to the male underneath, but not so deeply coloured. Upper surface entirely rufous banded with black, with a faint blueish shade on the rump, the upper tail coverts inclining to buff; head rufous, streaked with black; tail rufous, banded with black, the bars not being strictly continuous, tipped with buffy white, before which is a conspicuous broad band of black; facial features and soft parts as in the male. Total length, 12·5 inches; culmen, 0·75; wing, 9·2; tail, 6·5; tarsus, 1·6.

Young male.—Resembling the old female, but rather paler and more distinctly striped on the breast. The tail first changes, becoming blue like that of the old male, and thus birds are often seen

in partial plumage, having the blue tail of the adult male, but retaining the rufous head of the old female dress.

Fig. Sharpe and Dresser, B. Eur. part 2.

56. CERCIINEIS RUPICOLA.

South African Kestrel.

Tinnunculus rupicolus, Layard, B. S. Afr. p. 22 (1867).

This little Hawk is common all over the country as far as we have been. Victorin met with it in the Karroo in January, and at the Knysna in March, and Mr. Rickard informs us that it is common both at East London and Port Elizabeth. Mr. Ayres found it in Natal, where it is not rare and breeds, but he has not yet procured it in the Transvaal, where its place appears to be filled by *C. rupicoloides*. Indeed it seems to be a more western bird in its range, as it has not been found in the Zambesi region, but Mr. Andersson says that it is very common in Damara and Great Namaqua Land, where it "is one of the few Hawks which remain in Damara Land during the dry season." Senor Anchieta has shot this Kestrel at Huilla in Mossamedes, and at Capangombe in the interior of the same country. It extends its range likewise into Angola proper, as Mr. Monteiro procured it in the neighbourhood of Ambriz.

This species takes the place in this colony of the *Windhover* of Europe, which it resembles closely in all its habits, hovering in the air over small birds, mice, &c., and falling suddenly from a considerable height upon its quarry. It nests in trees (or the high bushes which do duty for trees in this country), and its eggs, 3—5, are similar in colour to those of the European birds, having a reddish-brown ground, profusely spotted with very dark marks of various sizes and shapes. They, however, vary extremely, even to being pale cream-colour, with the minutest possible spots of brown. In size they also vary, but the shape is pretty constant, being rather round. Axis, 1'' 7'''; diam. 1'' 4'''. Mr. Henry Buckley observes:—"My eggs vary from 1.57 × 1.25 inches, to 1.7 × 1.35, and are white in colour, suffused all over with very pale brown. My specimens are very much paler than those of the English Kestrel."

Adult.—Head, back, and sides of neck dull blue grey: back, belly, and shoulders deep rufous, with irregular black spots. Breast rufous, with black lines. Primary wing-feathers black; secondaries blackish, crossed with irregular rufous bands. Tail blueish grey, banded with

black, all its feathers broadly tipped with white, next to a broad black bar. Cere round eye bright-yellow; cere of bill and legs orange-yellow; irides brown. Length of fresh-killed male, 11" (female, 14"); wing, 10"; tail, 7".

This Kestrel is distinguished from *C. tinnunculus* by its uniform blue side-face.

Fig. Sharpe, P. Z. S. 1874, pl. lxxvii.

57. CERCHNEIS RUPICOLOIDES.

Large African Kestrel.

Tinnunculus rupicoloides, Layard, B. S. Afr. p. 23 (1867).

This Kestrel is very rare near the colony, but becomes more common towards the Zambesi, where Mr. Chapman procured it in some abundance. Mr. Andersson observes that it is "very sparingly met with in Damara Land, but is a little more frequent as one approaches the Orange River; it is also found at Lake N'gami." Mr. Ayres says that it is one of the commonest Falcons in the Transvaal.

Sir A. Smith gives the West Coast of South Africa, near the Orange River, and the interior to the north of that, as the chief habitat of this species; and states that unlike its congener, *C. rupicola*, it never perches on rocks. Mr. Henry Jackson has sent it with its eggs, from Nel's Poort. The eggs resemble those of the preceding, but are rather larger. The nest was found in a tree, and the parent bird shot from it. It appears to be not uncommon in the Karoo, Mr. Jackson having sent numerous eggs and specimens. He writes, "this Kestrel was very rare here until quite lately. It has now quite taken the place of *C. rupicola*, which was formerly very plentiful, but is now seldom seen." Dr. Exton says, "it inhabits the open Veldt, perching on isolated trees and stumps." He found it in considerable numbers in the interior. Eggs in Mr. Henry Buckley's collection are stated by him to measure 1.75 × 1.35 inches, and are white, blotched all over with pale brown.

Head, neck, shoulders, and scapulars pale tawny, clouded with pale rufous; head and neck with black longitudinal stripes; back, shoulders, and scapulars have broad, brown transverse bars. Throat and under parts pale fawn; breast and belly striped brown; quill-feathers brown, inner vanes banded pale rufous; tail brown, with about six white transverse bands; tips of feathers white. Bill bluish black; base of lower mandible yellow. Length, 16"; wing, 12"; tail, 8'.

Mr. Ayres gives the cere yellow ; tarsi and feet, dull yellow ; iris, tawny yellow.

Fig. Smith, Ill. Zool. S. Afr. pl. xcii.

58. CERCHNEIS NAUMANNI.

Lesser Kestrel.

Tinnunculus cenchris, Layard, B. S. Afr. p. 22 (1867).

Mr. Andersson says that this species is "rather scarce in Damara Land, and only makes its appearance during the rainy season." It occasionally strays into the colony, following the locust swarms. On one of these occasions the pair now in the Cape Museum were obtained by Mr. Cairncross, of Swellendam, in 1860. He informed us that they were feeding on the locusts, and after gorging themselves, perched on the summits of high trees, from which they were easily shot. On the 7th January, 1870, Mr. Cairncross wrote "over the street (Swellendam), I to-day counted thirty-four of the little Kestrel drifting along westward about 200 feet over head. Locusts are plentiful this year." Dr. Exton writes, "North of Sechele's I shot a pair of *C. naumanni* out of a flock from which I also obtained *C. rupicola*. They were harrying a flight of locusts, taking them on the wing, striking them with their feet and then carrying them to their bills." Mr. T. E. Buckley, during his journey to the Matabili, shot a young male on the Limpopo River, on the 14th of November, 1873.

Adult male.—Head, shoulders, and tail ash-coloured ; back rufous ; under parts vinaceous, more or less spotted with dark-brown ; throat and chin white ; wing-feathers brown-black ; tail tipped with white, and crossed at the end with a broad bar of black ; legs and cere yellow ; iris yellow brown. Length, 12'' ; wing, 9½'' ; tail, 6½''.

Adult female.—Dissimilar to the male. Above tawny rufous, transversely crossed by bars of blackish brown, narrower and more obscure on the lower back, rump, and upper tail-coverts, the latter of which are strongly inclined to grey ; tail rufous, barred with black, tipped with whitish, before which a broad subterminal band of black ; head and neck rather pale rufous, the former broadly, the latter more narrowly, streaked with blackish shaft-stripes ; forehead and a distinct eyebrow whitish, cheeks and ear-coverts silvery white, with narrow shaft-lines of black ; primaries dark brown, barred on the inner web with rufous, secondaries coloured like the back, the outer ones narrowly margined with white at the tip ; throat, vent, and under tail-coverts fulvous white, unspotted ; breast

inclining to rufous fawn-colour, all the feathers mesially streaked with blackish, these stripes being broader on the flanks, and very tiny on the thighs, which are also paler rufous. Total length, 12·5 inches; culmen, 0·7; wing, 9·3; tail, 5·9; tarsus, 1·2. (Sharpe Cat. B. i. p. 436.)

Young male.—Like the old female, but somewhat paler rufous. The blue tail is assumed by a moult, the blue head being, on the other hand, gained by a change of feather. Birds in intermediate stages are often thus seen. (id. t. c. p. 437.)

Fig. Sharpe and Dresser, B. Eur. part 3.

59. CERCHNEIS VERPERTINA.

Red-footed Kestrel.

Although it has not yet been found within the limits of the colony, this species nevertheless visits certain portions of South Africa, along with the other insect-eating Falcons. According to Mr. Andersson it "usually arrives in Damara and Great Namaqua Land about the rainy season, and again retires northward on the approach of the dry season; they arrive in enormous flocks of many thousand individuals." Mr. Andersson also killed the species in Ovampo Land, and Senor Anchieta obtained numerous specimens at Huilla, in 1868.

The following description is extracted from the 'Catalogue of Birds,' (I, p. 444).

Adult male.—Above leaden grey, a little paler on the wing-coverts, the greater series of which are conspicuously silvery-grey; primary-coverts and quills silvery-grey, the secondaries darker and approaching the colour of the back; tail brownish black; under surface blueish grey with faint indications of blackish shaft-stripes; lower abdomen, vent, under tail-coverts and thighs rich chestnut; under wing-coverts *leaden grey*; inner lining of wing brownish black; cere, orbits and feet bright brownish red; claws yellowish white, horn coloured at points; bill yellowish horn colour, blackish at tip; iris *light brown*, (according to Andersson "*dark brown*"). Total length, 11·5 inches; culmen, 0·75; wing, 9·8; tail, 5·6; tarsus, 1·15.

Adult female.—Different from the male. Above blueish grey, with transverse black bars on all the feathers, the interscapulary region a little darker and more ashy; tail also blueish grey, with narrow black bars, the subterminal one much broader, the tip a little

paler grey; quills brownish, externally ashy grey, barred on the inner web with whitish; head, hind neck and under parts rufous, inclining to buff on the under tail-coverts; forehead whitish; lores and feathers round the eye greyish black; sides of the face and neck, as well as the throat, yellowish white, with faint indications of a pale rufous moustachial streak; soft parts as in the male but less bright. Total length, 11 inches; culmen, 0·7; wing, 9·7; tail, 5·6; tarsus, 1·15.

Young.—In general colour similar to the adult female, having the tail barred with black. The fore part of the head is whitish, and there is a strong tinge of rufous on the edgings to the interscapular region, the bases to the feathers being blackish; feathers round the eye and on the upper part of ear-coverts greyish black, with faint indications of a moustachial streak; throat and sides of neck creamy white; under surface rufous, paler than in the old female, and streaked with blackish centres to the feathers, these developing into spots towards the end of the feather; cere, orbits, and feet reddish yellow, claws yellowish white, with dark grey tips.

Fig. Sharpe and Dresser, B. Eur. part 1.

60. CERCHNEIS AMURENSIS.

Eastern Red-footed Kestrel.

Even as in its breeding places this species has a more eastern habitat, so in its winter residence it appears not to go so far to the westward as *C. vespertina*. Only three specimens occurred to the late Mr. Andersson in Damara Land, the foregoing species being by far the more common bird there, as it is in Benguela. There are two specimens in the British Museum, obtained by Dr. Kirk on the Zambesi, and Mr. Gurney states that the Norwich collection contains a specimen from thence. The following remarks of Dr. Kirk refer to this species: "In February and March it is seen in numbers on the Shiré, where the bush vegetation and palm-forest come down to the river."

Mr. Ayres has procured this Kestrel in the Transvaal, and according to the same gentleman, in Natal, "numbers may be seen during the summer months about the open downs in the neighbourhood of Maritzburg."

Dr. Exton likewise shot a fine example in the Matabili country, and Mr. Andersson obtained one at the Knysna.

Dr. Kirk gives the following account of its habits in the Zambesi

country:—"This pretty little hawk is found near the river. It appears only at sunset and in the dusk, when, coming in great numbers from the shady forest or from among the fronds of the lofty Borassus-palm, it hovers, swallow-like, over the plains and water, catching dragon-flies and locusts, which, with other insects caught on the wing, seem to constitute its chief or only food. In February and March it was seen in numbers on the Shiré, where the bush-vegetation and palm-forest come down to the river."

Adult male.—Above leaden black, a little paler on the lower back and secondaries, the greater wing-coverts and primaries clearly washed externally with silvery grey; tail greyish black above, paler beneath; under surface of body pale grey; lower abdomen, thighs, vent and under tail-coverts bright chestnut; under wing-coverts *pure white*; cere and orbits orange; feet and tarsi dark orange, claws whitish; bill dark orange, black at tip; iris hazel. Total length, 9·5 inches; culmen, 0·75; wing, 9·0; tail, 5·3; tarsus, 1·15. (Sharpe, Cat. B. i, p. 445.)

N.B.—The above particulars as to the soft parts are given by Ayres (Ibis, 1868, p. 41). Mr. Gurney observes that the female "differs materially from the female of *C. vespertinus* in the absence of rufous tints from all the upper portions of the plumage."—See the accurate plate in the Ibis, *loc. cit.*

Young.—Brownish, the feathers indistinctly margined at the tip with dull fulvous, the lower scapulars, inner secondaries, rump and upper tail-coverts inclining to greyish, all tipped with fulvous and barred with dull black; tail grey, with distinct transverse bars of black; sides of the face and throat white, the nape also mixed with white; the lores and feathers of the eye as well as the indistinct moustache brown; rest of under surface of body white, the breast thickly covered with blackish central streaks to the feathers, the thighs and under tail-coverts buffy white, the former tinged with rufous.

Fig. Gurney, Ibis, 1868, pl. 2.

61. CERCHNEIS ARDESIACA.

Grey Kestrel.

Only one specimen of this exclusively north-tropical species has occurred within our limits. According to Prof. Barboza du Bocage, a single specimen was procured at Humbe on the River Cunènè by

Senor Anchieta. Hitherto it had only been known from north-eastern Africa and Senegambia.

Adult male.—Slaty-grey with dark shaft stripes to the feathers, especially distinct on the head and neck; quills dark brown, the inner secondaries slaty-grey like the back, the outer ones clearer grey towards the tips; tail slaty-grey, paler towards the tip, with whitish bands on the inner webs; under surface pale slaty-grey, with black shaft-stripes to the feathers, the throat and sides of the face whitish; cere, orbits, and feet yellow; bill dark leaden blue; iris dark. Total length, 14 inches; culmen, 1.0; wing, 8.9; tail, 6.4; tarsus, 1.6. (Sharpe, Cat. B. i, p. 446.)

Fig. Temm. Pl. col. i, pl. 330.

62. CERCHNEIS DICKERSONI.

Dickerson's Kestrel.

This beautiful little hawk was discovered by the late Dr. Dickerson at Chibisa on the Shiré Valley, where also Dr. Kirk obtained a specimen. It has likewise occurred once to Senor Anchieta at Caconda in Benguela, on the south-western coast of Africa.

Adult male.—Head and neck whitish ashy, with distinct blackish shaft-stripes to the feathers; rest of upper surface deep brown, inclining to black, the quills much darker brown, banded on the inner web with white; rump and upper tail-coverts white with a slight greyish shade; tail banded alternately with black and greyish white, the subterminal black bar being very broad, the tip white; throat whitish; rest of under surface ashy brown with a slight greyish shade; under wing-coverts whitish ashy with distinct shaft-stripes; cere, orbits and feet yellow; bill blueish black, yellow at base of lower mandible; iris dark brown. Total length, 11 inches; culmen, 0.95; wing, 8.3; tail, 5.0; tarsus, 1.6. (Sharpe, Cat. B. i, p. 447.)

Fig. Sclater, Ibis, 1864, pl. viii.

SUB-ORDER PANDIONES.

63. PANDION HALIAETUS.

Osprey.

The Osprey appears to be confined to the eastern districts of South Africa. It has been found in Natal by Mr. Ayres, who says that it frequents the salt-water lakes near the sea. Dr. Dickerson

procured a specimen at Chibisa; but we have never seen it from the Cape Colony. Mr. T. C. Rickard writes that he believes he saw this species up the Buffalo river on the 24th May, 1870. Our description is taken from a European specimen.

Adult.—Above brown, most of the feathers with obsolete margins of paler brown, more distinct on the wing-coverts; primaries black, secondaries brown like the back, the primaries pale, but uniform, white brown below, the secondaries whitish on the inner web, with indistinct bars of ashy brown; tail almost uniform brown, tipped with white brown, and shaded with ashy externally, the inner web obsoletely barred with ashy brown, a little more distinct below, where the interspaces are whitish; head brown, with white bases to the feathers; a broad white streak from behind the eye running down the sides of the neck; ear-coverts blackish brown; sides of neck uniform with the back; sides of face and entire underparts white, the breast varied with brown centres to the feathers of more or less extent, the chin and fore part of cheeks also slightly streaked with dark brown; axillaries and a few of the flank-feathers also marked with rufous brown like the breast; under wing-coverts buffy white, with dark brown centres, the outermost almost entirely brown, with whitish tips; cere blue; bill black; feet blue; iris yellow. Total length 24 inches; culmen, 1.75; wing, 19.1; tail, 9.5; tarsus 2.4. (Sharpe, *Cat. B. i*, p. 450.)

SUB-ORDER STRIGES.

Fam. BUBONIDÆ.

64. SCOTOPELIA PELI.

Pel's Owl.

In Western Africa this beautiful species has been found in different localities from Senegambia to Gaboon, but in South Africa it has been met with only in the Zambesi. Dr. Kirk gives the following account of it:—"One of the rarest of the Raptores in the Zambesi region. I know of only three pairs having been seen, and of these five birds were secured. The pairs frequented the same locality every day, and from their colour, were extremely difficult to observe. Once started, they found more difficulty in again concealing themselves, but remained exposed on some limb of a tree and might then be approached. They were observed living in single pairs

both in August before the rains and in March in the spring. All three were inhabitants of the river Shiré valley, one at the confluence, the others near the Murchison Rapids. The food of this Owl is said by the natives to be small animals and snakes."

The Rev. H. Waller, who obtained this species in the Zambesi district, informed Mr. Gurney that it feeds on wild Guinea fowls which it captures whilst roosting. In West Africa it has been observed to feed on fish.

The following description is from a Zambesi specimen in the British Museum, and is copied from the editor's "Catalogue of Birds."

Adult.—Above deep rufous bay, crossed with numerous irregular bars of black, fainter on the head, which is more fulvescent; wing-coverts and entire wing bay, barred with black, exactly like the back, the under surface of the wing rufous and barred exactly like the upper surface; tail rufous fawn-colour, rather lighter than back, banded across with black; under surface of body light bay, with distinct cordiform bars of black, somewhat irregular in shape; under wing-coverts rufous bay with a few black spots and bars, more distinct on the lower series, which are lighter and resemble the inner lining of the wing; cere blueish lead-colour; bill similar to cere but darker, excepting towards tip; tarsi dirty white, tinged with blueish pink; talons light horn-colour with a tinge of dull blue; iris extremely dark brown. Total length, 23·5 inches; culmen, 2·7; wing, 16·5; tail, 10·0; tarsus, 2·7.

Fig. Gurney, Ibis, 1859, pl. 15.

65. BUBO CAPENSIS.

Cape Eagle Owl.

Its food consists of moles, rats, and small birds. Le Vaillant says it makes a nest in a rocky locality, of branches, dried leaves, and moss: eggs three.

We shot a specimen on the Cape Flats in the day-time on the 25th May, 1855; it appeared to see perfectly well. Since we made this old note in 1855, we have only obtained one other specimen; the species must, therefore, be rare. The example alluded to above was shot in broad daylight in the bright sun, and gave us a long chase, after being wounded at the first shot. He rose out of some rushes in the first instance, and then perched in several different places, but always keeping us well in view, and flying off on our

approach. Two eggs were lately given to us as the "eggs of the large owl," and probably belong to this bird: they were taken from a nest in the rocky sides of the Winterhoek Pass, by Mr. Short, the Superintendent of Convicts, to whom we are indebted for many good specimens. Eggs pure white, smooth, but not shining: axis, 2"; diam. 1' 9"; ends both alike rounded. Mr. Atmore says he once took a nest at Bufflejaghts river in a mimosa tree containing three eggs. The nest had been used (and probably constructed) by a crow the previous year. The bird is common in the Karroo but rare about George.

We took two eggs exactly agreeing with those given to us by Mr. Short, from a nest on an exposed bank along a wet ditch running by the side of a frequented road at the Berg river, on the 21st of September, 1869; it was about two feet in diameter and composed of soft dry flags and rushes; the hen bird sat very closely for several days before we took the eggs and assimilated so closely with the dead flags and rubbish on the bank that she was almost invisible. Mr. Rickard writes us word that "a very large owl with many rufous markings was shot on the hills close to the town of Port Elizabeth many years ago. I frequently saw it when stuffed and have but little doubt of its being this species."

Although confined to a limited district in South Africa, this Owl occurs in Abyssinia, for Mr. Gurney (P. Z. S. 1871, p. 148) proclaims that the type of *B. dilloni* is referable to the present bird.

General colour umber-brown, the under side being the lightest, variegated with irregular spots of dark rufous on the head and shoulders, and with bars and spots of deep orange on the rest of the body. Wings umber-brown, much varied by pale buff bars of irregular width; each bar is spotted, or speckled brown. Feathers of tail yellowish-white, with narrow dark bars. Legs and toes ochreous-yellow; collar brown; spot on the breast white. Facial disk yellow-brown, with white wiry feathers near the beak. Length, 23"; wing, 16"; tail, 9".

Fig. Smith, Ill. Zool. S. Afr. pl. 70.

66. BUBO LACTEUS.

Verreaux' Eagle Owl.

Several specimens of this noble Owl have come to us from our correspondents. Mr. Jackson says it is not uncommon in the mountains near his residence at Nel's Poort. Mr. Arnot has sent it

from Colesberg, and Mr. Atmore procured it at Blanco. Dr. Atherstone also has it from the Fish River. Mr. Ayres has recorded a specimen from the interior of Natal, and says:—"I observed this fine Owl sparsely scattered along the banks of the Limpopo during a recent journey through that district," and the late Mr. Andersson gives the following note:—"This is the largest Owl found in Damara Land. It is of not unfrequent occurrence from the Okavango River northward, to the Cape Colony in the south, and it is also met with in the Lake regions." Senor Anchieta has procured it at Quillengues and Caconda in Benguela.

Mr. Atmore has sent us the following account of its habits:—

"Meiring's Poort, June 19th, 1863.—I have at last obtained the large Owl described to be as 'big as a vulture.' I send him herewith. Eyes black, with a narrow brick-red ring round the iris. He is very destructive to poultry, and judging from the capacity of its swallow, could take down a chicken at a gulp. The throat is of a peculiar construction, and I now regret I did not send it to you in spirits. The fat all round it was half an inch thick. His call-note is often mistaken for that of a leopard. One killed a dikkop (*Ædienemus maculosus*) and left his skeleton close to the house, so it appears he victimises them as well as poultry. He throws up no quids."

Mr. Jackson corroborates Mr. Atmore's statement of its being destructive to poultry. He had many hens sitting in boxes in a building with high walls, and closed doors, secure from every prowler but a winged one; but the window in the roof being left open, each night a hen disappeared. Mr. Jackson set a wire snare over each box, and soon had the satisfaction of noosing the robber, who, even with the wire round his leg, would not let go his prey, and was killed "red-handed."

Mr. Ayres writes:—"About sunrise individuals may be heard making a low hooting 'goo, goo,' repeated at intervals. The stomach of the specimen sent from the Limpopo contained the remains of a Guinea-fowl, *Numida coronata*, a species which is exceedingly plentiful all along the Limpopo, and roosts at night on the trees by the side of the river." Mr. Andersson states that its food consists of mice and other small quadrupeds, birds, lizards, and large beetles.

Mr. T. E. Buckley observes:—"This fine Owl is very common from the Transvaal as far as the Matabili land, haunting the sides

of rivers, away from which localities I never saw it. These Owls generally go in pairs, but I once saw five together, out of which I procured my specimen; after the first disturbance they get more wary. I fancy they breed in old nests of other birds as I once saw an Owl sitting in one."

The following note is given by Dr. Kirk:—"The habits of this bird resemble those of *Scotopelia peli*. It is much more common, being rather plentiful among the mountains, and not unfrequently met with in the Zambesi and particularly the river Shiré valley." Dr. Dickerson also procured examples at Magomero and Chibisa in the Zambesi country, and gives the iris as "dark russet brown."

General colour above and below brownish-grey, minutely variegated throughout. A white mark extends from the shoulder half-way down the back, and several white blotches appear on the wing-coverts. The facial disk is lightish grey; a semicircle of black extends from each horn, under the chin, but they do not unite by several inches. The horns are dark rusty-brown. The stiff hairs, which project along the bill, are black along their shafts and at the tips. Cere, blueish grey; bill, pale ash-colour; iris, very dark hazel; eyelid, a conspicuous pink. Length, 26"; wing, 18½"; tail, 11; tarsus, 3 inches.

Fig. Temm. Pl. Col. ii, pl. 4.

67. BUBO MACULOSUS.

Spotted Eagle Owl.

This is the commonest Owl in South Africa, and is found throughout the colony. Victorin procured it at the Knysna, in June and November, and Mr. Rickard informs us that it is plentiful both at East London and at Port Elizabeth. Mr. Ayres has collected it in Natal, where also Mr. R. S. Fellows shot it, on the Tugela River. Mr. Ayres has found it breeding in the Transvaal. Dr. Dickerson procured it in the Zambesi country. Mr. Andersson observes:—"This Owl is sparingly met with in Damara and Great Namaqua Land," and Senor Anchieta has procured it at Humbe on the river Cunènè. Mr. Monteiro says it is abundant about Benguela, and Anchieta met with it at Huilla and Caconda.

It frequents forests, open lands, bush-covered or cultivated places indiscriminately. We think it is subject to partial migrations, as on several occasions we have, while hunting for game, come upon little parties of eight or ten individuals, which kept together in their flight. Pointer-dogs will stand to them as staunchly as to game. Our lato

lamented friend, the Rev. John Fry, of Rondebosch, a zealous observer of birds, informed us that they regularly frequented a grove of fir-trees in his garden at one season of the year. We have noted them in these trees in October. About twilight they begin to move, ascending to the highest branch, and uttering their loud "hōo, hōo" for a quarter of an hour together, and then sailing off to the Cape Flats in search of their prey, which consists of mice, rats, moles, and sometimes frogs. They lay two purely white eggs (axis, 2''; diam., 1'' 9'') in holes of rocks, and sometimes in an old termite's heap, or even on the bare ground. Mr. Jackson says they make no nest with him, simply depositing their eggs on the sand or on a ledge in the river bank. Dr. Exton states that the Bechuanas hold the idea that they are birds of ill omen.

Mr. Ayres gives the following note on the breeding of the present species in the Transvaal :—

"The only nest I ever found of this fine Owl was placed in a nook on the face of a precipitous rock, and contained one young bird, not long hatched, which was of a creamy, tawny-white colour, and one egg cracked and addled, the shell of which I send. This I took in the month of October whilst on an exploring expedition to some very curious limestone caves of great extent, some of the galleries of which are exceedingly beautiful by torchlight, stalactites of all imaginable shapes hanging in every direction."

Above grey-brown, more or less variegated with light ochreous (or white) spots and blotches; below, the ground colour is more ochreous, and the markings, chiefly fine wavy bars, with a few large blotches, are of the same brown as the back. A dark circle surrounds the facial disk, broken under the chin with rufous and white, immediately under which is a broad white collar; facial disk grey. Feet feathered to the toes, lightish-yellow or dirty-white, speckled with brown. Tail broadly barred with ochreous brown; iris yellow. Length, 19''; wing, 13''; tail, 7½''.

Fig. Temm. Pl. Col. ii, pl. 50.

68. SCOPS LEUCOTIS.

White-faced Scops Owl.

This species does not come into the colony, but we have received specimens from Mr. David Arnot procured in Mahura's country. Mr. Ayres obtained it in Natal, where he found its nest containing two white eggs, and composed of a few coarse dry fig-leaves, in a

small cavity on the top of the stump of a pollard Banyan fig-tree. More recently he writes:—"I met with only one of these owls during my trip to the Limpopo, which was brought to me by a Caffre in a starving state; it was a female, and measured in entire length 10.4 inches; the wing, $7\frac{1}{2}$; tail, 4; and tarsus, $1\frac{3}{4}$. Another specimen was shot by my brother in the month of August, amongst some willows at Pochtefstroom." Dr. Dickerson procured a single example at Magomero in the Zambesi district.

To the westward it appears more plentiful, and Mr. Andersson observes, that "next to *Athene perlata* this is about the most common Owl in Damara Land, and the parts adjacent to the northward; it is also pretty frequent in the Lake regions, but is less frequently observed in Great Namaqua Land." Senor Anchieta has procured it at Capangombe in Mossamedes, as well as at Ambaca in Angola proper, the Lisbon Museum likewise containing a specimen from the interior of the latter country, shot in Duque do Braganza.

Dr. Exton found this species roosting in forest trees, and the contents of its stomach to be coleoptera. Mr. Andersson says:—"It is always seen in pairs, and though strictly a night owl, its vision by day is by no means bad." The latter gentleman gives in his work on the birds of Damara Land, a good account of its nesting.

General colour brownish grey, longitudinally striped with black. Egrets very long, more or less tipped with black. Under plumage with a deep black line down the centre of each feather. Legs white faintly mottled; iris golden yellow. Length, 11"; wing, 8"; tail, 4".

Fig. Temm. Pl. Col. ii, pl. 16.

69. SCOPS CAPENSIS.

Cape Scops Owl.

Ephialtes senegalensis, Layard, B. S. Afr. p. 41 (1867).

This beautiful little Owl is rare in Southern Africa, and we do not know of a single specimen procured in the colony, though we saw a bird in the possession of the Count de Castelnau, said to have been procured at the Knysna, which was either this species or the common Damara Land *Carine perlata*. We could not, however, obtain a description of it at the time, and quote from memory.

Mr. Ayres has only obtained one in Natal, but Mr. Andersson obtained several examples during his residence in Damara Land, and further to the northward it appears to be common, for Senor

Anchieta has shot specimens at Biballa, Maconjo and Gambos, as well as at Huilla in Benguela, in which latter district Mr. Monteiro also procured it. The present species extends its range into Angola proper, having been met with at Pungo Andongo by Anchieta and in Duque do Braganza by Senor Bayao.

Mr. Gurney considers that the South African Scops owl is a distinct species both from *Scops giu* and *Scops senegalensis*, and some excellent remarks on this subject will be found from his pen in Andersson's "Birds of Damara Land," (p. 39).

This species is distinguished from the other South African Owls by its small size and mottled plumage, the general colour being a dark grey, finely pencilled with black cross-lines: it has distinct ear-tufts, and is slightly paler below with more white on the abdomen than on the breast. Total length, 7.5; wing, 5.3; tail, 2.6; tarsus, 0.95.

70. SYRNIUM WOODFORDI.

Woodford's Owl.

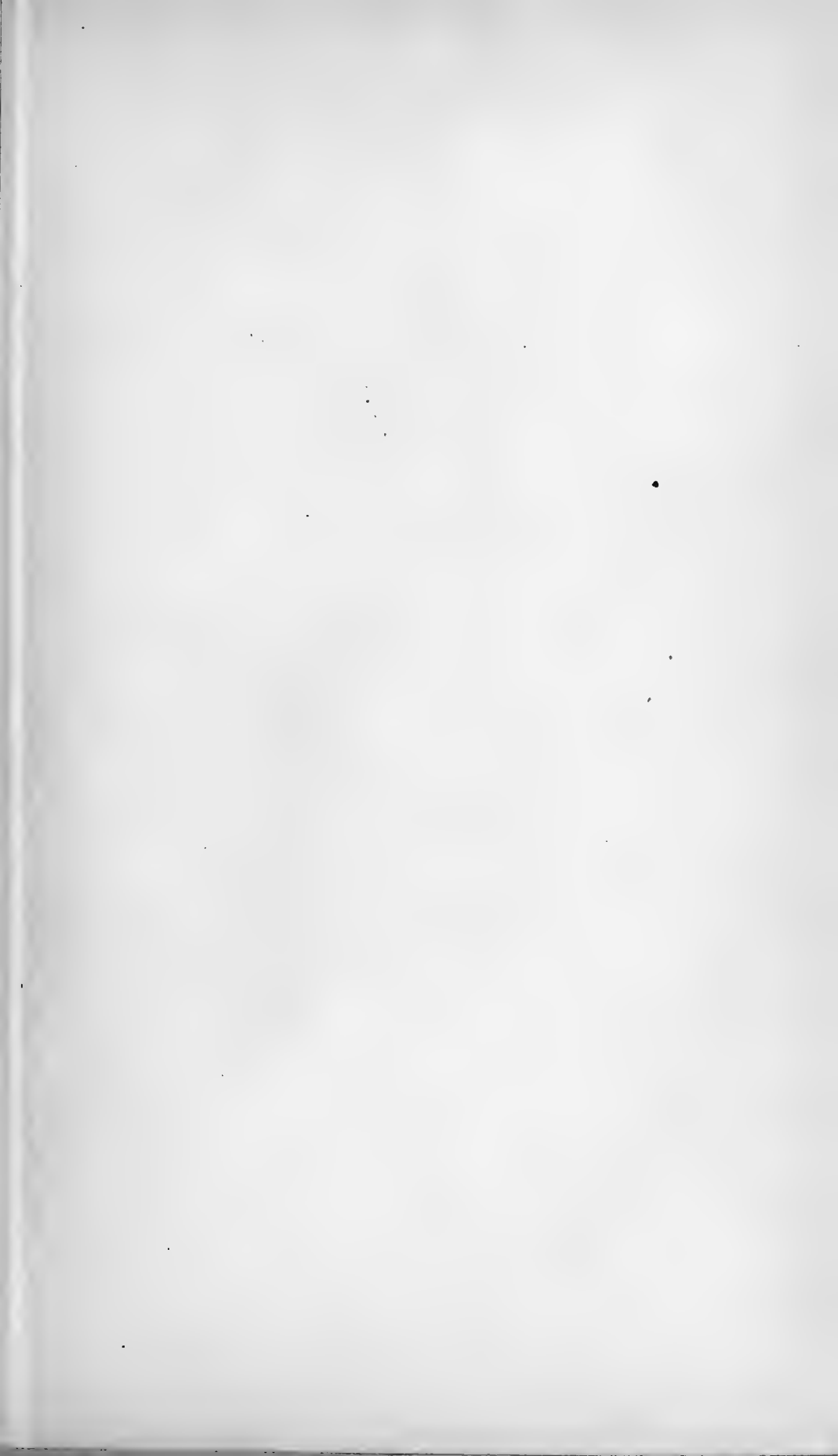
Not common, but has a wide range in the colony. Its food consists of small quadrupeds, birds, insects, &c. We have received two specimens from the Knysna, procured by the late Mr. Villet in that neighbourhood; but know nothing of its habits. Victorin also met with it in the last mentioned locality in May and October, and one specimen was procured at Port Elizabeth by Mr. Browning. While in the Zambesi country a single example was shot by the late Dr. Dickerson at Chibisa, and Mr. Gurney has received two specimens from Natal.

Male.—All the upper parts very dark reddish umber, variegated with white spots, and sienna-coloured and white bars. Wings generally yellowish brown, marked with dark bars, and yellowish, white blotches. Collar white, with brown bars. When lying smooth, the breast and belly appear alternately in bars of white and reddish pale brown. Tail reddish brown, barred with pale brown.

Female.—Everywhere of a much lighter colour. Length, 13½"; wing, 9"; tail, 6".

Iris "dark brown" as observed by Mr. Ayres—"light brown" as noted by Dr. Dickerson—"yellow" according to Sir A. Smith. Bill, cere and feet light yellow. (Ayres.)

Fig. Smith, Ill. Zool. S. Afr. pl. 71.





CARINE CAPENSIS.

71. CARINE CAPENSIS.

Barred Owllet.

(Plate III.)

Athene capensis, Layard, B. S. Afr. p. 37. (1867.)

The few specimens known to Dr. A. Smith were all killed in forests in the Cape Colony. Personally we have not met with it; neither does M. Victorin appear to have found it at the Knysna. Mr. Ortlepp writes: "I hear they are not uncommon in the woods which margin both banks of the Vaal River, where we procured one specimen on the 1st of May about noon. It was asleep on one of the topmost branches of a high tree, and looked more like a small ball of moss than a bird. Its stomach was filled with some soft stuff which looked like the soft rind of the 'wait-a-bit' thorn-berry, and numerous small bones (quite entire and clean) of mice, upon which they commence to prey as soon as the twilight darkens into night. Irides light yellow." Mr. Andersson observes as follows:—"This, I apprehend, is a very scarce bird in Damara Land, as I saw but very few specimens in all my travels. I have never observed it in Great Namaqua Land." Mr. Gurney states that in Mr. Andersson's last collection were a pair of birds from the Cunènè and another specimen from Ovampo Land. Dr. Kirk obtained it in the Shirè valley, opposite the village of Chibisa in October, and says it was "not unfrequent in wooded country near the open plains."

Head and neck red chestnut-brown, with imperfect white bars; from neck to end of tail umber brown, glossed with purple; some feathers have large white blotches, others yellowish bars; wings similarly coloured and variegated. Breast, of all these colours, but each paler. Belly white, with large brown blotches; under part of tail pale-coloured; legs white, faintly marked in brown. Length, $8\frac{1}{2}$ " ; wing, $5'' 9''$; tail, $3\frac{1}{2}$ ".

The figure is taken from the type in the British Museum.

72. CARINE PERLATA.

African Pearl-spotted Owllet.

Athene licua, Layard, B. S. Afr. p. 38. (1867.)

This species is not plentiful in the Cape Colony, and when the first edition was written had not fallen under our notice, but as will be seen below it is by no means uncommon in the interior of South Africa. Mr. Ortlepp obtained this pretty little Owl to the north of Colesberg, and Mr. T. C. Atmore procured a pair on the Vaal River.

in Griqualand in May, 1871, while Dr. Exton fell in with it near Kanye, and Mr. T. E. Buckley says it is common from the north of Pretoria into the Matabili country. The Lisbon Museum contains a specimen from the Transvaal, forwarded by F. Vanzeller, and Mr. Ayres in his list of birds from the above locality, writes as follows:—"This little owl is tolerably common along most of the rivers in the Bush, and especially on the banks of the Limpopo." According to Mr. Andersson it is the "commonest Owl in Damara Land, Great Namaqua Land, and Ovampo Land," and Senor Anchieta has met with it at Quillengues in Benguela as well as at Ambaca in Angola proper.

For the following notes on the habits of the present species we are indebted to Dr. Exton:—"The stomach and bill of one showed that it had been eating a specimen of *Proteba melba*, others contained only coleoptera. They hunt by day, and I saw one in the middle of the forenoon dart on a *gryllus*, which he still held firmly when I shot him. In the midday heat its favourite position seems to be a perch on a thick branch in the shade of the stem of the tree, and should it be detected by the smaller birds it is treated with the same insult and its presence as loudly protested against as is the common *Bubo maculosus* when he makes his appearance in the day time."

General colour above a warm brown approaching to rufous on the head, and with a rufous and white collar round the neck. The upper parts are throughout spotted with white, the spots being smallest and most numerous on the head. Wings with six rows of white spots. Tail greatly exceeding the wings, brown, crossed by seven imperfect rows of spots more or less large. Under parts, except the rufous collar, white, longitudinally striped with dark brown. Eyebrows and sides of chin white. Legs covered to the toes, which are hairy, with brown and white hair-like feathers. Iris yellow. Length, 7'' 6''; wing, 4''; tail, 3'' 3''.

Fig. Temm. Pl. Col. ii, pl. 34.

73. ASIO CAPENSIS.

African Short-eared Owl.

Otus capensis, Layard, B. S. Afr. p. 43. (1867.)

This Owl is only found in marshy places, and is usually gregarious. It conceals itself during the day amongst long grass, or reeds, &c., and preys upon water-insects, mice, and lizards. Dr. Smith gives no loca-

lity for this bird; but we have ascertained that it is pretty generally distributed, though nowhere very common: it frequents dry vleys, in the flags of which it lies concealed. We killed a couple in such a situation at "Naght waight," near Bredasdorp in June. Mr. H. Trevelyan tells us that it is apparently common near Kingwilliamstown, where he flushed seven or eight from some long grass in October, 1874. Mr. Ayres has found it in Natal and also in the Transvaal Republic. He says:—"This owl occurs in the swamps near Potchefstroom, where I have occasionally come across its nest, whilst beating for snipes among the long grass and rushes. The nest is merely a small cavity in the ground, snugly situated under a clump of grass or rushes, with a few blades of dry rushes at the bottom. The bird flies from its nest in a great hurry at the near approach of danger. The eggs are two or three in number, pure white and slightly glossy; size about $1\frac{5}{8}$ by $1\frac{3}{8}$ inches. I found a male bird sitting on a nest which contained three eggs a good deal incubated; this was in the month of April." Dr. Kirk found it in the Zambesi district, where he observes that it is "a common owl in the clumps of trees bordering the valley, over the grass plains near which it hunts, during the dusk of the evening, in search of small animals." It is probably owing to the more suitable country on the eastern and central portions of South Africa that this owl is more common there, for it is a scarce bird on the west coast, as Mr. Andersson only obtained it once in Ovampo Land (Cf. Gurney in Anderss. B. Damara Ld. p. 43), and Mr. Monteiro procured but a single specimen in Angola.

Upper parts of head, neck, back, upper tail-coverts, breast, and lesser wing-coverts reddish-brown, varied with a more yellow shade. Body and legs pale yellow-ochre, barred with brown. Wings chiefly brown, barred with yellow; most of the feathers with a much paler margin. Tail barred brown and yellowish-white. Facial disk pale, dull-yellow, marked with brown; deep-brown round the eyes. Collar deep-brown. Iris, as observed by Mr. Ayres, "light reddish-brown;" as observed by the late Mr. Favier at Tangiers, "blackish-brown."

Fig. Smith, Ill. Zool. S. Afr. pl. 67.

74. ASIO BRACHYOTUS.

Short-eared Owl.

This species has been known to occur once in South Africa, as recorded by Mr. Gurney (*Ibis*, 1868, p. 150):—"The Zoological

Society has lately acquired from Natal a living bird of this widely-spread species. It is a dark-coloured example, but not more so than some English specimens that have come under my notice."

Adult male.—General colour above pale ochreous buff, deeper on the centre of the back, the centres of the feathers longitudinally dark brown, producing a broadly streaked appearance, the scapulars much paler on their outer margins, the brown markings more irregular and branching into bars, so that the interspaces represent large ovate spots of whitish buff; wing-coverts rather darker than the back and more of a reddish ochre, the central markings to the feathers dark brown as on the back, but more irregular and forming bars, on the median and greater series more confined to the inner web, the outer ones having very large and distinct ovate whitish spots, which are very conspicuous on the wing; primary-coverts dark brown, with a few rufous ochre spots, principally near the base; quills rufous ochre, with a whitish tip, inclining also to fulvous near the base of the outer primaries, all the feathers very plainly chequered with dark brown bars, which are much narrower on the inner webs; upper tail-coverts nearly uniform ochraceous, shaded slightly with brown near the tips; tail-feathers ochraceous tipped with whitish and crossed with seven brown continuous bars on the centro feathers, only five in number on the outer ones, where the bars are much narrower and disappear near the base; frontal plumes dark brown narrowly margined with ochraceous; ruff whitish, slightly washed with ochre and minutely speckled with triangular spots of brown; facial aspect dull white, the lores shaded with brown, the ear-coverts with narrow blackish shaft-lines, all the feathers round the eye black; ear-tufts 0.5 inches long, resembling the feathers of the crown; chin whitish; the ruff below extending upwards behind the ear-coverts ochraceous mottled with dark brown centres to the feathers; rest of under surface buffy white, washed with golden buff on the breast and sides, the breast feathers streaked with brown down the centre, these streaks narrowing into linear shaft-lines on the lower breast and abdomen and disappearing entirely on the legs and under tail-coverts; under wing-coverts white, very faintly tinged with ochre, the outer greater coverts blackish, forming the characteristic spot, the rest of the wing-lining whitish, the secondaries with obsolete brownish bars, which are nearly absent on the primaries, these being blackish on tips and only slightly barred with

ochraceous, the outer feathers having a blackish mark about half way up. Total length, 14 inches; wing, 12·4; tail, 6·5; tarsus, 1·75.

Adult female.—Of the same general appearances and markings as the male, but always much deeper colour, the under surface being of a rich ochre. Bands on tail, six on the middle, and four or five on the outer feathers. Total length, 15·5 inches; wing, 12·5; tail, 6·7; tarsus, 1·85.

Fig. Gould, B. Gt. Br. pl. xxxi.

75. STRIX CAPENSIS.

South African Grass Owl.

Sir A. Smith says that this Owl is found about Table Mountain, from which locality we have also obtained one pair; but the species is rare, as but few other examples have occurred to us.

Mr. Atmore writes: "Blanco, May 25th, 1864. A boy reports an Owl's nest in a vley near this. It was the female of this nest probably that Tom saw in the clutches of the Crested Eagle. May 26th: Have visited the Owl's nest and shot the male, (*Strix capensis*); found three large young ones in the nest just getting quill-feathers, so they breed early. It is not a rare bird here, but difficult to raise. It inhabits the wide palmiet vleys." Mr. Henry Bowker obtained this species at Masura in Moshesh's country and Captain Shelley shot one near the Umgeni river. Mr. Ayres has also procured it in Natal, as well as in the Transvaal territory, where he has found them inhabiting the long rushes in the swamps surrounding Potchefstroom, but not plentifully. Mr. T. E. Buckley also procured a male in the Transvaal, on the 8th of June, 1873; it must therefore be widely distributed.

Upper parts dark brown; on each feather a white spear-shaped spot, larger and more distinctly marked as they near the tail. Shoulders and inside of wings orange, spotted with brown. Sides of neck and under parts pale reddish-orange, each feather with a light brown, arrow-headed spot on its tip. Facial disk vinaceous, near the eye brownish-black, surrounded by a ring of white feathers, tipped with brown. Tail paler above, here and there barred with brown; below, nearly white; "eye black," (Ayres). Length, 17"; wing, 13½"; tail, 5".

Fig. Smith, Ill. Zool. S. Afr. pl. 45.

76. *STRIX FLAMMEA.*

Barn Owl.

Strix affinis, Layard, B. S. Afr. p. 43. (1867.)

This Owl is common all over the colony, breeding in the roof of nearly every farm-house that we have entered. Mr. Rickard records it from East London and Port Elizabeth. Mr. T. E. Buckley obtained a male in Bamangwato, and the British Museum contains a Transvaal specimen, presented by Mr. A. Foresman: but Mr. Ayres does not appear to have obtained it in Natal. Dr. Dickerson shot it at Quilimane in the Zambesi country. Mr. Andersson in his 'Birds of Damara Land' writes:—"South of the Orange River this Owl is exceedingly common, but north of that river it is a very scarce bird, though widely distributed over all the countries of which these notes treat." Mr. Monteiro states that it is abundant about Benguela, and Anchieta has procured it at Gambos in the Mossamedes district. In Angola the same traveller has obtained it at Ambaca, Toulson at Loanda, and Welwitsch at Bengo.

In Mr. Fry's fir-trees, a pair or two were to be found at any time. They occupy the same perch for days together, the ground below being covered with their pellets. On examining these, they will be found to consist almost entirely of the bones of mice—once only have we found the skull of a bird.

Eggs, two to four in number, pure white, not shining: axis, 1'' 7''; diam., 1'' 4''. These birds will continue laying in the same nest though it may be robbed many times in succession. We took three pair of eggs from a nest in Mr. Kotzé's wine store at the Berg river in September. Mr. Thomas Atmore writes on 12th July, 1870, "*Strix poensis* has already hatched in the F. A. M. Police Barracks, and the men have taken the young ones."

Upper parts rather deep reddish-orange, profusely mottled with dark grey, and spotted with white. Tail with four bars of deep brown, variegated with grey. Under parts ochreous-yellow, spotted with small arrow-head-shaped marks of a dark brown: on the feet and half-way up the legs, short, stiff, yellowish hairs. Facial disk white, tinted with vinaceous, darkest at the inner angle of the eye, and surrounded with a circle of dark brown, approaching to black, on the lower half. Length, 16''; wing, 12''; tail, 5'' 6''.

ORDER ' PICARLÆ.

Fam. CAPRIMULGIDÆ.

78. CAPRIMULGUS EUROPEUS.

European Nightjar.

Caprimulgus smithii, Layard, B. S. Afr. p. 47.*Caprimulgus infuscatus*, Gurney, Ibis, 1859, p. 242, et 1863, p. 151.

Sir A. Smith was the first to figure the common Nightjar as a South African bird, but Prince Bonaparte considered it to be a different species, an opinion in which, until lately, we ourselves were disposed to endorse. We have, however, lately seen undoubted specimens of *C. europæus* from the Cape Colony, and several are to be found in the national collection. According to Prof. Malmgren in the 'Ibis,' for 1869, (p. 69) a typical European Goatsucker was procured at Port Natal on the 2nd of February, 1840: Mr. Ayres has also met with it there, and Captain Shelley during a recent visit to that colony "frequently met with it at Durban and Pinetown." Mr. Atmore obtained an adult male in full plumage at Grahamstown, and we have received it from Colesberg, Swellendam and other places in the Cape Colony, and have shot it ourselves in the neighbourhood of Cape Town. The late Mr. Andersson also met with it at the Knysna, a specimen killed by him on the 12th of February, 1866, having the white-spotted tail-feathers just appearing.

We have noticed that Goatsuckers are more abundant near Cape Town during the month of March, doubtless congregating together before their departure northwards. It is just possible that, like the European Bee-eater, the present species breeds during its sojourn in South Africa, as some eggs of whose parentage we are not quite certain (though we know of no other South African species which could lay claim to them) probably belong to this bird. They are of a light cream colour, minutely freckled with purplish brown and grey. Axis, 12''' ; diam., 9'''.

As the Nightjars are all very similar in coloration, we purpose only to give such characters as may be of use in distinguishing the different species found in South Africa. Thus the European Night-

jar may be told by its large size, the wing being about $7\frac{3}{4}$ inches in length. The *male* has white spots on the inner webs of the first *three* primaries; the *female* has none of these white spots on the wing or tail, but the inner web of the quills is barred with rufous, these bars being narrow and at least *eight* in number. The only other South African Nightjar which could be mistaken for the female *O. europæus* is the female of *Cosmetorius vexillarius* (*M. sperlingi*, Sharpe), which is equally large, but has a very broad rufous collar and has only *six* broad rufous bars on the inner web.

Fig. Dresser, B. Eur. part xxxv [σ]: Smith, Ill. Zool. S. Afr. pl. cii [φ].

79. CAPRIMULGUS PECTORALIS.

South-African Nightjar.

Caprimulgus atrovarius, Layard, B. S. Afr. p. 48.

This species appears to be entirely confined to South Africa, and is found about Cape Town, frequenting gardens and orchards. It is common at Rondebosch and along the forest-clad eastern face of Table Mountain. The late Mr. Andersson procured it at the Knysna, where also Victorin found it in May, as well as from July to September. Mr. H. Atmore has forwarded it from the neighbourhood of George, and Mr. T. C. Atmore from Eland's Post. Mr. Rickard records it from Port Elizabeth.

Like all its congeners, it flies abroad as soon as the twilight begins to darken, and often perches on the rails of garden-fences, sitting lengthways along them. It has the churring note of the other Goatsuckers, and lays two greyish, cream-coloured eggs, shaped much the same at each end, freckled and blotched with brown spots and patches. Mr. Henry Buckley tells us that the eggs in his collection measure $1\cdot04 \times 0\cdot77$ inch, and are of a creamy white colour, marked with faint purplish spots, and shaped alike at both ends.

The nest is a mere depression in the soil, under the shelter of a large stone or bush. At Mr. Vigne's farm, on the River Zonder End, a bird of this species has hatched her eggs, for several successive years, in a flower-bed close to a well-used path. We saw her sitting in the beginning of November; she allowed us to approach within two or three feet of her, and never once moved from her nest, though we visited her daily. Her eyes were always closed to within a mere thread-like crack, out of which she watched every

movement, and she generally rested her head on a small dead branch that lay beside the nest.

This Nightjar is remarkable for its very black coloration and broad golden-buff collar. The length is about 9·5 inches; wing, 6·8. Both *male* and *female* have the white spots on the wing-feathers, the first *four* primaries being spotted. The two outer tail-feathers have a white termination, of exactly the same size in both, and occupying nearly the terminal half of the feather.

Fig. Levail, Ois. d'Afr. i, pl. 49.

80. CAPRIMULGUS RUFIGENA.

Rufous-cheeked Goatsucker.

Sir A. Smith says that this Goatsucker "is chiefly found in the eastern districts of the colony, and, in common with the other Cape species, seeks its food generally in the dusk of the evening, and during the early part of the night." We have seen it from the Karroo near Beaufort, and from Grahamstown. At Port Elizabeth it has been noted by Mr. Rickard. Dr. Exton met with it near Kanye in the Matabili country, and Mr. T. E. Buckley, in his account of his journey in the latter locality, observes:—"This is the only species of Goatsucker we obtained, and it was common from the Limpopo, where we only found it in the rainy season, far into the Matabili country." Mr. Ayres has found it in the Transvaal, where he procured the egg. Mr. Andersson writes:—"I have found this bird tolerably common in the southern part of Damara Land, and it is also an inhabitant of Great Namaqua Land. It is met with singly or in pairs, and frequents moderately dense brushwood." He thinks that they are partially migratory as they are "much more common in the rainy than during the dry season." It is certain that the present species goes further to the north than Mr. Andersson tells us in the above notes, for he himself procured it subsequently in Ondonga. How far it extends on the eastern side of the continent has yet to be seen, but at present it has not been found even in the Zambesi, and so does not find a place in the "Vögel Ostafrika's" of Drs. Finsch and Hartlaub.

Mr. H. Jackson found it breeding at Camfers Kraal, where he resides, and forwarded eggs: these are oval, of a dull salmon coloured ground, profusely blotched and clouded with greyish purple. Axis, 12''; diam., 9''.

Dr. Exton also sent us an egg taken from the abdomen of a female shot by him, and he writes:—"I can give no assistance in the collecting of eggs. To the native mind there is something tangible in a young bird—all sorts of fledglings have been brought to me, Hawks, Owls, Hornbills, &c.—but the enquiry for *eggs* is generally looked upon as a mild form of lunacy, partly it may be arising from eggs (even those of poultry) not being admissible as food for men, and only under exceptional circumstances for women and children."

The habits of this bird seem exactly to resemble those of the common Nightjar, like which species, says Mr. Buckley, "it has a jarring note, and is fond of settling in the paths: it roosts on the ground during the day." The eggs, according to the same gentleman, are pink, mottled all over with greyish brown. Canon Tristram describes the egg as of a rich cream-colour, with faint fawn-coloured cloudings all over it. This latter egg was sent by Mr. Ayres, who found it "laid on the bare ground, without the slightest pretence to a nest."

C. rufigenis is like a miniature *C. europæus*, being smaller, and having the under wing-coverts nearly uniform. Total length, 9·5 inches; wing, 6·35. Four primaries are always spotted with white, and sometimes traces are apparent on the *fifth*.

Fig. Smith, Ill. Zool. S. Afr. pl. 100.

81. CAPRIMULGUS FERVIDUS, *Sharpe*. Fiery-necked Nightjar.

This new species, four specimens of which are in the British Museum, was obtained by the late Mr. Andersson in Damara Land, and has hitherto been confounded with *C. rufigena*. It is, however, to be distinguished from this species by the characters mentioned below, and, unless Mr. Andersson has erred in the sexing of the specimens, it differs from the above mentioned bird in having the characteristic white spots present in *both* sexes. Two females were procured by him at Elephant Vley on the 5th and 28th of October, 1859, another female at Otjoro on the 30th of November, while the fourth was shot near Ovampo Land on the 2nd of February in the same year.

This is the species identified by Messrs. Strickland and Selater as *C. pectoralis* (Contr. Orn. 1852, p. 143) and is likewise the *C. pectoralis* of Mr. Andersson's work (p. 45). He writes concerning it:

—"This species is tolerably common in the north of Damara Land. It is usually found singly, and is partial to open roads and paths about dusk. Its food consists of beetles and other insects, their eggs, and small seeds." Mr. Gurney has correctly identified the *C. damarensis* of Strickland (*l. c.*) with *C. rufigena*, and the determination of the other Damara Goatsuckers has been rendered easy to us by the kindness of Mr. Salvin, who allowed us to see all the Strickland specimens.

This bird may be briefly described as being very closely allied to *C. rufigena*, but at once distinguishable by its uniform clear golden-buff cheeks; the latter in *C. rufigena* are black slightly streaked with rufous. Total length, 9·5 inches; wing, 6·7; tail, 4·8; tarsus, 0·7.

82. CAPRIMULGUS LENTIGINOSUS.

Freckled Nightjar.

We never personally fell in with this large Nightjar in the Colony, and Mr. Andersson says:—"I am inclined to think that this is a scarce bird in South Africa, though, at the same time, somewhat widely diffused, as I have obtained specimens in every part traversed by myself." The only example, however, of Mr. Andersson's which we have seen, is one from the river Cunene, formerly in the editor's collection and now in the British Museum. Sir Andrew Smith originally procured the species in Great Namaqua Land, where he got two specimens; "the one, when it was shot, was seated on a high road, and the other was skimming around a pool of stagnant water, and occasionally darting from its general course as if to capture insects. Many other individuals, probably of the same species, were observed in the same country; but as they all kept so extremely close to the edge of the brushwood, and never appeared till the dusk was about giving way to darkness, two specimens only were obtained."

This is a large-sized species, as well as a very variable one. Total length, 10·6 inches; wing, 7·2; tail, 5·4; tarsus, 0·8. Its large size prevents its being mistaken for any other South African Nightjar excepting *C. europæus*, but it may at once be distinguished from the latter bird by the small size of the white spots on the primaries, four of which have the white markings: on the tail-feathers there are no distinct white tips to the outer ones, only an indication of white being present.

Fig. Smith, Ill. Zool. S. Afr. pl. 101.

83. CAPRIMULGUS NATALENSIS.

Natal Nightjar.

This small species was discovered by Sir Andrew Smith near Port Natal, and seems to be confined to that country, as, although recorded by Dr. Kirk from the Zambesi, we find that his specimens really belong to *C. mossambicus*.

It not unfrequently occurs in Natal collections. Mr. Ayres writes concerning it:—"The stomach was full of large and hard beetles swallowed whole. These birds roost on the ground among the grass; if disturbed, they fly a short distance and alight again; they feed only at night, and are fond of frequenting roads or any other bare grounds; they rise from the ground, and catch any beetle that passes, immediately alighting again. The flight of this Goatsucker is noiseless; its note is extremely liquid and mellow; it builds its nest in the grass and lays two white eggs." Mr. E. C. Buxton when travelling in Natal met with this bird just beyond the Bombo mountains.

The Natal Nightjar is a small species, and may be distinguished by its having the terminal half of the outer tail-feather pure white, extending nearly to the base of the outer web. The male has *four* white spots on the primaries, which are otherwise uniform; in the female these spots are sandy buff, and near the base is a second large sandy coloured bar: the outer tail-feather also is brown barred with dull sandy. The coloration of this Nightjar is different from any other species known from South Africa, being a mixture of yellowish buff and black, the latter forming large spade-shaped spots on the scapulars. Total length, 8·5 inches; wing, 6·3.

Fig. Smith, Ill. Zool. S. Afr., *Aves*, pl. 99.

84. CAPRIMULGUS MOSSAMBICUS.

Mozambique Nightjar.

Two specimens of this bird were procured by Dr. Kirk at Tete during the Zambesi expedition, and these are all that we have seen from South Africa. It is probably the species identified by Dr. Kirk (*Ibis*, 1864, p. 31) as *C. natalensis*, "obtained in the plains near the sea-coast;" as his Zambesi collection contains no specimen of the Natal Nightjar.

This species, as well as its near ally *C. fossi*, may be distinguished

from the other African Goatsuckers by the *outer* web of the last tail-feather being *white for its whole extent*, the white tip to the inner web being small: the *secondaries* all broadly *tipped with white*: five primaries spotted with white. Total length, 10 inches; wing, 6.4.

Fig. Finsch and Hartlaub, Vög. Ost.-Afr., taf. 1.

85. COSMETORNIS VEXILLARIUS.

Standard-winged Nightjar.

This remarkable Nightjar has not yet occurred in the Cape Colony, but is found a little further to the northward in Damara Land and across to the Zambesi. Mr. Andersson says:—"I only observed this singular Nightjar in the large forests about one degree south of the river Okavango. I never saw many of them, and the few that were observed were all found within from twenty to one hundred yards of each other." In the British Museum is a specimen procured by Mr. Andersson at Elephant Vley on the 13th of October, 1859, being the example mentioned by Mr. Gurney as formerly in the editor's private collection (cf. Gurney in Anderss. B. Dam. Ld. p. 46). Senor Anchieta has procured it at Biballa in the Mossamedes district of Angola, where he says it bears the native name of *Pumbamba*. Dr. Kirk writes:—"The *Cosmetornis* was first observed about 300 miles up the Zambesi, a little above Tetè, on the Kebrabassa Rapids in November, 1858, and was there decidedly common. It was again met with on the western side of Lake Nyassa (lat. 12° to 13° S.) where, in September and October, it was very common, being seen in flocks of from fifteen to twenty. It was also common at Chibisa on the Shiré in lat. 16° S. It was only during the months from October until January that the singular prolongations of the wing-feathers were observed. These are peculiar to the males. Like other Nightjars the habits of the *Cosmetornis* are crepuscular. It catches insects on the wing, and frequents bushy lands and the vicinity of water. When started during the day-time from the ground where they always rest, they fly swiftly to a little distance, and again settle, but are extremely difficult to follow with the eye. Not so the males when in full plumage; in their case there is no difficulty; their flight is evidently retarded, and they become prominent objects from the long streamers waving behind them. A deviation from the usual habits of this bird was observed when cruising on the Nyassa. On two occasions being overtaken in a

gale, and riding out a short but dangerous sea which set in and raised a surf on the shore, through which it was impossible to land, the male birds came off in flocks of about fifteen, and flew over the surface of the water. On no other occasion have I seen them take wing of their own accord, or keep on the wing during the day." Mr. Andersson remarks:—"This bird, when seen on the wing at dusk, presents a most singular appearance, giving the idea of a large double-winged bat."

We are convinced that the bird recently described by the editor as *Macrodipteryx sperlingi*, the type of which was obtained at sea in the Bay of Malimba by the late Commander Sperling, is only the female of *C. vexillarius*. A specimen agreeing in every particular with the type was shot by the late Mr. Andersson at Otjimbique on the 13th of October, 1859, the very day on which he procured the male *Cosmetornis* mentioned above, so there can be but little doubt that our surmise is correct.

The male in full breeding plumage is an unmistakable bird, being easily recognized by its long streaming quill-feathers, which reach out far behind the bird's body. The female can be told by the broad rufous bars, six in number, on the under surface of the quills, and by her broad rufous neck-collar: she has no long streamers, and looks like an ordinary *Caprimulgus* at first sight.

Fig. Gould, *Icones Avium*, ii, pl. 3.

Fam. CYPSELIDÆ.

86. CYPSELUS APUS.

Common Swift.

Cypselus barbatus, Gurney in Anderss. B. Dam. Ld. p. 47.

The supposition that the Swift of South Africa constitutes a different species from the ordinary Swift of Europe, does not seem to us to be founded on fact, and we believe that when *C. apus* leaves Europe, it makes South Africa its winter home. It is extremely abundant about Cape Town during the South African summer, disappearing about the middle of April. Mr. Atmore however says this species sometimes remains with us all the year and did so at George in 1870. Mr. L. Layard also used to declare that he saw it all the year round at Swellendam, not every day, but frequently, at

odd times. This is curious, but a similar thing happens with *Cotyle paludicola*, which we ourselves saw in the depth of winter hawking over a river in the Strandveldt.

The following is an extract from our diary with respect to the migration of the Swifts and Swallows :—“We have this year (1861) kept a strict watch over their time of departure. The result has been as follows :—

“April 9th. *C. apus* and *C. caffer* about in abundance. *Hirundo cucullata* come into town, the other swallows having left us.

“April 27th. Large flocks of *C. apus* flying at a great altitude, and screaming; these were observed at night-fall—in fact just at dark.

“May 3rd, morning. *C. apus* and *C. melba* in the upper regions, trending to the northward.

“May 30th. Several specimens of *C. apus* flying about the top of the ‘Lion’s Rump,’ in company with a flock of *Cotyle fuligula*—three shot. After this they disappeared, with the exception of *Cotyle fuligula*, which remains with us all the year.”

In 1867 the Swifts first arrived on the 3rd of August, and in 1868 they were noticed on the 28th of that month, about which time Mr. L. Layard also saw them at Swellendam. Victorin has recorded the species from the Karroo, and he shot it at the Knysna in August. Mr. Rickard has procured this Swift both at East London and Port Elizabeth, and in Natal Mr. Ayres says they “may be seen more or less all the year round, but are more plentiful in summer. They are generally in numbers, their flight being exceedingly rapid and mostly at a considerable height: their food consists of small insects.” According to Mr. Andersson, it is common in Damara and Great Namaqua Land during the rainy season. It has likewise been sent from the Rio Chimba in Mossamedes by Senor Anchieta.

We have remarked that here they are not in the habit, as in Europe, of chasing each other round lofty buildings, uttering piercing cries and throwing up their wings. This evolution is performed by *C. caffer*, and we are inclined to attribute it to some love-gambol, as *C. caffer* breeds here, and *C. apus* does not. The latter, however, constantly utters shrill screams when at a great altitude in the air; and our attention has thus often been called to flocks that would otherwise have escaped our notice.

General colour black, with a greenish reflexion on the mantle and

back; throat, white; bill, black; toes, dusky; iris, dark hazel. Total length, 7·5 inches; wing, 7·4; tail, 3·5; tarsus, 0·5.

Fig. Dresser, B. Eur. part xxxi.

87. *CYPSELUS PALLIDUS.*

Pallid Swift.

This species is closely allied to the ordinary Swift, and was first distinguished by Captain Shelley, who procured it in Egypt, and since then it has been obtained in Morocco and Southern Spain by Colonel Irby, and in Malta by Mr. C. A. Wright. It arrives in Europe before *C. apus*, and in South Africa, which is doubtless its winter home, it seems to occupy a different area to the last-named species, for, whereas *C. apus* goes right down to the Cape, *C. pallidus* has not yet been noticed further south than Damara Land. Mr. E. Cavendish Taylor possesses a specimen shot by the late Mr. Andersson at "Nonnidas, Swakop River," on the 11th of December, 1863, and the British Museum contains an example procured by Mr. Monteiro in Benguela, where, according to the latter gentleman, it is "common, building its nest very commonly under the eaves of houses." It should be noted that Mr. Monteiro's specimen differs in being uniform above and below, though very pale in colour, and shews little or no throat-patch. Prof. Barboza du Bocage mentions a Swift from Loanda, which may possibly be the same as the Benguela bird; he was inclined to consider his specimen undescribed, but Dr. Finsch referred it to the Madeiran *C. unicolor*. It is, therefore, possible that a further supply of specimens may shew the existence of another species in S. W. Africa, but be that as it may, Mr. Taylor's bird is undoubtedly *C. pallidus*, and this is sufficient warrant for our including it in the present work. His specimen measures:—Total length, 6·7 inches; wing, 6·8; tail, 3·0; tarsus, 0·45.

C. pallidus may be described as being closely allied to *C. apus* but smaller and paler, being pale brown or mouse-colour, with generally indications of whitish edgings to the feathers.

Fig. Dresser, B. Eur. part xxxv.

88. *CYPSELUS CAFFER.*

African white-rumped Swift.

This species can be easily distinguished from *C. apus*, even on the wing, by its smaller size and conspicuous white rump. It is con-

stantly in company with it and *C. melba*; and indeed the former is rarely seen in any number without being mixed with it.

It is more domestic than the other Swifts, breeding freely under the verandahs of houses in the city, and occupying almost every porch in the isolated farm-houses scattered over the country. It usually takes possession of the nests of *Hirundo cucullata*, driving out the rightful owners. Its eggs, generally four or five in number, are pure white, and singularly shaped, the small end rounding off very suddenly, as if truncated. Axis, 1"; diam. 7'''.

It seems to be distributed over the whole of South Africa, being found near Cape Town, where it arrives about the end of August. In 1870, Mr. Thomas Atmore noticed its arrival near Grahams-town at the end of August, and we observed it simultaneously at Cape Town. Victorin collected it in the Karroo in December and at the Knysna in March and April, and again in October. In the latter place Mr. Andersson also obtained the species. Specimens have been sent to us from George by Mr. Harry Atmore, and his brother, Mr. Thomas Atmore, has forwarded it from Eland's Post. Mr. Ayres writes concerning it in Natal, as follows:—"I have not seen these Swifts on the coast, neither have I observed them inland during the winter months, but numbers were flying about Maritzburg in December. . . . Their flight is not nearly as rapid as that of the Black Swift (*C. apus*)." Captain Shelley saw it occasionally in considerable numbers near Pinetown. It is apparently more plentiful in the interior, as Mr. Ayres writes:—"I find these Swifts very numerous in the Transvaal, much more so than in Natal. In the town of Potchefstroom a pair have taken possession of a deserted Swallow's nest in one church, and another pair have located themselves in a similar manner in another part of the town; but whether this is their usual method of finding suitable places to breed in I cannot say."

Mr. Gurney remarks:—"The nidification of this Swift as described by Mr. Layard, and as also noticed in the Transvaal by Mr. Ayres, differs from its habits in this respect as observed in Senaar by Dr. Vierthaler and his companion, who found it breeding in holes about two feet in length and terminating in a basin. These holes were pierced in a steep river-bank; and in one of them a sitting-bird of this species was captured on her nest, which contained three white eggs."

The distinguishing characters of this species are its white rump and forked tail. The general colour is bluish-black, the wings and tail glossy brown, as also is the head, the forehead being still paler: throat white. Total length, 8·75 inches; wing, 57; tail, 3·0.

Fig. Temm. Pl. Col. 460, fig. 1.

89. *CYPSELUS AFFINIS.*

White-rumped Swift.

This is a well-known Indian species, and is found in North-Eastern and in Western Africa, being very plentiful on the Gold Coast, but it is only recently that it has been discovered in South Africa. Mr. Dresser in his account of the species mentions that it has "occurred as far south as the Cape of Good Hope, according to Dr. Sclater and Dr. Finsch," but he does not appear to have seen a specimen. One is, however, duly recorded in the editor's 'Catalogue of Birds' (p. 2) on our authority, and is to be seen in the British Museum. This specimen was procured by our excellent correspondent, Mr. H. Jackson, of Nel's Poort, to whom the credit of the rediscovery of this species in South Africa is due. He wrote to us saying that he had found an apparently new species of Swift, differing from *C. caffer* in their breeding habits and making their own nests in clusters, fixed to the rocks and composed of feathers agglutinated together. Of course a proceeding so different to the ordinary habits of *C. caffer* convinced us that it could not be that species, and the receipt of specimens proved it to be *C. affinis*.

The present bird may be described as similar to *C. caffer* and possessing a white rump like that species, but distinguishable at once by its *square tail*. Total length, 4·5 inches; wing, 5·0; tail, 1·8.

Fig. Dresser, B. Eur. part xxxiii.

90. *CYPSELUS PARVUS.*

Little African Swift.

Cotyle ambrosiacea, Layard, B. S. Afr. p. 59.

This little Swift is found all over Africa, being especially plentiful on the Gold Coast: the specimens which we have seen from S. Africa were much lighter in colour than those from other localities. It may be distinguished from the other South African Swifts by its small size and long, forked, tail. We have never seen it from the Colony, but it was found to be "pretty common at Ondonga" by

Mr. Andersson, and has been sent from Angola by Senor Furtado d'Antas.

Mr. Andersson writes:—"At the end of February these Swifts appeared to be nesting, as they were seen in pairs and a male and female were both shot with feathers in their bills. The flight of this species is generally lofty."

The small size of the bird will tell it at a glance, the length of wing being under $5\frac{1}{2}$ inches, whereas *C. pallidus*, the only other South African Swift with which it could be confounded has the wing 6.8 inches. The general colour is greyish brown, the head and wings rather darker; throat whitish; tail very much forked and the outer feather elongated. According to Mr. Andersson the "iris is dark brown, the legs and feet brown, the bill black."

Fig. Temm. Pl. Col. 460, fig. 2.

91. CYPSELUS MELBA.

White-bellied Swift.

Cypselus gutturalis, Gurney in Anderss. B. Dam. Ld. p. 46.

As with *C. apus*, the South African White-bellied Swifts have been supposed by Canon Tristram to belong to another species and referred to *C. gutturalis* of Vieillot. The differences proposed, however, do not hold good in our opinion, and in this Mr. Dresser also concurs (B. Eur. part xxxi). It can, indeed, scarcely be doubted that the specimens seen in South Africa, only at the time when the species is absent from Europe, are emigrants from the latter continent. We must, however, add one peculiarity respecting the South African birds, and that is, that we never heard them utter any sound, whereas during a visit to Switzerland, in the summer of 1871, we were astonished to hear the stridulous cry uttered by the birds while circling around the cathedral of Berne. Can it be, therefore, that the note is only uttered during the nesting season, as the bird does not breed with us, as far as we know? Le Vaillant, indeed, says that it breeds in rocks, but we have never heard of their nests being found, though we have seen them flying into crevices of the rocky sides of Table Mountain. We have also watched several pairs flying in and out of the rocky face of the "Ravine" at Simon's Town, but had no means of ascertaining if the birds were in a breeding state, and the crevices were perfectly inaccessible.

The great Alpine Swift is very abundant about Cape Town, where

we noticed its arrival in 1868, on the 2nd of August, and in 1870 on the 10th of the same month. We have seen it at the Knysna, and have received it from a valued correspondent at Swellendam, Mr. Wm. Cairncross, who has sent it with several other Swifts and Swallows killed in that neighbourhood.

Victorin procured it in the Karroo, and also in the Knysna in May: here also Mr. Andersson shot it. Mr. Rickard says that it occurs at Port Elizabeth, where it is generally seen about Christmas, but does not stay. At East London the same gentleman has noticed it on the 31st of July. Captain Shelley writes:—"Although I found this species plentiful in the Cape Colony, I did not observe it near Durban." Mr. Ayres has, however, procured it in Natal. Mr. Andersson says:—"On July 8th, 1866, I observed at Objimbinque a large flight of these Swifts, which to the best of my recollection were the first I ever saw in Damara Land, and particularly noted them as very numerous on the Omaru River on November 2nd." Senor Anchieta has likewise met with the species at Huilla in Mossamedes.

C. melba appears to reside principally in the mountains, only occasionally descending into the plains when some particular food is to be found. On the top of Table Mountain we have seen it in great abundance. Once, after lighting a fire there, we found ourselves surrounded by hundreds of them, hawking after the flies which the fire drove up. They dashed through the dense smoke and skimmed along the burning ground at the risk of singeing their wings.

The large size of the Alpine Swift prevents its being mistaken for any other species known from South Africa, measuring, as it does, 8 inches in length, with a wing of 8 inches also. In addition to this it can always be told by its white belly.

Fig. Dresser, B. Eur. part xxxi.

Fam. MEROPIDÆ.

92. MEROPS APIASTER.

European Bee-eater.

The European Bee-eater, during its period of visitation, extends all over the Cape Colony, and we have generally noticed its arrival about August in company with the Quail. All the instances which

have been recorded with the actual dates of capture, show that it is only during the months when it is absent from Europe that it visits South Africa, and hence the fact of its breeding during its stay is of great interest. Victorin procured it in the Karroo in January; Dr. Exton shot a specimen at Kanye, and on the 24th of October, 1873, Mr. T. E. Buckley shot two specimens near the River Meathly in Bamangwato: It does not seem to have occurred to Mr. Ayres in Natal, but Mr. Andersson states that it is "very common in Ondonga during the rainy season, when it is also not uncommon in Damara Land proper:" he considers it to be less abundant in Great Namaqua Land. Senor Anchieta has met with the species on the River Cunene, and also at Caconda in Benguela, while the British Museum contains an example from the Congo, without, however, any indication of the collector.

It hawks after flies, uttering its cheerful, chirruping cry, and alighting on the summit of the highest bush in the neighbourhood. It breeds in the neighbourhood of Nel's Poort, Mr. Henry Jackson having found several nests in holes in banks. The eggs are pure white: axis, 12''' ; diam. 10''' . We also found it breeding in great abundance at the Beig river in September and October. It does not always select a bank into which to bore the hole destined for its nest, for we found one flat piece of sandy ground perforated with numberless holes into which the birds were diving and scrambling like so many rats.

This species is of large size: Total length, 11·5 inches; wing, 5·9; culmen, 1·4; tarsus, 0·45. It is distinguished from the other Bee-eaters of South Africa by its yellow forehead and throat, and by its *straw-coloured scapulars*.

Fig. Gould, B. Gt. Brit. pl. .

93. MEROPS SUPERCILIOSUS.

Blue-cheeked Bee-eater.

Merops savignii and *M. aegyptius*, Layard, B. S. Afr. p. 69.

Notwithstanding the difference in the shades of blue and green which are to be found in a series of skins of this Bee-eater, we believe that but one species is represented: the brown head which is sometimes seen, more especially in Madagascar birds, is often to be noticed in specimens from other parts of Africa, and these brown-headed individuals occur along with green-headed specimens, so that they are probably nothing but immature birds.

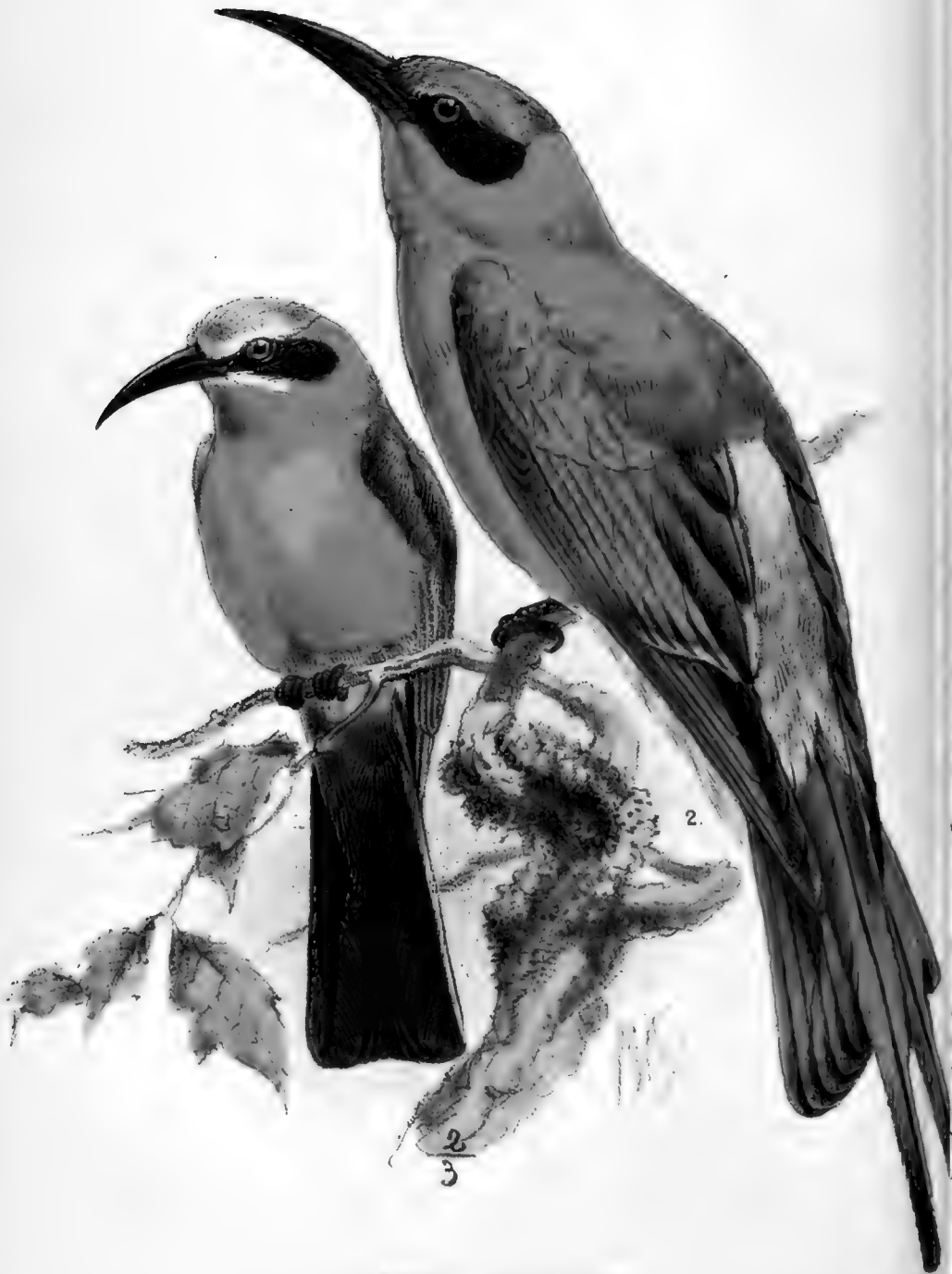
Its range in the Cape Colony is not extensive, and not many specimens have come under our notice from the colony itself. Mr. T. B. Bayley, of Wynberg, shot a specimen on the Cape Flats and sent it to the Cape Town Museum, and Mr. Dumbleton, of the same town, assures us that these birds periodically visit a circumscribed portion of the Flats in considerable numbers. On the 15th of February, 1866, a specimen was sent to the Museum by Mr. Bishop, shot near Kuil's River. In Natal, according to Mr. Ayres, they only inhabit the coast-lands, and are migratory, appearing only during the months of the South African summer. Dr. Kirk observed them in the Zambesi district, where he says they were gregarious, but not found in any numbers during the wet season. Mr. Andersson first noticed them near the River Okavango, and afterwards obtained several specimens in Ondonga, on the 20th and 28th of November, 1866. Senor Anchieta met with the species on the Rio Coroca in Mossamedes, and it has also been sent from Benguela by Senor Furtado d'Antas. It also extends to Angola proper, having been obtained there by Mr. Monteiro, whose specimens are now in the British Museum.

Dr. Kirk gives the following note on its habits in the Zambesi district:—"The nests are formed in the clay or sandy perpendicular banks of rivers, and consist of long passages about three inches in diameter, tunnelled in the face of the bank and generally about two feet apart. The colony occupies a space of about fifty yards in extent. In the heat of the day they are seen flying together near their settlements, catching flies on the wing." Mr. Ayres writes:—"These birds take their food on the wing, and their flight somewhat resembles that of the Swallows: they frequently alight on the trees and branches to rest: during flight they utter a harsh grating note."

This species is one of the larger Bee-eaters, measuring as follows:—Total length, 10 inches; bill, 1·7; wing, 5·75; tail, 4·03; tarsus, 0·5; middle tail feathers, 6·2. The general colour is green both *above* and *below*, the forehead whitish, the ears black: both above and below the eye a more or less distinct bluish stripe; chin yellow, passing into chesnut, the latter forming a conspicuous *gular patch*.

Fig. Shelley, B. Egypt, pl. vii. fig. 1.





1. MEROPS BULLOCKOIDES
2. — NUBICOIDES.

94. MEROPS NUBICOIDES.

Carmine-throated Bee-eater.

Plate IV, fig. 2.

Merops nubicus, Layard, B. S. Afr. p. 69.

This is a species seldom met with in collections, and as far as we are aware, rarely occurring in the colony itself. M. Jules Verreaux, however, informs us that he procured a stray specimen at Genadenhal, near Caledon. The Editor's collection contained a single specimen from Port Natal, and this is now in the British Museum. Mr. Ayres forwarded a specimen from the Transvaal to Mr. Gurney, "shot on the Pindais River, about 130 miles to the north of Potchefstroom, by Mr. Button, who states that there were many of them together." In the Zambesi region, according to Dr. Kirk, they were rather local both in the Zambesi and Shire, but on the former river they were discovered in colonies, tunnelling their nests in the river-banks. Mr. Andersson writes:—"I have only once observed this species, when a specimen occurred a few days' journey south of the river Okavango: its appearance on the wing was beautiful. I understood from the hunters that at certain seasons this Bee-eater is common on the Okavango, and breeds on the banks of that river."

Its large size and ruddy coloration ought to distinguish this species at a glance. Unfailing characters are its red tail and pink undersurface, in which no other South African Bee-eater resembles it. Total length, 13·7 inches; wing, 5·8; tail, 4·4; tarsus, 0·5; middle tail-feathers, 7·8.

95. MEROPS BULLOCKOIDES.

White-fronted Bee-eater.

Plate IV, fig. 1.

This species was originally obtained by Sir A. Smith in 25° S. lat., north of which it was not uncommon. "When observed," he says, "it was perched upon the tops of trees, along the immediate banks of rivers, or in the act of making short circuits through the air, apparently in chase of flying insects." Mr. David Arnot, of Colesberg, has forwarded several examples to the South African Museum, all of which were obtained in the Orange Free State. Mr. T. E. Buckley found them breeding in the banks of the Limpopo, and in the Transvaal he also procured specimens on the 1st and 2nd of July; and in the same district Mr. Ayres has noticed them. He

writes :—" These Bee-eaters I have usually found in flights on the banks of rivers, generally alighting on the tops of bushes and trees, or on any bare exposed twig: their notes are harsh and short." The same gentleman also procured specimens on the Monocusi River in Natal. According to Dr. Kirk it was met with in the Zambesi district, "solitary in habits, frequenting the banks of streams." It never seems to have occurred to Mr. Andersson in Damara Land, but Senor Anchieta fell in with the species on the River Cunene and also at Huilla in Mossamedes.

This species is of medium size, the chief characters being its straw-coloured nape and breast, the latter contrasting strongly with the deep blue under tail-coverts: it is also remarkable for its white chin and broad white moustache. Total length, 8·5 inches; culmen, 1·4; wing, 4·6; tail, 4·0; tarsus, 0·5.

96. *MEROPS PUSILLUS*.

Little Bee-eater.

Merops erythropterus, Layard, B. S. Afr. p. 70.

Although not yet recorded from within the boundaries of the Cape Colony, the present bird is by no means rare in collections from Natal and the Transvaal. Respecting its occurrence in the former province Mr. Ayres writes :—" These Bee-eaters are particularly fond of frequenting reedy marshes and swamps, and are to be found here in certain localities all the year round. They are by no means so plentiful as the Blue-cheeked Bee-eater, which is only here during the summer months. It is seldom that more than five or six are seen together, and generally not more than two. When feeding, their flight is not so prolonged as that of *M. superciliosus*, neither is their note so loud and harsh." Dr. Exton procured it at Kanye, in the Matabili country, and generally throughout Zulu Land during the winter months. "It flies low," he writes to us, "and perches on twigs near the ground, from whence it launches after passing insects." Mr. Ayres says that it is pretty common along the Limpopo, and Mr. T. E. Buckley noticed it on the same river, as well as on the Samouqui River in the Matabili country. He says that they were "plentiful in comparatively open country in the north of the Transvaal." Dr. Kirk, who speaks of this species as *M. variegatus*, mentions it as widely distributed in the Zambesi country in the vicinity of water.

Mr. Andersson observes:—"This exquisite and diminutive species is common on the banks of the Rivers Okavango, Teoughe, and Botletlé, as well as on the Lake-watersheds in general, and also about Lake N'gami itself, but I have never observed it as far south as Damara Land proper. It seems to be partial to the immediate neighbourhood of the reedy banks of rivers, and of swamps and morasses; and I have never found it at any distance from water." Senor Anchieta has recently procured it on the Cunene River, and Mr. Monteiro met with it both in Benguela and Angola proper.

The small size of this Bee-eater ought always to distinguish it, but it may be briefly described as of a green colour on the upper surface, with a yellowish brown breast: throat yellow with a blue line across the lower part, followed by a black patch and shading off into chesnut: bill and feet black: iris crimson in adults, dark hazel in young. Total length, only 6 inches; culmen, 1·0; wing, 3·0; tail, 2·5; tarsus, 0·3.

The young bird is, as in other species, much greener than the adult: there is no yellow on the throat, which is, however, of a light straw-brown, resembling the rest of the under surface, the breast being marked with green.

Fig. Levaillant, *Hist. Nat. Guepiers*, pls. 7, 17.

97. DICROCERCUS HIRUNDINACEUS.

Swallow-tailed Bee-eater.

Merops hirundinaceus, Layard, *B. S. Afr.* p. 70.

Levaillant found this species in abundance near the Orange River, and Mr. Ortlepp, who has forwarded specimens from Colesberg, writes:—"I found, in June, several hawking over the trees on the banks of the Orange River. As the season was so far advanced I conclude that they are not migratory like their congener, *M. apiaster*, which they much resemble in habits, only they do not fly so high when in search of food." Mr. Andersson observes:—"This is the commonest species of Bee-eater in Damara Land, and it is also found in Great Namaqua Land and in the Lake country. Chiefly visits Damara Land during the wet season. I took a nest of this Bee-eater on the Omaruru River on the 31st of October. It was situated in a soft sandy bank, some three feet deep horizontally: the entrance was not above two fingers wide, but the hole was slightly enlarged where the nest was found. The latter, which had no lining,

contained three beautifully white eggs." The species has likewise occurred to Senor Anchieta on the Cunene River, and to Mr. Monteiro in Benguela.

The strongly forked tail renders this Bee-eater an unmistakable bird, no other South African species also having the tail-feathers tipped with white: iris, carmine-red: bill, black: tarsi and feet brownish. Total length, 8 inches; culmen, 1·3; wing, 3·9; tail, 4·2; tarsus, 0·4.

The young bird differs in being all green, the yellow throat and blue gorget of the adult being absent, but it has the tail forked as in the full-grown bird.

Fig. Swainson, B. W. Afr. pl. 10.

Fam. CORACIADÆ.

98. CORACIAS GARRULA.

European Roller.

Coracias abyssinica, Layard, B. S. Afr. p. 60.

This Roller has not as yet been noticed in any numbers within the Cape Colony, and is doubtless only a winter visitant. We believe it to be the species noticed under the heading of *C. abyssinica* in the first edition, for it has been pointed out that *C. garrula* is exactly similar to that species without the elongated tail-feathers, (Cf. Sharpe, Ibis, 1871, p. 201). We consider that *C. abyssinica* is confined to North-Eastern Africa and Western Africa and has not yet appeared in South Africa at all.

The European Roller has been received from one or two places along the northern border of the colony, also from the neighbourhood of Spring-bok fountain in Namaqua Land. Mr. Rickard tells us that he once saw a Roller, apparently of this species, near East London.

It has been killed in Natal by Mr. Ayres, Mr. Mohr and other collectors, and Captain Shelley recently obtained a specimen from the neighbourhood of Pinetown, but it was considered to be by no means common in that locality. Mr. Ayres has lately forwarded a specimen from the Transvaal, which, he says, was killed amongst some bushes about three miles from Potebcestroom in the month of December. Mr. Andersson writes:—"This species is common in Ondonga, but is less so in Damara Land proper, than either *C. nœvia* or *C. caudata*. As far as I recollect, it is only seen during the rainy season."

Upper surface sandy brown; head and neck blue; forehead and

chin whitish ; cheeks and throat pale blue with streaks of silvery-blue ; remainder of under surface pale greenish blue ; least wing-coverts rich ultramarine, the rest greenish blue ; primaries blackish, externally marked with ultramarine, secondaries externally greenish blue, the innermost sandy brown like the back ; upper tail-coverts greenish blue ; middle tail-feathers dirty green, the other feathers blue, paler towards the tip, the two outer ones tipped with dull blue ; bill black ; feet yellowish brown ; iris dirty brown. Total length, 12 inches ; culmen, 1·3 ; wing, 7·6 ; tail, 4·4 ; tarsus, 0·7.

The present species has not an elongated outer tail-feather, and therefore cannot be mistaken for *C. abyssinica* or *C. caudata*, which it somewhat resembles in coloration. It approaches *C. nœvia* in size and form of tail, but is differently coloured, and has *no white nape patch*.

Fig. Sharpe and Dresser, B. Eur. part 1.

99. CORACIAS NÆVIA.

White-naped Roller.

Coracias nuchalis, Layard, B. S. Afr. p. 60.

Le Vaillant procured this Roller in Caffraria. One specimen was shot near Middelburg on the eastern side of the colony, and sent to us by the late Mr. J. O'Reilly, magistrate of that place. Dr. Reid informs us that it is not unfrequent between Soutpans drift, Orange River, and Gricqua Town.

Mr. Ayres says that in Natal it is "not uncommon during summer, and it also occurs on the River Limpopo ; it is generally found either solitary or in pairs." Dr. Exton procured it at Kanye, and during his journey to the Matabili country, Mr. T. E. Buckley found the species fairly common. He obtained a specimen in the above locality in October, 1813, and again in the Transvaal in July. Mr. Ayres has also met with it in the last-named country. According to Mr. Andersson it is not uncommon throughout Damara Land and is also found in the Lake-regions. By Senor Anchieta it has been met with at Huilla and on the Rio Cuncenc. [Mr. Andersson gives the following excellent account of the habits :—"It is usually met with in pairs, and is not particularly shy. It seldom extends its flight far, but occasionally rises suddenly to a considerable height, rocking violently to and fro, and descending in a similar manner, with a motion resembling that of a boy's kite when falling to the ground on the guiding force being withdrawn. When on the wing it makes a great

noise, rapidly uttering harsh and discordant sounds: its notes are at times not unlike the sound produced by a broad-bladed knife passing through a tough piece of cork, but in a louder key. This species seeks much of its food on the ground; but sometimes it watches from some elevated position, and, the moment its prey comes within sight, darts upon it with unerring certainty, its habit in this respect being very much like that of the Butcher-bird Shrikes. It is a most useful bird, feeding largely on centipedes, scorpions, tarantulas, and other insects, as well as on small snakes and lizards."

"This Roller is one of the earliest breeders in Damara Land, and makes its nest in the hollows of trees, usually such as have been previously occupied by some Woodpecker; the stems of these trees are mostly very tall and straight; and in consequence of this and of the smallness of the apertures, the nests are very inaccessible. I have frequently seen such breeding-places without being able to reach them; but I believe that the eggs are white and two in number, and that both parents assist in their incubation."]

General colour reddish-brown glossed with olive-green; under surface dull reddish-brown, streaked with white; wings dull rufous green, with purple reflexions; the primaries dark blue; tail ultramarine, the middle feathers olive-green; forehead and chin white, as well as a *distinct patch on the nape*; cheeks rusty red with white streaks to many of the feathers; bill black; legs and tail greenish or yellowish brown; iris varying from dark or hazel brown to olivaceous brown. Total length, 13 inches; culmen, 1.5; wing, 7.4; tail, 5.6; tarsus, 0.8.

Fig. Levaillant, Rolliers, pl. 29.

100. CORACIAS CAUDATA.

Lilac-breasted Roller.

This species inhabits the same localities as *C. garrula*, but like that species, it has not fallen under our personal observation. Mr. R. Moffat, jun. has forwarded several specimens from Kuruman, Verreaux from Kurrichaine, and Mr. Ayres has found it in Natal. The same gentleman has met with it on the River Limpopo. Mr. T. E. Buckley says that it was first observed by him a few days north of Pretoria and found far up into the Matabili country. "This species," he remarks, "was extremely shy and it was difficult to procure specimens. Just before the breeding-season they fly high up in the air, rolling about from side to side, and uttering a harsh note all the

time, settling afterwards on the very top of the nearest high tree. In the Matabili country this is a royal bird, and no one except the king is allowed to wear its feathers." We are likewise indebted to Dr. Exton for the following account of the bird :—" From Sechelés northward *C. caudata* is commonly known as 'Mosilikatze's bird,' its liveliness and pugnacity perhaps having given rise to the old warrior's interest in it. In his earlier career Mosilikatze claimed the feathers solely for royal adornment, and in his milder moods has been known to give an ox to the youth who had captured and presented one of these birds. It delights to perch on the topmost branch of a leafless tree, from which it gives out its note of challenge, and should a crow or a hawk approach its vicinity, it will make rapid darts at the intruder, and with sharp pecks and harsh screams drive off birds greatly superior to itself in size and strength. It has a habit when disturbed by the solitary hunter of flying directly towards him, but high overhead, and after careful scrutiny, wheeling off uttering discordant screams. For so bright-plumaged a bird, it is noteworthy that there is no difference between male and female. Bechuana name 'Le-cler-cler;' Matabili name 'Fee-Fe.'"

Mr. Buckley procured a male in the Transvaal on the 1st of July, 1873, and he observes moreover that he has "seen the young about November, evidently not long out of the nest, so the Rollers must be amongst the earliest breeders." Dr. Kirk says it is a very common bird in the open woods and bush country near the Zambesi and other rivers, that the cry is harsh, and that the plumage varies considerably, being much less brilliant during the cold and dry seasons. Mr. Andersson writes :—"This species is common in the Lake-Regions, and is also pretty common in Damara Land, where, however, I imagine that it must be partially migratory, as during the dry season comparatively few individuals are seen. It is more shy and difficult of approach than *C. naevia*, which it otherwise resembles as to food and habits." On the River Cunene Senor Anchieta has recently met with it as well as at various places in the Mossamedes district.

A long description of this bird is not necessary here, as it is easily distinguishable by the following characters—its forked tail with the outer feathers measuring 8·5 inches in length; white throat; blue abdomen; and by its lilac-coloured throat and breast, the throat being streaked with white; "bill black; feet greenish yellow; iris yellow-

ish brown, the ring round the eyes greenish yellow, (*Andersson*), iris dark hazel (*Buckley*).

Total length, 15 inches ; wing, 7·0 ; tail, 5·5.

Fig. Des Murs, *Iconogr. Orn.* pl. 28.

101. EURYSTOMUS AFER.

Cinnamon Roller.

This small Roller was observed on the Zambesi by Dr. Kirk, who writes respecting it:—"Local, and observed rarely near Teté. Frequent in the river-valley at Chibisa on the River Shiré. Its habits resemble those of *Coracias caudata*." In other parts of Africa the species is plentiful.

General colour cinnamon brown, with a distinct lilac gloss: least wing-coverts bordering the edge of the wing, and the greater coverts deep ultramarine, the inner ones inclining to cobalt; quills black, externally washed with ultramarine, the outer web of the primaries inclining to cobalt; the under surface of the wing greyish black glossed with cobalt; upper tail-coverts dull cobalt; tail silvery cobalt, inclining to white on the inner web, the middle feathers brown washed with blue, the extremities of all the feathers banded with black, more narrowly on the outer ones; under tail-coverts cobalt: bill deep yellow: legs pale yellowish olive: iris olivaceous. Total length, 10 inches; culmen, 0·95; wing, 6·95; tail, 4·3; tarsus, 0·65.

The species is to be distinguished by its *yellow* bill, which is very stout, and as broad at base as it is long.

Fig. Levaillant, *Rolliers*, pl. 35.

Fam. TROGONIDÆ.

102. HAPALODERMA NARINA.

Narina Trogon.

Apaloderma narina, Layard, *B. S. Afr.* p. 61.

This brilliantly plumaged bird is found throughout the forests and wooded kloofs in all the eastern portions of the colony. About the Knysna it is scarce, but this was the only locality where the late Mr. Andersson procured the species, and Victorin also met with it there from September to November. Most of the specimens which we have seen have been from Natal, where, says Captain Shelley, "it is not uncommon in the thick woods about Durban and Pine Town." Dr. Kirk writes:—"In the Zambesi this is decidedly a

scarce bird: I know of only four specimens having been seen; one in the Zambesi delta, the others at Chibisa, on the Shiré. It seems to frequent trees. Native name, 'M'voraio.'" Bianconi procured it in South Mozambique. The Trogon seems never to have been met with in Damara Land by Andersson, but Mr. Monteiro obtained one specimen which he shot in a wood in Benguela, and more recently Senor Anchieta has procured a pair at Biballa in Mossamedes. Mr. Hamilton also shot a pair at Cazengo in the interior of Angola. Wherever found it exhibits the same shy, creeping habits. When apprehensive of discovery, it sits motionless on its branch until alarmed at same act of the fowler, when it precipitates itself headlong into the bush, and is instantly lost to view. It feeds on fruits and insects, and utters a loud moaning note, or, perhaps, more correctly speaking, a hoot, which Mr. Atmore describes as "like the bark of a poodle with a bad cold." Le Vaillant states that they nest in holes of trees, and lay four, nearly round, white eggs; but this requires confirmation. We have never met with any one who had seen their nest, though we made particular enquiries for them when at the Knysna.

Adult male.—Entire upper surface shining green as well as the throat and chest, the rest of the under surface crimson: wing-coverts grey, finely pencilled with black lines and slightly shaded with green: two centre tail-feathers green like the back, the three others more or less white on the outer web: bill yellow: feet black: iris red. Total length, 11·6 inches; wing, 5·3; tail, 7·0; tarsus, 0·65.

Female.—Duller coloured than the male: the breast greyish washed with crimson.

Fig. Gould, Monogr. Trogon. pl.

Fam. **ALCEDINIDÆ.**

103. ALCEDO SEMITORQUATA.

Half-collared Kingfisher.

This Kingfisher, which is the representative of the European species in Africa, and is strictly of the same type, is widely distributed throughout South Africa and appears at uncertain intervals, though it cannot be called migratory. Mr. L. Layard shot several on the Liesbeck River near Cape Town, and Mr. John Reid has also procured it on the Salt River. We have received it from Swollen-

dam, and we saw it ourselves near Graham's-town, the Fish River, and Kowie. Specimens were in Major Bulger's Windvogelberg collection. Victorin obtained examples at the Knysna in April, July, and August, and Mr. Andersson also shot it at the same place. Mr. Rickard records it from Port Elizabeth and East London, where, he says, it frequents the beach as well as the rivers and feeds much on crabs: it has also been sent from Eland's Post by Mr. T. C. Atmore. It appears to be scarcer in Natal than in Cape Colony, but Mr. Ayres says that it frequents both the coast and the interior. The specimens he procured were named at the time *A. quadribrachys*, a West-African species, and one which we do not consider an inhabitant of South Africa, for, though the late Mr. Jules Verreaux assured us that he obtained it on the Buffalo River, no actual specimens are in existence from any part of South Africa, and we think it probable that in this instance his memory failed him. Mr. Ayres has also found the species in the Transvaal, but it was not met with in the Zambesi country by Dr. Kirk, although a specimen said to be from thence is in Mr. Dawson Rowley's collection. On the western coast it has been procured by Anchieta at Capangombe.

In habits the Half-collared Kingfisher resembles its European prototype, and may be seen perched for some time on a bough overhanging the water, into which it plunges after fish, &c. Its flight is strong, but is not so swift as that of its European congener. Mr. W. Atmore informs us that it nests in holes of banks, and that he took one at Kykoc, which contained three polished white eggs.

General colour rich blue, the back brilliant cobalt, the head and nape banded with bright blue lines and a stripe on the sides of the neck white, as well as the throat; rest of under surface orange, the sides of the breast blue, somewhat converging so as to form a half collar; bill black; feet coral red; iris black.* Total length 7·5 inches; bill, 1·8; wing, 3·2; tail, 1·8; tarsus, 0·25.

Fig. Sharpe, Monogr. Alced. pl. 7.

104. *CORYTHORNIS CYANOSTIGMA.* Malachite-crested Kingfisher.

Alcedo cristata, Layard, B. S. Afr. p. 65.

This beautiful little Kingfisher is abundant throughout the colony, wherever a stream or marsh exists which can supply it with its

* The descriptions of all the Kingfishers are derived from the editor's "Monograph of the Alcedinidæ."

necessary food. We have captured it even in Cape Town, two specimens which we sent to London having actually killed themselves by flying against a building in the town itself. Victorin procured it in the Karroo in January and February, and we have seen it in Mr. T. C. Atmore's collections from Eland's Post, as well as in Major Bulger's from Windvogelberg. Mr. Rickard tells us that it is common at Port Elizabeth, but is not quite so numerous at East London. Mr. Ayres has procured it in Natal, where he says it frequents "both the coast and interior streams." Captain Shelley remarks that he found it, during his recent trip to the the same country, "invariably frequenting the small streams and ditches close to Durban, where however, it is not very abundant." In the Transvaal Mr. Ayres has found it breeding, and according to Mr. T. E. Buckley, it frequents pools and streams throughout the latter country, but always singly. According to Dr. Kirk it was universal "on all the waters of the Zambesi region, sitting on the reeds or bushes which overhang them, and darting on its prey." Mr. Andersson writes:—"Probably from want of permanently running rivers this exquisite little species is not found in Damara or Great Namaqua Land, but it is common on all the waters north of those countries." Mr. Monteiro says it is abundant at the Lagoons near Benguela, but at present Senor Anchieta has not forwarded it from Mossamedes.

It breeds in banks, and lays from four to six glistening white eggs, so transparent that the yellow yoke shines plainly through the shell. Axis, 9''' ; diameter, 6'' 6''' . The nest consists of nothing but the bones of the delicate little fish upon which the bird habitually feeds, and is usually constructed, if the constantly accumulating mass of bones can be called a nest, at the end of a hole bored two or three feet into loose sandy soil, and situated in a chamber always elevated above the mouth of the hole; the drainage is thus perfect, the chamber being always dry. We found several nests along the Berg river in September.

Mr. Ayres says that in Natal, "it feeds on fresh water shrimps and small fish, but principally the former, as well as on beetles and insects, darting from a bough on to its prey."

The general colour of this little Kingfisher is of a rich ultramarine, the cheeks, ear-coverts and under surface rufous; throat and a longitudinal patch along the sides of the neck white. It may be told, however, at a glance by its bright coral red bill and by its enormous

fan-like crest, which is of a malachite-green colour barred with black. Total length, 5·2 to 6 inches; bill, 1·3; wing, 2·3. South African birds are rather larger than those from Western or North-Eastern Africa.

Young birds have the bill blackish, the whole of the colouring duller than in the adults, and may further be told by the bars of light cobalt on the upper surface.

Fig. Sharpe, Monogr. Alced. pl. xi.

105. *CERYLE RUDIS.*

Pied Kingfisher.

This species is not uncommon, and is widely distributed. We have seen it about "Salt River," near Cape Town, but in greater numbers about the rivers, lakes, and estuaries of the Knysna, and have received it from Kuruman, Colesberg, and Kaffraria. Mr. Chapman found it all the way to Lake N'gami. It hovers over the water while fishing, and plunges under the surface in pursuit of its prey. It breeds in holes hollowed by itself in sandy banks. We took a nest (Nov. 10th, 1865,) in a bank of Zoetendals Vley, which was placed at the extremity of a small hole, more than two yards deep. It was composed entirely of fish-bones and scales; and the eggs, six in number, were of a lovely shining white, almost similar in shape at each end: axis, 14''; diam., 11''. At the time we took them, the young were nearly ready for exclusion. We also found them breeding in great numbers along the Berg River in September, and we there took thirty-nine eggs in one day.

It must certainly be found plentifully at the Knysna, for Mr. Andersson's collections contained many examples, and Victorin found it in the same locality from March to May, and in the months of July, September, and October. At Port Elizabeth it is extremely common, according to Mr. Rickard, but is not quite so plentiful at East London. Mr. Ayres states that in Natal it frequents the lakes and rivers near the coast, but is not found in the interior. Mr. T. E. Buckley writes:—"This bird is pretty common in Natal, but much more so on the Limpopo, in the north of the Transvaal, where I found its nest in a hole of the bank, but as the ground was hard, I was unable to get the eggs. Its absence in the Matabili country is accounted for by the rivers being mostly sand-rivers in the part of the country I visited." Dr. Kirk says it is abundant on all rivers and lakes throughout the Zambesi region.

Mr. Andersson observes :—" I do not remember to have seen this bird in Damara Land proper, but have occasionally met with it along the periodical watercourses and temporary rain-pools of Great Namaqua Land, and I have reason to think it may be found permanently on the banks of the Great Fish River, where large pools of water, containing fish, exist at all times of the year." Senor Anchieta has met with the species at Capangombe and Gambos in Mossamedes, on the Rio Coroca, and more recently on the Cunene River. It is also found in Angola, and indeed all over Africa.

Adult male.—Head crested, black, striped narrowly with white, plainer on the cheeks; a broad superciliary line extending downwards on to the sides of the neck, white; the rest of the body black varied with white, the latter colour predominating on the lower parts of the back and rump; quills black, white at the base, the secondaries barred with white, the primaries externally white at the base, forming a large white patch; tail feathers black, spotted and tipped with white; under surface of the body pure white with two black bands across the breast; a few black marks on the flanks, and sometimes a few spots on the throat; bill and feet black; iris dark brown.

Adult female.—Similar to the adult male, but has only one band across the breast.

Young.—Similar to the adults, but the plumage above almost entirely black, and the breast marked with grey edgings to the feathers, giving a barred appearance, the band across the breast not complete.

Fig. Sharpe, Monogr. Alced. pl. 19.

106. CERYLE MAXIMA.

Great African Kingfisher.

This is the largest of the South African Kingfishers, and is very widely distributed: it is not at all uncommon, but is migratory and we do not know anything of its nidification. It frequents the "Salt River," and other small streams in the neighbourhood of Cape Town, perches on trees, and is wary and difficult of approach. It is very common at Zoetendals Vley and along the River Zonder End. Mr. Rickard reports it from Port Elizabeth, and informs us that it is common at East London, being very numerous in May; some stay all the year, frequenting both the beach and river, and feeding on

crabs. The late Mr. Andersson procured several specimens at the Knysna, where also Victorin found it in March and April. Mr. Ayres has procured the species in Natal and the Transvaal, it being found in the former country not far from the coast, where it frequents rivers and lakes. Captain Shelley says:—"I met with a pair of these gigantic Kingfishers amongst the low bushes between Durban and the Conguella, and procured them both. They kept entirely to the small streams, and when disturbed flew only for a short distance, returning again to the same haunt as soon as they fancied they were out of danger." Dr. Kirk says that throughout the Zambesi region, it was observed on the courses of the rivers. According to Mr. Andersson it is occasionally found in Damara Land on the Teoughe River and also on the Okavango, but is everywhere very shy. Senor Anchieta records it from Humbe on the Cunene River. It is not uncommon on the Quanza, where, we are informed by Mr. Monteiro, "it may be seen generally on the bare or dead branches of trees overhanging the river, sitting upright, with its head at nearly right angles with its body, and the crest is prominently exhibited." On the Congo, however, it appears to be represented by *Ceryle sharpii*.

The food of this large Kingfisher consists of crabs, frogs, reptiles, and fish. Mr. Atmore writes:—"I once found one of these birds with his bill shattered, evidently from striking his prey in too shallow water."

Adult male.—Above slaty-black, darker on the head, which is crested; most of the crest feathers with good sized white spots upon both webs, towards the nape some of the feathers in very old birds unspotted; back and scapularies clearer slaty-grey, a few shaft stripes very plainly developed, and all the feathers spotted with white, some of the spots being more longitudinal bars; the lesser wing-coverts slaty-grey with a heart-shaped spot of black in the centre of the feather; the rest of the wing coverts black, edged with slaty-grey and conspicuously spotted with white; quills blackish, the inner web white at the base and broadly edged with slaty-grey and spotted with white; a small spot in front of the eye, throat and a line of feathers from the base of the lower mandible down the sides of the neck, pure white, the latter varied with longitudinal black marks; cheeks and a line of feathers below the last mentioned line of white and black feathers, black, the former narrowly, and the

latter broadly varied with white; lower part of the throat and chest rich rufous, the sides varied with slaty-grey, the feathers spotted with white; flanks white banded with slaty-grey; under wing and tail-coverts white with an occasional black spot; centre of the abdomen and vent pure white; bill black; feet dark olive brown; irides nearly black. Total length, 14·8 inches; of bill from front, 3·5, from gape, 4·3; wing, 8·0; tail, 5·3; tarsus, 0·4; middle toe, 1·0; hind toe, 0·3.

Adult female.—Similar to the male, but instead of the upper part of the chest being rufous, it is replaced by a broad slate-coloured band, each feather being banded with white; below this there is a white band, and the rest of the under surface of the body with the under wing and tail-coverts is rufous. Total length, 16·5 inches; of bill from front, 3·5; from gape, 4·5; wing, 8·0; tail, 4·75; tarsus, 0·4; middle toe, 1·0; hind toe, 0·3.

Young female.—Similar to the adult female, but has the feathers of the band on the breast darker and edged with white, the whole band tinged with rufous.

Young male.—Similar to the young female, but has the abdomen and under wing and tail-coverts white. From an examination of several young males we are induced to believe that as the bird advances in age the rufous colouring of the under wing-coverts becomes pure white as in the adult male; then the abdomen loses the rufous colouring, the flanks and under tail-coverts becoming slaty-grey barred and spotted with white, the latter again in very old birds becoming pure white. At the same time the black feathers on the upper part of the breast disappear, being replaced by a rufous band.

Fig. Sharpe, Monogr. Alced. pl. 20.

107. ISPIDINA NATALENSIS.

Natal Kingfisher.

Halcyon cyanotis, Layard, B. S. Afr. p. 64.

Alcedo natalensis, Layard, *t. c.* p. 66.

Sir Andrew Smith, who first described this species, states that it "inhabits the banks of rivers, &c., to the eastward of Cafferland." The Leiden Museum also has it from Caffraria, but the greater number of the specimens which we have seen have been from Natal, where, according to Captain Shelley, "it is rather more plentiful

than *C. cyanostigma*, and occasionally met with in the woods away from water." Mr. Ayres also writes:—"These birds feed entirely on butterflies and insects caught on the wing; they frequent the dense bush, and are often seen along the streams, but never catch fish." Although not recorded by Dr. Kirk in his Essay on the Birds of the Zambesi region, a specimen from that locality was in the Editor's collection, and it doubtless occurs there, as it has been found by Bianconi in Mozambique.

Adult.—Crown of the head black, barred with rich ultramarine; a line of feathers extending from the base of the nostrils backward over the eye, cheeks, sides and back of the head rich lilac rufous; a patch of feathers behind the ear rich ultramarine; throat white; rest of the under surface of the body bright orange red; bill rich coral red; feet red; irides dark brown. Total length, 4 inches; of bill from front, 0·9; from gape, 1·1; wing, 2·1; tail, 0·9; tarsus, 0·25; middle toe, 0·4; hind toe, 0·2.

Fig. Sharpe, Monogr. Alced. pl. 52.

108. HALCYON SEMICERULEA. African white-headed Kingfisher.

Halcyon Swainsonii, Layard, B. S. Afr. p. 63.

This species has the bill red, but may be told at once by its whitish head from the rest of its African congeners.

Sir Andrew Smith stated that this Kingfisher was an inhabitant of the interior of South Africa, but there is every reason to believe that he described a West African skin. At all events no specimen of his collecting exists in any museum that we are aware of, and it remains to be rediscovered as an inhabitant of South Africa proper. Its only claim to a position in this book rests upon its occurrence in South Western Africa, a specimen having been obtained at Ondonga by the late Mr. Andersson, while Senor Anchieta has also procured it on the Cunene River and at Gambos in Mossamedes. Mr. Monteiro also collected a specimen in Benguela.

Male.—Head and neck greyish white, purer on the latter, the head showing the shafts of the feathers rather strongly; back and scapulars and wing-coverts glossy black; lower part of the back, rump and upper tail coverts rich glistening cobalt; primary coverts cobalt shaded with black; quills black, the inner web white for more than half its length, the outer web, especially of the secondaries, broadly edged with brilliant cobalt, extending nearly the entire length of the

latter, but confined to the base of the former, where it has a faint lilac tinge; tail above brilliant cobalt, shading into black on the edge of the feathers, the underside deep black; cheeks, throat, and breast white; rest of the body with the under wing and tail-coverts deep sienna; bill and feet sealing-wax red. Total length, 8·0 inches, of bill from front, 1·6; from gape, 1·95; wing, 4·3; tail, 1·4; tarsus, 0·45; middle toe, 0·7; hind toe, 0·3.

Female.—Similar to the male, but the colours duller and the head more dusky,

Young.—Similar to the adults, but the colours much more dingy, those parts being blackish-brown which in the adult are jet-black; head uniform ashy; back of neck, cheeks and entire breast dirty white, thickly crossed with transverse brown vermiculations; throat and abdomen white, flanks and under wing and tail-coverts tinged with sienna; the blue on the wings and back dull; bill dark red, black at the base.

Fig. Sharpe, Monogr. Alced. pl. 63.

109. HALCYON ALBIVENTRIS.

Brown-hooded Kingfisher.

Halcyon fuscicapilla, Layard, B. S. Afr. p. 63.

Like the preceding bird this species has a red beak, blackish only at the tip, but may be further distinguished by its striped head and breast as well as by the black scapulars. Some specimens have the back brown, and we are not certain whether it is the young bird or the old female which exhibits this character. A pair of birds were collected in the Transvaal by Mr. Buckley and in this case the male had a black, and the female a brown back. This species is not found in the neighbourhood of Cape Town, but it is common on the Eastern frontier, and is plentiful both at Port Elizabeth and East London, according to Mr. Rickard. Victorin procured it in the Karroo in December and January, and again at the Knysna in April and December. Mr. H. Atmore has forwarded specimens from George, as also has his brother, Mr. T. C. Atmore, from Eland's Post. Mr. Fellows noticed it at St. Lucia Bay, and Mr. Ayres has sent it from Natal, where, according to Captain Shelley, it is numerous about Durban and Pinetown. Mr. T. E. Buckley found it breeding along the banks of Limpopo in November, and says that it was very common along the rivers north of Pretoria. In the Zambesi it seems to be replaced by the following species.

Mr. Atmore assures us that it is plentiful at Swellendam, and that when he is digging in his garden, specimens may always be seen perched on the trees near him, from which they dart down on the worms, slugs, etc. which he turns up with his spade. Mr. Ayres writes :—"These birds frequent the bush in Natal, generally perching on some dead or bare bough not far from the ground ; they do not take their prey on the wing, but take it from the ground. They have a loud chattering note, somewhat similar to the Laughing Jackass of South Australia, but do not laugh in the same ludicrous manner ; they have a dipping flight, seldom flying far at once." Eggs sent by Mr. L. Layard and Mr. Harford were white but not so shiny as those of *Ceryle rudis*. Axis, 1·2, diam. 1·0.

Adult.—Head dark brown, broadly striped with darker brown, becoming nearly black ; scapularies and wing-coverts black ; lower part of the back and rump bright cobalt ; quills brownish-black, the inner web pale orange at the base, the primaries at the base of, and the secondaries for the whole of the outer web, as well as the primary coverts, bright cobalt ; tail cobalt above, black beneath, the inner web of all but the two middle feathers more or less black at the edge ; feathers from the base of the nostril extending backwards over the eye, cheeks and a collar round the neck pale yellowish-brown with distinct longitudinal bars ; throat and abdomen white with faint lines marking the shaft of the feather ; breast and flanks tinged with yellowish-brown and marked with very broad and distinct longitudinal stripes ; under wing- and tail-coverts pale orange, lighter on the latter ; bill crimson, black towards the tip ; eye dark brown ; feet dark red. Total length, 10 inches ; of bill from front, 1·85 ; from gape, 2·3 ; wing, 4·2 ; tail, 2·7 ; tarsus, 0·5 ; middle toe, 0·6 ; hind toe, 0·3.

Fig. Sharpe, Monogr. Alced. pl. 65.

110. HALCYON ORIENTALIS.

Peters' Kingfisher.

This species is closely allied to *Halcyon albiventris*, and like it has a striped head, but is distinguished by its uniform whitish under-surface.

Although not included in Dr. Kirk's Zambesi list, there is a specimen in Lord Walden's collection from that locality, obtained, we believe, by the late Dr. Meller. It was originally discovered by Dr. Peters in Mozambique, and ranges as high as Mombas, where

Baron Von der Decken procured specimens. Curiously enough, it has recently been shot on the Loango Coast in Western Africa, by the German Exploring Expedition.

Adult male.—Head light brown, striped with dark brown along the shaft of each feather; rump and upper tail-coverts bright blue; quills light brown, the inner web pale orange at the base, the outer web edged with bright blue, more especially on the secondaries; tail greenish blue above, blackish beneath; a loreal spot produced backwards over the eye, sides of and a collar round the neck, and the entire under surface white, inclining to fulvous on the flanks, and purest on the throat and upper part of the breast; bill dusky-vermilion; feet orange. Total length, 8·5 inches; of bill from front, 1·65; from gape, 2·2; wing, 4·0; tail, 2·4; tarsus, 0·5; middle toe, 0·7; hind toe, 0·35.

Fig. Sharpe, Monogr. Alced. pl. 66.

111. HALCYON CHELICUTENSIS.

Striped Kingfisher.

Halycon striolata, Layard, B. S. Afr. p. 64.

This is a small species of the same peculiar African group as the two preceding ones. It has a red beak and a striped head, but it has the scapulars brown at all ages, and is further distinguished from them by its smaller size. This Kingfisher is found all over the continent, but South African specimens are always larger than those from North Eastern or Western Africa: we do not, however, consider them specifically distinct.

The late Mr. Jules Verreaux states that "it is everywhere common near Kurrichaine, Latakoo, and the Vaal River, and is also met with commonly in Natal." If the species was plentiful in the latter country at the time of the writer's sojourn in South Africa, it cannot be said to be so now, for Mr. Ayres has never met with it there, nor did it occur to Captain Shelley during his recent visit to the colony. Mr. Ayres has, however, procured it on the Limpopo, and Mr. T. E. Buckley shot a male bird in the Transvaal, in July, 1873. In the Zambesi region, Dr. Kirk informs us that it is widely distributed, being equally common on the sea coast among the mangroves, and near the rivers far in the interior as well as in the plains. Mr. Andersson writes:—"This Kingfisher is very sparingly met with in Damara Land and the parts adjacent to the northward; it is partial

to localities where the vegetation has been destroyed or partially injured by fire; and it selects, if possible, a low dry branch on an isolated tree, where it watches by the hour for its prey; this, as far as I could ascertain, consists of insects, which it generally seizes on the wing. It utters loud, sharp, and shrill cries, and is always found singly or in pairs." Senor Anchieta has procured this species at several of his collecting places in Mossamedes and Benguela, and it also extends into Angola.

Dr. Kirk states that the food of this Kingfisher consists of insects. He also says that it is a sweet songster, both before and during the rains. Mr. Monteiro also refers to its note and observes as follows:—"All the birds belonging to this family that I have observed in Angola utter a very agreeable loud note or song, which produces a singular effect when, in going down a river in a canoe, in the breathless mid-day sun, it is heard cool and clear, while all else is hushed and still in the glaring heat. They are found in the thick woods and bush in the vicinity of the rivers as much or more than on the very banks."

Adult.—Head brown, each feather longitudinally marked down the centre with a shaft-stripe of darker brown; ear-coverts and back of the neck black; feathers in front of the eye at the base of the bill, cheeks and a collar round the back of the neck dirty white, marked with brown and slightly tinged with buff; upper portion of the back, scapulars and wing-coverts brown, the greater coverts narrowly edged with white, primary coverts dull green; quills dark brown, the inner web broadly white at the base, the outer web washed with dull green and narrowly edged with white towards the tip; lower portion of the back, rump and upper tail-coverts bright cobalt; tail dull green above, greyish brown beneath; under surface of the body white, inclining to buff on the flanks and abdomen; upper part of the breast and sides of the neck transversely crossed with narrow margins of brown, and each feather marked down the centre with a dark shaft-stripe; flanks longitudinally streaked with dark brown; bill and feet red (*Buckley*). Mr. Andersson gives the following note on the soft parts:—"The irides in this species are claret-coloured, the bill reddish-brown on the upper mandible, and orange-red on the lower, the lores are dusky, the legs and toes yellowish." Total length, 6·7 inches; culmen, 1·3; wing, 3·3; tail, 1·9; tarsus, 0·4.

Young.—Similar to the adult, but has the breast distinctly marked with transverse edging to the feathers.

Fig. Sharpe, Monogr. Alced. pl. 67.

112. HALCYON SENEGALOIDES.

Mangrove Kingfisher.

The present bird, which is an inhabitant of Natal, belongs to a very different group of the genus *Halcyon*, and although it has a wholly red beak, which character allies it to *H. albiventris*, its affinities are nearer to *H. senegalensis*. It may be distinguished from the other red-beaked Kingfishers of South Africa by its uniform greyish breast, and ash-coloured head washed with blue.

Sir Andrew Smith first discovered the species in Natal, where, he says, "like other members of the group, it resorts to thickets, and feeds upon insects, especially *crustacea* and *gryllæ*." Mr. Ayres gives the following note on the species in the same country:—"These birds, as far as I know, are only found upon the mangroves which line the Bay: they feed principally on small crabs, though fish are sometimes taken by them. They are generally seen singly or in pairs, and are only here in the winter months, leaving us on the approach of summer; they are rather shy birds, and dive into the dense mangrove-bush when alarmed."

It has been procured as far west as the Buffalo River by Mr. Rickard.

Head and nape cinereous, with a greenish blue lustre; back and scapularies thalassine-blue, very bright on the lower part of the back; wing-coverts deep black; wing feathers blackish, white at the base, the basal half of the outer web of the primaries, and nearly the whole of the outer web of the secondaries brilliant thalassine-blue; tail above blue, beneath black; a stripe from the base of the beak extending backwards over the eye, dusky cinereous: spot in front of the eye and ring of feathers round the eye black; throat, abdomen, under wing and tail-coverts white, the latter washed with blue; checks, sides of the neck, breast and flanks cinereous with a greenish lustre and with transverse cinereous vermiculations; bill coral red; feet dark reddish yellow; eye dark brown. Total length, 9 inches; of bill from front, 2; from gape, 2.4; wing, 4.2; tail, 2.6; tarsus, 0.45; middle toe, 0.8; hind toe, 0.4.

Fig. Sharpe, Monogr. Alced. pl. 68.

113. HALCYON CYANOLEUCA.

Angola Kingfisher.

Halcyon senegalensis, Layard, B. S. Afr. p. 62.

This Kingfisher has the upper mandible red and the lower one black, and although very nearly related to the following bird, it may be distinguished by the blue wash on the head, which is thalassine-blue, and by the black streak through the eye produced to the upper part of the ear-coverts. From *H. malimbica* both this species and *H. senegalensis* may be recognized by their blue scapulars.

In the colony it is scarce: Mr. Atmore procured a specimen at the Knysna in splendid plumage, and Dr. Exton found it in Mosilikatze's country, while Mr. Ayres has collected it at the mouth of Monocusi river in the north-east of Natal. Mr. T. E. Buckley obtained specimens on the Limpopo in November, 1873, and writes as follows:—"Very common during our journey down in the summer, but not seen in the winter. It is rather a shy bird, and continually utters a monotonous whistle. I did not meet with this species except on the Limpopo, where these birds are most conspicuous objects when on the wing." Specimens from the Zambesi are in Lord Walden's collection.

The following note on the species in South Western Africa is given by Mr. Andersson:—"This species is very abundant in Ondonga. It generally perches on or near the summit of lofty trees, from whence it sends forth a succession of rather pleasant thrilling or whirring notes." Senor Anchieta has also procured it on the River Cunene, and Mr. Monteiro in Benguela.

Above beautiful thalassine-blue, showing a sea-green tint in some lights, especially bright on the rump and outer edge of the secondaries; a white stripe from the base of the nostrils extending backwards over the eye; feathers at the base of the bill, encircling the eye and extending backwards over the ear-coverts deep black; wing-coverts jet black, outer wing-coverts thalassine-blue; quills black, the inner web white at the base; tail thalassine-blue above, beneath black; throat and under wing-coverts pure white; rest of the under surface of the body greyish white, with small transverse cinereous vermiculations, and washed in some lights with thalassine lustre; upper mandible vermilion, lower mandible black; feet black. Total length, 9 inches; of bill from front, 1·8; from gape, 2·3; wing, 4·4; tail, 2·5; tarsus, 0·4; middle toe, 0·7; hind toe, 0·35.

Fig. Sharpe, Monogr. Alced. pl. 69.

114. HALCYON SENEGALENSIS.

Senegal Kingfisher.

A species with parti-coloured beak like the foregoing, from which it is separable by its plain ashy grey or brown head and by the absence of black behind the eye. Although most of the specimens of Halcyon which we have seen from South Africa have belonged to *H. cyanoleuca*, we have examined specimens of the true *H. senegalensis* from the River Quanza in Mr. Monteiro's collection, and some undoubted examples were forwarded from Katenbella in Benguela by Mr. Sala: this therefore warrants our including the species in the present work.

No full description of the bird is necessary, as the above characters will serve to distinguish it. Total length, 8 inches; bill, 1·9; wing, 4·0.

Fig. Sharpe, Monogr. Alced. pl. 70.

115. HALCYON MALIMBICA.

Ashy-fronted Kingfisher.

Halcyon cinereifrons, Layard, B. S. Afr. p. 64.

This is altogether a larger species than the foregoing members of the genus *Halcyon*, and it may be distinguished at once by its black scapulars. Its occurrence in South Africa is at present not well authenticated. A specimen supposed to be from Natal exists in the Philadelphia Museum, and another was sold to the editor as from the Zambesi region. Its presence may be expected in South Western Africa, as Mr. Monteiro states that it is not uncommon in the thick woods near Bembe in the interior of Angola.

Adult.—Entire head ashy-grey, becoming tinged with blue on the nape; back, from the nape to the rump, rich cobalt; scapularies and wing-coverts jet-black; quills black, the inner web white at the base, the basal half of the exterior web of the primaries, and nearly the entire outer web of the secondaries, brilliant cobalt; tail dark cobalt above, black beneath; throat, and a narrow line over the eye, white; space between the bill and the eye, feathers round the eye extending backwards over the ear-coverts, deep black; cheeks, ear-coverts, sides of the neck and the breast, greenish cobalt; abdomen and under tail-coverts, white; flanks grey, with obscure vermiculations; upper mandible vermilion, black at the base and towards the tip, lower mandible jet black; feet red. Total length, 10 inches; of bill from front, 2·3; from gape, 2·7; wing, 4·6; tail, 3·2; tarsus, 0·5; middle toe, 0·8; hind toe, 0·35.

Fig. Sharpe, Monogr. Alced. pl. 72.

Fam. BUCEROTIDÆ.116. *BUCORAX CAFER.*

South African Ground Hornbill.

Professor Barboza du Bocage, following the idea of Professor Schlegel, has separated the Ground-Hornbill of South Africa from the other two species which inhabit Abyssinia and the west coast of the continent. In this he is apparently quite justified, the different shape of the casque being a good character.

The "Brom-vogel," as it is called from the droning cry which it utters, is common on the Eastern frontier, where the birds associate in large flocks and devour vast quantities of grubs and locusts. The Fingoes seem to attach some superstitious veneration to them, and object to their being shot in the neighbourhood of their dwellings, lest they should lose their cattle by disease.

We are indebted to several correspondents for notes upon this singular bird. From East London, Mr. T. C. Rickard writes:—"I had one alive for nearly two months; it ate rats, birds, snakes, rotten eggs, &c, also dry mealies; the latter did not digest. It tossed up its food, and caught it as it fell. They are said to breed in a hole in a 'Krantz' on the Buffalo River: my informant says that he has seen the eggs, which are large, and white. The Kaffirs have a superstition that if one of these birds is killed, it will rain for a long time. I am told that in time of drought, it is their custom to take one alive, tie a stone to it, and then throw it into a 'vley'; after this rain is supposed to follow. They avoid using the water in which this ceremony has been performed. When I had this one in my yard we were getting a good deal of rain, and I often heard the Kaffirs blame me for keeping the bird a prisoner. Kaffir name 'Insigees.'"

Mr. H. Bowker writes:—"There are many superstitions connected with the 'Brom-vogel', the bird is held sacred by the Kaffirs, and is only killed in times of severe drought, when one is killed by order of the 'rain doctor,' and its body thrown into a pool in a river. The idea is, that the bird has so offensive a smell that it will 'make the water sick,' and that the only way of getting rid of this, is to wash it away to the sea, which can only be done by heavy rains, and flooding of the river. The ground where they feed is considered good for cat-

tle, and in settling in a new country, spots frequented by these birds are chosen by the wealthy people. Should the birds, however, by some chance fly over a cattle kraal, the kraal is moved to some other place. They are mostly found in groups of from 3 to 6, or 7, and build their nests in hollow trees, or in the hollow formed by three or four branches striking off, from the same spot; they roost in tall yellow wood trees, and commence calling about daylight. I never saw one eating carrion, as stated in your book, though I have frequently seen them near the bones of dead cattle, picking up beetles and worms; they will eat meat, mice, and small birds, and swallow them by throwing them suddenly up into the air, and letting them drop down the throat in falling. I once had a tame one, and noticed this particularly. It is very weak on the wing, and when required by the 'doctor,' the bird is caught by the men of a number of kraals turning out at the same time, and a particular bird is followed from one hill to another by those on the look out. After three or four flights it can be run down and caught by a good runner."

Mr. Ayres' account of the species in Natal, though often referred to by other writers, is so excellent that no work treating of South African birds can omit it, and is therefore reproduced here in its entirety from the Ibis for 1861, (p. 133):—"In the stomach of the male were snakes, beetles, and other insects. These birds are gregarious and to be found here all the year round, but are not very plentiful, generally three or four, sometimes more, being found together. They are very fond of hunting for their food on ground from which the grass has been burnt; with their strong bills they peck up the hard ground, and turn over lumps in search of insects, making the dust fly again; having found an insect or other food, they take it up, and giving their head a toss, the bill pointing upward, appear to let the food roll down their throat. They also kill large snakes in the following manner, viz. :—On discovering a snake, three or four of the birds advance sideways towards it with their wings stretched out, and with their quills flap at and irritate the snake till he seizes them by the wing-feathers, when they immediately all close round and give him violent pecks with their long and sharp bills, quickly withdrawing again when the snake leaves his hold. This they repeat till the snake is dead. If the reptile advances on them they place both wings in front of them, completely covering their

heads and most vulnerable parts. Their call, which consists of but one note repeated, a deep and sonorous *coo-coo*, may be heard at a great distance; I have myself heard it, under favourable circumstances, at a distance of nearly two miles. The call of the female is exactly the same *coo-coo*, only pitched one note higher than the male. The latter invariably calls first, the female immediately answering, and they continue this for perhaps five or ten minutes, every now and then, as they are feeding. Their flight is heavy, and when disturbed, although very shy, they seldom fly more than half a mile before they alight again. At a distance they would easily be mistaken for Turkeys, their body being deep and rather compressed, similarly to those birds, with the wings carried well on the back. The little pouch on the throat they are able to fill with air at pleasure, the male bird sent by me to London doing this before he died. I think their principal range of country is on the coast, and from twenty to thirty miles inland. They roost on trees at night, but always feed on the ground."

In his essay on Transvaal ornithology the same gentleman continues:—"There are two or three kinds of land-tortoise in the district of the river Limpopo which are eaten and much esteemed by the natives, and also fully appreciated by the large Hornbill, which attacks the tortoise and very neatly picks every atom of flesh from the unhappy reptile, eating also the legs and head and leaving the entire shell without damage. I could not at first imagine what it could be which thus destroyed the tortoises without injuring their shell; but the Caffres assured me that it was the large Hornbill during the summer months, when the tortoises are out in numbers."

In the Zambesi region, Dr. Kirk says that it is "widely spread, but nowhere plentiful, and difficult to obtain, being shy, feeding on the ground in the open plains or in a forest. Occurs singly, but more frequently in pairs or in flocks of five or six. A specimen is in Dr. Dickerson's collection." Mr. Andersson also found it common in Ondonga, but very wild, and he also observed it sparingly in the desert near the Okavango.

He gives the following note on its habits:—"The ground seems to be the chief resort of these birds, and I have seen them running at a tremendous rate; but they also perch on trees when flushed. They utter at times an incessant kind of booming cry, which may

be heard a long way off. They are generally seen in small flocks of from three to six individuals.

“The Ovampos seem to have a superstition about this curious bird, which I cannot fathom. On asking Chijkongo, for instance, to get me the eggs, he said it was not to be done, as they were soft to the touch, and would fall in pieces on the least handling!”

Senor Anchieta records it as plentiful at Humbe on the Cunene River, where it is called ‘Mucungungo’ by the natives. He has also sent it from Quillengues in Mossamedes.

A very good account of the habits of the Ground Hornbill is given by Mr. Monteiro in his paper on the birds of Angola. (Ibis, 1862, p. 38.)

This species is distinguished by its large size and compressed casque. Total length of wing about 19 inches. The colour is black all over, with the exception of the primaries, which are white. Mr. Ayres states that the iris is very light brown, the legs and the bill black, the bare skin of the neck and round the eye bright red; the female is said to have the bare parts blue. Senor Anchieta who has forwarded several specimens to the Lisbon Museum, gives the following account of the soft parts:—“The region round the eye, the neck and pouch on the throat, are yellowish, more or less mixed with orange or red. One of the females has a large spot of blue-black on the gular pouch, and in two other birds of the same sex, there is plainly observable an elongated spot of dark blue on each side of the neck, below the angle of the lower mandible. The young bird has these parts of a yellowish red without any mixture of blue.” For figures of the heads of all the African Ground Hornbills see the paper by Professor Barbosa du Bocage (P. Z. S. 1873, p. 693.)

Fig. Levaill. Ois. d’Afr. pls. 230, 231, 232.

117. BUCEROS BUCCINATOR.

Trumpeter Hornbill.

By no means a common species in collections. Victorin met with it at the Knysna in June and July, and it has been forwarded to us by Mr. Henry Bowker, who procured it in the Transkei country. His sister, Mrs. Barber, informs me that it “is a very wild and shy bird, and difficult to shoot.” It has been procured in Natal by Mr. Guenzius, and regarding its occurrence in the Zambesi, Dr. Kirk writes as follows:—“Rather common both in the mountains and

plains, frequenting the forests, and living in small flocks. It returns every night to the same roosting-place, leaving in the day in search of fruits. It is very fond of a drupaceous species of *Strychnos*, (resembling the *S. potatorum* of India,) the fruit of which is said to be poisonous to man. Its cry is loud and harsh."

Mr. D. G. Elliot who has given the best diagnoses of these large African Hornbills, characterizes the present species as follows:— "Crest slightly spotted; secondaries black tipped with white; tail feathers, except the median ones, also white for about an inch and a half from the tip; casque high and broadened on the ridge." Total length, 25 inches; wing, 11·5; tail, 9·5; tarsus, 1·75.

Fig. Temm. Pl. Col. 284.

118. *BUCEROS CRISTATUS.*

Crested Hornbill.

This large species is an inhabitant of North Eastern Africa, and only claims a place in the present work from its occurrence in the Zambesi Region, where it was collected by Dr. Kirk during the Livingstone Expedition. We quote his account as follows:— "Native name, *Kakomira*, a local bird, not known to the natives from the interior; frequent on the River Shiré. Year after year it returns to the same roosting-places, living in large flocks. During the breeding season, or after the rains have set in, these become scattered in the forest, where the natives say the female hatches the eggs in a hole under ground, in which she is plastered up by the male. The vessel being at anchor near one of the roosting-places, we had an opportunity of seeing their habits. Towards sunset, in the months of August and September, they come in from different quarters in pairs, the male always known by his large bill. On perching, they uttered a loud cry, heard far off, and hopped from one branch to another, always keeping in pairs. As night set in they became quiet, and roosted on the branches of the large trees. Early in the morning they were off again, an hour before sunrise, not to return until the evening. The affection of these birds for one another seemed remarkable. On one occasion, as a large male passed suddenly, I fired and missed: but the bird fell from fear, and before it had fairly got on the wing again, was secured and taken to the ship. It began to get tame, and rather unwillingly took food; but the female came every morning, when the others had gone to the forest, and remained hovering about until 9 a.m., calling to its mate, which it saw on the

deck, to follow; at last she went off, but came back in the evening to repeat the invitation. After five days the male became sulky, would eat nothing, and died. No injury was found, and, but for the female, there seemed no reason why it should not have lived."

The following characters are given by Mr. Elliot for the species:—Distinguished by its entirely black wings; tail black, except extreme base and an apical band, which are white; spotted crest and enormous casque. Total length, about 30 inches; wing, 14·5; tail, 11·6; tarsus, 2·2.

Fig. Rüppell, Atlas, taf. 1.

119. TOCKUS MELANOLEUCUS.

Crowned Hornbill.

Buceros melanoleucus. Layard, A. S. Afr. p. 225.

This Hornbill has a wide range, extending from the Knysna along the East Coast as far as Kisiludini, 5° south of the Line. How much farther it goes we do not know; but at this place we found it very abundant, flying in small flocks or families, and feeding on berries and fruits. At the Knysna, and in the Eastern province, it is also common. Mr. Atmore writes from Geneva-fontein, George, March 16th, 1869:—"My garden is now full of Hornbills, but as they eat nothing but locusts, I do not shoot them; besides they are in bad plumage."

Mr. Ayres writes concerning it in Natal:—"I shot this Hornbill whilst in the act of swallowing a large locust which it had taken from the bough of a low bush. This bird did not appear to throw the head back so much as I have noticed that some other species do. Its stomach was full of locusts and caterpillars. These Hornbills are generally found in companies of from ten to twenty; they mostly frequent the coast districts, but occasionally during the winter months they wander more inland."

Dr. Kirk met with it in the River Shiré valley in open bush and low trees.

Mr. Gurney states that a specimen was procured by Andersson in Ovampo Land, but no details as to its distribution in the Damara country were given by that excellent collector. Mr. Chapman, however, speaks of it as not very abundant there. Senor Anchieta has collected the species at Humbe on the Cunene River, where however it was less common than *T. erythrorynchus*. The same ornithologist has sent it from Caçonda in Mossamedes, and from Biballa. The specimen from this former locality has been separated

by Drs. Finsch and Hartlaub as *T. pallidirostris*, a species we cannot allow, for in the series sent by Mr. Sala from Galungo were examples with deep red and pale coloured bills, but belonging, as it seemed to us, to the true *T. melanoleucus*. Whether this change in the colour of this organ is due to age or season we do not know, but it was probably one of the pale-billed birds which Mr. Andersson described as having the bill "reddish-yellow." He says that its food consists of lizards and beetles.

Le Vaillant states that the nest is made in a large hole in a tree; and that the eggs, four in number, are white.

Our friend Mrs. Barber thus writes of the singular habit which this bird exhibits, in common with other species of the genus, of blocking up the sitting female in her nest:—"By the bye, do you know that our Hornbills build their nests of mud and sticks in old broken and hollow trees, or between the crowded stems of the tall Euphorbia in our forests; and while the process of incubation is going on the male bird *builds* the female *into the nest*, closing up the entrance in such a manner that it is impossible for her to escape, leaving only a small hole for the purpose of feeding her during her long imprisonment. I do not know how long she is kept in *durance vile*; but we have sometimes taken them out, and found them so cramped and weak that they were unable to fly. This peculiar habit may be a precautionary measure to protect the female during the season of incubation; for it may be that during that time she is too weak and dull to fly away from any approaching danger. Depend upon it that it is not done in vain, and that there is a sufficient reason for this strange and curious habit. We self-willed and presumptuous human beings often act without reason or reflection; but the 'birds of the air' and the 'lilies of the field' are guided by a higher Power! And if we do not understand the wisdom of all their ways, it is because we have not studied them sufficiently."

Head grey, some of the feathers at the back rather elongated, and centred with white, giving the bird when in some positions the appearance of having a white half circle at the back; back dark brown, each feather edged with lighter brown; wing-feathers very dark brown, edged with white; tail same as wings, and broadly tipped with white, with the exception of the two centre feathers; under side with the exception of the throat and chin, dull white; bill large, slightly casqued, red, with a narrow yellow band along the base;

eye-lashes very stiff and projecting; bill red; tarsi and feet black; iris yellow. Total length, including bill, 22''; bill, 3''; tail, 11''; wing, 10" 6'''.

Fig. Levaill. Ois. d'Afr. pls. 234, 235.

120. TOCKUS MONTEIRI.

Monteiro's Hornbill.

This beautiful species was first discovered by the well-known naturalist, Mr. Joachim J. Monteiro, in Benguela, where he found it pretty abundant. Mr. Sala also shot a specimen at Katenbella on 31st December, 1869, but it does not appear to have been met with by Senor Anchieta. Mr. Andersson's account of the species is as follows:—"This Hornbill is not very abundant in Damara Land; it is usually seen in pairs, but occasionally half a dozen individuals may be found in close proximity to one another. It is a shy and wary bird, and difficult to approach, except on hot days, when it appears to suffer a good deal from the heat. About 8 or 9 o'clock in the morning it may often be observed quietly resting on the top of a tree; and it will also perch in such situations at other times when alarmed, but takes its departure again on the least sign of danger. It seldom flies far at a time, but if closely pursued extends its flight each time it is dislodged, and thus soon distances its enemy. The flight of this and other Hornbills is not unlike that of a Woodpecker, dipping and rising alternately. The present species feeds on flowers, young shoots, berries, birds' eggs, and insects; and, in fact, little comes amiss to it. I have found much gravel in its stomach, and have often flushed it from the ground, to which it resorts for the purpose of picking up sand as well as food."

Adult.—General colour above ashy brown; the lower back and rump darker and more blackish; the wing-coverts spotted with white; these spots being relieved by a circular margin of black, the greater coverts broadly tipped with white; primary-coverts and primaries black, the latter with two rows of spots, one at the tip of the outer web and the other at about one third of the distance from the base of the feather on the same web; innermost secondaries ashy-brown like the back, the others pure white, with a certain amount of black on the outer web of those nearest the primaries; four centre tail-feathers black, the rest of the feathers white, with a little black near the base of the outer web of the external rectrices; head and neck grey all round including the throat and the fore-neck, slightly spotted

on the sides of the head and face with clearer grey; rest of under surface of body white, including the under wing- and tail-coverts; the inner lining of the quills black. Total length, 23 inches; wing, 9·0; tail, 9·5; tarsus, 1·95.

Mr. Andersson gives the accompanying note on the soft parts:—“The irides are nut-brown; the legs and toes brown horn-colour; the bill which is much longer, broader, and stronger in the male than in the female bird, is yellowish red, darkest towards the extremities of the mandibles, which are dark purple, that tint being also sometimes apparent on other parts of the bill as well.”

Fig. Hartlaub, P. Z. S. 1865, pl. 5.

121. *TOCKUS FLAVIROSTRIS.*

Yellow-billed Hornbill.

Although specimens of this bird from South Africa were separated by Dr. Hartlaub under the title of *T. elegans*, we have been unable to find any difference between them and other examples from North Eastern Africa, and we believe that Dr Hartlaub now concurs in their specific identity. The Yellow-billed Hornbill, though not included in the first edition, occurs in Natal, as Captain Shelley, during his late visit to that colony, met with some very large flocks to the east of the Umgeni, but did not see it elsewhere.

Mr. T. E. Buckley states that Hornbills were very common from the North of the Transvaal through the Bamangwato country, and a pair of the present species were collected by him in the Transvaal on the 7th July, 1873. Mr. Ayres also says that it is tolerably plentiful throughout the bush country of the Transvaal, being mostly found in small flocks. He states that it feeds principally on fruits. Mr. Andersson writes:—“This species is the most common of the Hornbills in the middle and southern parts of Damara Land. It is found singly, or in pairs, and being a comparatively fearless bird, is easily killed, especially during the heat of the day, when it invariably perches on or near the top of a lofty tree (where such are to be found,) and will remain for hours in this situation, keeping up, with short intermissions, a kind of subdued chattering note of Töc Töc Töc Töckë Töckë Töckë Töc, in a tone not unlike the quick yelping of young puppies, and accompanied at intervals by a flapping and raising of its wings and an alternate lowering and erecting of its head.” Anchieta has procured it at Capangombe, and Mr. Monteiro met with it in Benguela.

Adult.—Head grey, with a very broad white band extending over the eye from the lores and joining on the neck; sides of face, throat and entire under parts white; the ear-coverts slightly streaked with black, more distinctly on the fore-neck and chest, some of the feathers narrowly margined with greyish-black; upper surface of the body blackish, the centre of the back white; all the wing-coverts spotted with white near the tip; quills black, glossed with green near the base of the primaries, which have each a white spot about the centre of their outer web, the outermost secondaries entirely white, marked with black near the base, the inner secondaries brown externally edged with white; four centre tail-feathers black, the rest black at base, white at tip, the white increasing in extent towards the outermost tail feather, where it occupies nearly two-thirds of its extent; “Iris tawny-yellow, bare skin round the eye dark pink; bill bright yellow with brown margins” (*Ayres*); iris yellowish-white. (*Buckley*.) Mr. Andersson observes:—“The irides are yellow; the legs and toes are very dark brown; the colour of the bill approaches orange-yellow, with the exception of the edges, upper ridge and the tips of the mandibles, which are reddish-brown; in the young bird the bill is sometimes very dark coloured.”

Total length about 16·5 inches; wing, 7·8; tail, 8·0; tarsus, 1·5.

Fig. Hartlaub, P. Z. S. 1865, pl. 4.

122. TOCKUS ERYTHORYNCHUS.

Red-billed Hornbill.

Buceros erythrorhynchus, Layard, B. S. Afr. p. 227.

Sundevall gives this species as an inhabitant of Kaffraria, but we have not seen it ourselves from that locality. It was procured by Victorin at the Knysna in April. Mr. Buckley shot a female in the Matabili country on the 5th September, 1873, and Mr. Ayres has found it to be numerous about the River Limpopo. Dr. Kirk gives a note on the species in the Zambesi, where it is called by the natives “Koppi:”—“In all open woodlands common, feeding on fruits and insects; breeding in the hollows of trees during the season, the female being closed in during the time of incubation, when she moults her feathers, and is unable to fly.”

Mr. Andersson writes as follows:—“Common in Ondonga, at the Okavango River, and for some distance to the south of that stream; and I have obtained specimens from Lake N’gami. I have also met with it in Damara Land proper, at Objimbinque and Schmclens Hope.”

Anchieta has forwarded specimens from the Cunene River (Humbo), where it is called *Sunguiandondo*, and he has also met with it at Huilla and Capangombe in Mossamedes.

Of its habits, Mr. Andersson writes :—" This Hornbill is frequently seen searching for food upon the ground ; and the way in which it swallows some kinds of food is peculiar, raising its head and pitching the morsel into the air, receiving it again into its bill, and repeating the process several times, perhaps with the object of softening the food or reducing it to a pulp."

Top of head grey ; forehead, cheeks, a line half-way down the middle of back, some spots upon the shoulders, some of the inner wing-feathers, more or less of the three outer tail-feathers, and all the under parts, white ; outer wing-feathers black, with some white markings ; four inner tail-feathers and rump black ; iris light yellow ; bill deep red, elongated, curved, sharply keeled above, not casqued, $3\frac{1}{2}$ inches long. Total length, 19'' ; tail, 7'' ; wing, 7'' 6''.

Some specimens appear to have the cheeks grey. Mr. Gurney writes of a female from the Limpopo :—" In the specimen sent the cheeks were dark bluish grey, not white, as described by Mr. Layard (B. S. Afr. p. 227.) I believe that both these variations of colour occur in South-African examples of this bird, but whether they are indicative of distinct races I am unable to say." In a note to this species in Mr. Andersson's work, Mr. Gurney further writes :—" Two of these examples (a white cheeked bird from Objimbinque, and a grey cheeked one from Ovampo Land,) are preserved in the collection of Mr. R. B. Sharpe ; and as both of these were marked as males by Mr. Andersson (no doubt from dissection,) and as both of them from the character of their bills are evidently adult birds, it follows that the difference is not due either to age or to sex. Professor Sundevall, from his remarks at p. 130 of the 'Ofversigt' for 1850, appears to consider the grey plumage of the cheeks to be especially characteristic of what he considers the Caffrarian race, for which he has proposed the specific name of '*rufirostris*.' On the other hand, Mr. Jules P. Verreaux informs us that he considers that both birds are of one and the same species, and that the pure white on the cheeks and the parts adjacent is a nuptial dress annually assumed and lost by a double seasonal change."

Fig. Levaill. Ois. d'Afr. pl. 238.

123. TOCKUS NASUTUS.

African Grey Hornbill.

Buceros pæcilorhynchus, Layard, B. S. Afr. p. 226.*Buceros nasutus*, id. t. c. p. 227.

This species does not appear to visit even the eastern districts of the colony, and in the western portions it has never yet been found. It has been stated by Dr. Hartlaub and Professor Schlegel to inhabit Caffraria, and a specimen is recorded in the Leiden Museum as having been procured by Wahlberg in the "Makkalis Mountains." In the Transvaal it is more frequent, and Mr. Ayres writes as follows:—"This species is common along the Limpopo; and I have also received it from Megaliesberg, a range of wooded mountains about seven miles from Potchefstroom. Like *T. flavirostris*, this Hornbill is a great fruit-eater, lives in small companies and has a dipping flight. I was much surprised to find one of these birds, perched on the top of a small tree, singing very prettily with the voice of a Thrush. I could scarcely believe my ears, until I had watched the bird for a considerable time: at last he flew away, and the woods were silent." Mr. F. Barratt has a specimen from Oliphants Nek, near Rustenburg.

Mr. T. E. Buckley shot specimens in Bamangwato, and Dr. Exton observed the species at Kanye in the Matabili country. He says:—"They are generally found in the early morning feeding on the ground under trees. The stomachs of those I procured were filled with berries, seeds, and insects (sand-wasps)." Dr. Kirk mentions having seen the species in the Shire Valley, but it appeared rather rare in the Zambesi. Mr. Andersson give the following account of it:—"This species does not occur in Great Namaqua Land, but is found in Southern Damara Land, where, however, it is far from common and excessively shy; in the northern parts of Damara Land it is less shy and very common; and it is also to be met with in the Lake-regions. It is seen in small families rarely exceeding half a dozen individuals. It roosts on large trees if such be within reach, generally returning nightly to a fixed roosting-place; it usually perches upon trees about halfway up, and, unlike *T. melanoleucus* and *T. flavirostris*, rarely alights on the topmost boughs. In common with the rest of the genus it appears to suffer very much from the heat during the most trying season of the year, when it may be found perched at noon in the shadiest part of the forest, gasping as

if for breath, and may then be approached and shot much more easily than at other times. When on the wing it occasionally utters short piercing cries. This Hornbill is almost omnivorous; but its principal food consists of berries, young shoots, and insects."

Adult male.—Head and neck all round dark grey, with a tolerably broad white eyebrow produced to the nape, where the two join; rest of upper surface brown, mottled with white edgings to the feathers, especially down the centre of the mantle; the wing-coverts and secondaries brown, the primaries blacker, all broadly edged and tipped with buffy white; tail black, broadly tipped with white, the two centre feathers more narrowly tipped and laterally rayed with brownish white; under surface dull white, inclining to brown on the sides of the body and chest, the latter being narrowly striped with black shaft-lines; under wing-coverts ashy white, the quills dark brown below, inclining to white near the base of the inner web; bill black, with a white streak on the upper mandible; legs dark olive brown; iris dark hazel (*Buckley*). Total length, 19 inches; wing, 8·6; tail, 8·5; tarsus, 1·6.

The female has the bill red, with a much larger yellowish patch on the upper mandible than in the male: the base of the lower mandible black. This sex has generally been separated as a distinct species, but independent observers in different parts of Africa have now determined that the sexes of this Hornbill differ in the colour of the bill.

Fig. Levaill. Ois. d'Afr. pls. 236, 237.

Fam. UPUPIDÆ.

124. UPUPA AFRICANA.

South African Hoopoe.

Upupa minor, Layard, B. S. Afr. p. 72.

This Hoopoe is the most easily recognised of all the species of the genus *Upupa* by its entirely black quills, not to mention its deep rufous coloration and the absence of white on the crest-feathers.

It is not found to our knowledge within the Table Mountain peninsula: the nearest spot whence we have received it being Swclendam. At the latter place we saw them in considerable numbers,

always feeding on the ground, into which they thrust their long bills in search of their insect food. Mr. L. Layard found several pairs at Grootevaders Bosch, breeding in the old Kraal walls: they made no nest, but just laid their eggs on the mud that had been used in cementing the stones in the rough wall: the eggs were very pale greenish blue, unequally smeared throughout with indistinct markings of pale brown. It is certainly the "ill bird of the proverb" that fouls its own nest, for the filth is described to us as intolerable.

It is very common in the Karroo towards Beaufort and Nel's Poort, frequenting the thickets of mimosa trees which border all the rivers of that district. Its monotonous cry of "hoop-poop" resounds the entire day. It is shy and difficult of approach, searching for its insect prey about the rugged limbs of trees or crevices of rocks. Mr. Atmore writes:—"They are migratory; we did not see them at Meiring's Poort from February till June: they then came in, but were in bad plumage." Mr. Rickard notices it from the neighbourhood of East London and Port Elizabeth; and Mr. T. C. Atmore has sent several specimens from Eland's Post. Mr. Ayres observes:—"These birds are very scarce in Natal: when found they are generally solitary, and only very occasionally a pair are found together. I know little or nothing of their habits from personal observation: they often feed on the ground, and are very shy generally." During his journey to the Matabili country, Mr. T. E. Buckley says it was common in the bush country north of Pretoria, but he does not remember seeing it further than Bamangwato. He observes:—"It is rather a shy bird, the note and the habits being the same as those of *U. epops*." In the Zambesi, writes Dr. Kirk, it is "everywhere rather rare, but widely distributed; found in the interior of the continent and near the coast. It is not injured by the natives, by some of whom it is named the 'Little Doctor,' in connexion with some superstition."

The following account of the species is given by Mr. Andersson in his well-known work:—"This species is very abundant in Damara Land during the wet season, but gradually disappears with the return of the hot weather, though a few individuals remain throughout the year; it is also common at Lake N'gami. When it first arrives in Damara Land it is seen in straggling flocks, which soon, more or less, disperse; yet a number of individuals are often found in close proximity, leading a person unacquainted with the habits of

the bird to believe that it is really gregarious; it is, however, most frequently found singly. This species, to some extent, seeks its food (which consists of insects) upon the ground; but, like the Bee-eater, it will also watch for and pounce upon its prey from some commanding height. Besides frequenting the ground in search of food, it also loves to dust itself in the sand. When in a state of rest the crest of this bird is generally recumbent, but on the least excitement it is alternately elevated and depressed, not rapidly, but in a graceful manner, with deliberation and ease. In Damara Land the Hoopoe is not very difficult to approach within range; yet there is some difficulty in obtaining specimens, as the bird, the moment it finds itself observed, flits about incessantly amongst the foliage, or is lost to view by gliding rapidly to the opposite side of a tree. Its flight is short, rising and dipping alternately."

Mr. Monteiro found the Hoopoe very plentiful in Benguela, and Senor Anchieta has forwarded specimens to the Lisbon Museum from Biballa in Mossamedes as well as from the Cunene River.

Adult male.—General colour deep rufous above and below, the crest-feathers with broad tips of glossy black; middle of back barred with black; rump white; upper tail-coverts black; tail black, with a broad white bar across it at about a third of the distance from the base, extending higher up the outer feathers; wings black, the least coverts rufous like the back, the greater coverts broadly barred with white, inclining to sandy rufous where they adjoin the scapulars, which are also barred with black and rufous; primaries entirely black, *without any white spot at all*; secondaries white, black for the apical third with a subterminal white bar; innermost secondaries black, rufescent at base and on the edge, and having an oblique broad bar of rufous extending up the feather; entire under surface of body rufous, the under tail-coverts slightly inclining to white; "bill dusky, pale at base; tarsi and feet dusky brown; iris dusky brown" (*Ayres*): legs greenish black (*Buckley*). Total length, 9·8 inches; culmen, 2·1; wing, 5·1; tail, 4·0; tarsus, 0·8.

Female.—Differs from the male in being paler, and in having the flanks broadly streaked with black. Total length, 9 inches; wing, 5·2; tail, 4·0; tarsus, 0·65.

Fig. Vicill. Ois. Dor. pl. 2.

125. IRRISOR ERYTHORHYNCHUS.

Red-billed Wood-Hoopoe.

This bird inhabits the forests of the Knysna, in which locality it was noticed by Victorin from July to November. It was found by Mr. Atmore on the head waters of the Gamtoos River in mimosa thickets, and it is abundant in the forest-clad eastern districts, being common at Port Elizabeth and East London, according to Mr. Rickard. Numerous specimens were forwarded to us from Eland's Post by Mr. Atmore, who records it as plentiful in that locality. It is generally seen in small flocks of from six to eight individuals, frequenting high trees, about the topmost branches of which it hunts unceasingly for insects. Its voice is harsh and resounding, and has acquired for it the name of "*Kackela*" among the Dutch, which signifies the "chatterer."

It is a difficult bird to shoot, being very shy and wary, and for ever whisking round on its perch, taking special care, however, of its long tail, by lifting it over the branches: its motions at these times reminded us very much of the habits of the Pheasant-Cuckoos (*Centropus*). We never saw or heard of one of these birds being observed on the ground. The residents in the Knysna district informed us that they bred in hollow trees, and that their eggs were pure white and round. Mr. Ortlepp confirms this, and states that their nests have the same offensive smell as those of the Hoopoes.

In Natal, Captain Shelley says it is migratory, but appears to be tolerably common about Durban some years. Mr. Ayres writes respecting its habits in the same country:—"The food of these birds consists almost entirely of a species of cockroach, which they take from the crevices of rough-barked trees, and in search of which they creep about the trunk and branches somewhat similarly to the Woodpeckers: in this manner their tail-feathers frequently become much worn. From four to eight of these birds are generally together, and frequent bushy country: they have a loud chattering note, and are extremely restless in their habits: they have a peculiarly powerful and disagreeable smell." We have seen a specimen in Mr. F. Barratt's collection, which he shot at Oliphants Nek on the Megalies Mountains. In the Zambesi country, writes Dr. Kirk, "it is more local than *I. cyanomelas*, which it resembles in habits: near the head of the Lower Shire Valley we found it particularly abundant." Mr. Andersson writes as follows:—"This species is not

uncommon in Damara Land, and the parts adjacent to the north and east, extending to Lake N'gami." It lives in small flocks, probably consisting of entire families, which frequent trees, chiefly of the larger kinds, and examine them most assiduously in search of insects and their larvæ, which they extract from crevices in the wood and from beneath the bark. These birds climb like Woodpeckers; and their long tails come into constant contact with the rough surface of the trees, by which the tail-feathers are much injured. When they have finished their examination of one tree they move to the next convenient one, but not altogether, as a short interval generally elapses after the departure of each individual. The moment flight is decided on, they utter harsh discordant cries or chatterings, which are continued until they are all safely lodged in their new quarters. These harsh notes are also heard when they conceive themselves in danger from either man, beast, or bird; and they thus often betray their presence."

Senor Anchieta has forwarded this species from the Cunene River as well as from Huilla, Quillengues, and Capangombe in Mossamedes. Mr. Sala has also procured it on the Rio Dande in Angola, and it is found both in Western and North Eastern Africa.

General colour black, glossed with green on the head, back, and under parts, and blue on the throat, purple on the wings and tail, and bronzed on the shoulders; tail lengthened and graduated; all the feathers, except the two centre ones, spotted with white near the tips; wings barred with white; belly and vent dull black; bill more or less curved, bright coral-red, as are also the legs; iris very dark brown. The bill differs in length and curvature with age and sex. Length to base of tail, 7 inches; wing, 7·0; tail, 10·0.

Fig. Levaill. Promer, pls. 1-3.

126. RHINOPOMASTES CYANOMELAS. Scimitar-billed Wood-Hoopoe.

The present bird is not found within the Colony, but it was brought from Kuruman by Mr. R. Moffat, and from Colesberg by Mr. Ortlepp, who writes:—"They are found in pairs or small flocks in wooded places. They float gracefully with expanded tail and wings from bush to bush in search of their insect prey. Should a small grasshopper be espied on the ground they descend rapidly, secure it, and fly up to the nearest bush to devour it." Mr. T. C. Atmore procured it in Griqua-land in April, 1871. Mr. Ayres

observes:—"These Hoopoes are very scarce in Natal, mostly frequenting the inland thorn-bushes, though occasionally found near the coast. They are always found either singly or in pairs, not in families like *I. erythrorhynchus*, and may be seen creeping about the thorn-trees, picking beetles and other insects from the crevices of the rough bark. The hen bird sent by me to London was busily engaged upon a swarm of white ants, which had worked their way up on the surface of a tree." Mr. F. A. Barratt has a specimen from the Marico district. Dr. Exton met with the species at Kanye, and Mr. T. E. Buckley says it was fairly common through the Bamangwato and Matabili countries; Dr. Kirk also gives a note on its occurrence in the Zambesi:—"A noisy chattering bird, found in bush-country and forest, commonly near rivers. In its flight it is peculiar, rising suddenly, and again descending more slowly while it flies along. Occurs in flocks of about twelve, which, on settling in a bush, run quickly up the branches and round the stem in search of insects."

Mr. Andersson writes as follows:—"This species is sparingly found throughout Damara and Great Namaqua Land, but more rarely in the latter than in the former country; it is also met with on the Okavango and Teoughe Rivers and about Lake N'gami. It partakes much of the habits of the true Creepers, attaching itself to trees and examining them in a similar manner, but sometimes with this difference, that, after settling on a tree or stump (which it generally does about half-way up), it carefully examines it in a downward direction, and with its head downwards, thus seeking for its usual food, which consists of ants and other insects with their larvæ; having reached the base of the tree or stump, it moves onwards to another, in a similar manner to that adopted by the preceding species. These birds are usually observed in pairs; but occasionally a solitary individual may be seen perched on the topmost bough of a lofty tree, uttering peculiar and plaintive notes." According to Mr. Monteiro it is not uncommon in Benguela. Senor Anchieta has forwarded it from the Cunene River and from Capangombe in Mossamedes.

Adult male.—Above dull glossy violet with slight steel-blue reflexions, the forehead inclining to green, the upper tail-coverts also slightly greenish; wing-coverts violet, with very little steel-blue, the inner primary-coverts pure white, forming an alar spot; quills

green with a steel-blue reflexion externally, the secondaries shaded with violet on the outer web, more so than the primaries, all of which have the terminal third of the feather whitey-brown, and have a distinct white bar across the inner web of all the feathers, the fourth to the seventh primary having a white spot on the outer web also; tail violet, more or less inclining to steel-blue near the base, the outer feather with a white bar near the tip; ear-coverts oil-green; rest of under surface shining oily-green, blacker on the abdomen, the throat and fore-neck slightly washed with steel-blue; under wing-coverts black, the edge of the wing greenish; "bill dark brown, yellowish towards gape; legs and feet dusky black, with a brownish tint on the tarsi anteriorly and with the soles of the feet olive; iris very dark brown" (*Andersson*). Total length, 10·8 inches; culmen, 1·95; wing, 4·25; tail, 5·8; tarsus, 0·85.

Adult female.—Very similar to the male above, but is rusty brown below and on the sides of the face and of the neck: three outer tail-feathers spotted with white. Total length, 10 inches; culmen, 1·6; wing, 4·0; tail, 5·5; tarsus, 0·8. Young birds are brown below like the old females. It is to be noted that the light endings to the primaries seem to disappear with age, so as to become wholly black, and the white spot on the first primary also becomes absorbed.

Fig. Jardine, Zool. Journ. iv. pl. 1.

127. *SCOPELUS ATERRIMUS*.

Straight-billed Wood-Hoopoe.

The authority for the occurrence of this northern species in South Africa is the 'Vögel Ostafrika's' of Drs. Finsch and Hartlaub, where a young specimen is said to have been examined from Damara Land. The Kuruman birds identified as *R. cyanomelas* by the author are also said to belong to *I. aterrimus*. We cannot but think that the doctors are in error with regard to the first, as they certainly are with the last occurrence, for the birds sent from Kuruman by Mr. Moffat were the true *R. cyanomelas*: all the Damara skins examined by us, including a good series in the British Museum, also belong to that species. Although we are thus unable to include the present bird as undoubtedly South African, we give a description of it taken from an Abyssinian skin, to assist in its future identification. [Cf. Gurney in Anderss. B. Dam. Ld. p. 68.]

Adult male.—Above violet, inclining to steel-blue on the head and more especially on the wings, the innermost secondaries being

violet and inclining to purple or steel-blue towards the middle; eight primaries barred with white, extending across the outer web on all excepting the three outermost, on which it is confined to the inner web only; inner primary coverts pure white, forming a distinct alar spot; tail-feathers steel-blue, more or less inclining to violet at the tips and on the margins, all of them waved under certain lights; ear-coverts dull greenish black; rest of the under surface black glossed with violet, especially on the throat, which has also a steel-blue lustre; bill and feet blackish; iris dusky. Total length, 9·8 inches; culmen, 1·2; wing, 4·05; tail, 5·3; tarsus, 0·7.

Fam. MUSOPHAGIDÆ.

128. CORYTHAIX MUSOPHAGA. White-crested Plantain-Eater.

Turacus persa, Layard, B. S. Afr. p. 223.

This species is truly South African and is not found out of our limits: it is very common in the forest districts, especially about the Knysna, where it was procured by Victorin from March to July and again in October and November. Mr. Rickard records it from East London, and Mr. T. C. Atmore forwarded many examples from Eland's Post. It ranges as high as Natal, whence we have seen several specimens. Captain Shelley writes, "A pair of these birds flew across my path while in the thick wood about twelve miles east of the Umgeni, when I procured one." Mr. F. A. Barratt has shot specimens in the Lydenburg district, at the foot of the western slope of the Drakensberg.

This Plantain-eater feeds on fruits and frequents the highest trees, rarely if ever descending to the ground, over which it can, however, travel with great rapidity if brought down by a shot. The motions of this species are very graceful and light, and performed with an ease and rapidity that delight the eye of the beholder. Strange to say, though we inquired carefully, we never could obtain any information respecting the nidification of this beautiful and common bird. Mr. Atmore, however, states that the eggs are white; but this must be from hearsay, as he writes: "How difficult it is to find these forest birds' nests. The Lories are breeding now: but for the life of me I cannot find a nest. The young ones go in troops, and are delicious eating: the old ones in pairs. We never shoot specimens out of a troop, except for the pot." An old forester told him that the eggs were

white, both the latter and the nests being like those of Pigeons. Mr. Rickard says: "I once found an egg in a bird I shot at East London (Jan. 27th): it was pure white, and the size of a tame Pigeon's." Mr. Bowker writes: "I once found a Louri's nest: it was just like a dove's, built of sticks laid horizontally, and about the size of a large dinner plate, placed about ten feet from the ground in the centre of a round bush. The old bird flew out as I walked up; I found five young birds in the nest; they were almost full grown, but their tails rather short and stumpy, crest just showing, but I cannot remember whether the red on the wing was showing or not. On my getting up to the nest they all flew out, and were killed by my dogs before I could come to the rescue. The bush was twenty or thirty yards from the edge of a large forest, and I was rather surprised to find this nest, as I had been told they built in hollow trees."

General colour, green, iridescent, with steel-blue on the wings and tail, and approaching to dull black, or rifle-green, on the thigh and vent; head much crested, each feather being tipped with white; two white lines also extend from the corner of the bill, and passing on each side of the eye, reunite behind it. The wings when expanded display the most brilliant carmine, glossed with purple; bill orange-brown; legs black; iris brown. Length, 19 inches; wing, 1.5; tail, 9.9; tarsus, 1.9.

Fig. Schlegel and Westerm. Toerak. pl. 11.

129. CORYTHAIX PORPHYREOLOPHA. Purple-crowned Plantain-Eater.

Turacus porphyreolophus, Layard, B. S. Afr. p. 224.

This very beautiful bird has been found at the Knysna; but is there extremely scarce. It increases in numbers as the collector travels eastward, until at Natal, as we are informed, it is not uncommon. Dr. Smith states that it inhabits thickets near the coast, feeding upon fruits, &c.

The following note is extracted from Captain Shelley's paper on the birds observed by him in South Africa:—"This handsome species is fairly plentiful about Durban, especially in the less frequented woods to the east of the Umgeni and at Pinetown, where its loud rough notes, somewhat resembling the word 'Tourakoo,' repeated successively several times, may be frequently heard in the morning and evening. It resorts mostly to the larger trees, where I

have frequently watched three or four playing together, hopping from bough to bough, depressing and expanding their tails, and at intervals displaying the rich crimson on their wings. There are few more striking birds than the present one and some of the allied species as they fly gracefully across the path in front, or are watched during their quaint but pleasing gambols."

In the Zambesi regions, writes Dr. Kirk,—“this was the common species of the plains, but was not noticed high up in the mountains. They are found in pairs and in small flocks.”

General colour, dark, iridescent green, with steel-blue reflections on the back, wings, and tail; head slightly crested, shining green and blue; under parts a dull green, with a reddish tinge on the breast; wings, when expanded, display the same brilliant carmine, glossed with purple, as seen in *C. musophaga*; bill and legs black; eyelids scarlet; iris dark brown. Total length, 17 inches; wing, 7·0; tail, 8·0; tarsus, 1·6.

Fig. Schlegel and Westerm. Toerak. pl. 3.

130. CORYTHAIX LIVINGSTONII.

Livingstone's Plantain-Eater.

This beautiful species was first discovered by the Zambesi Exploring Expedition. Dr. Kirk writes as follows: “It is peculiar to the mountains south of Lake Nyanza, where it was seen by Dr. Livingstone and myself in 1859, when passing to Lake Shirwa. On that occasion we noticed it in the ravine at the foot of the hills within a few miles of the river, but on no subsequent occasion was it seen so low down. It is most common near a hill called Sochi, and in the wooded river-banks of the region near the late Bishop Mackenzie's mission-station.” It likewise occurs in South Western Africa, where Monteiro discovered it in Benguela. He gives the following note concerning it: “They are sometimes brought to Benguela for sale by the negroes from Bibé. Appears to be much rarer than the *C. erythrolopha*. I have seen both pretty abundantly to the interior of Novo Redondo.”

Senor Anchieta has also met with it in the same country, and at Capangombe and Biballa in Mossamedes.

General colour, above green, with edgings of metallic darker green to most of the feathers, especially the wing-coverts; innermost secondaries green like the back, the primaries deep crimson, exter-

nally bordered with black, the outer secondaries green at base, red at tip; tail-feathers metallic green with somewhat of a steel-blue reflexion; head, neck and under surface of body rather lighter green, the abdomen, flanks and under tail-coverts dusky blackish; the head ornamented with a beautiful crest of white-tipped feathers, all the plumes of the nape also profusely tipped with white; a loreal spot and a streak under the eye, white; bill yellow, inclining to red on the culmen; feet blackish. Total length, 15 inches; wing, 7.4; tail, 8.0; tarsus, 1.85.

Fig. Finsch and Hartl. Vög. Ostaf. taf. 1.

131. *CORYTHAIX ERYTHROLOPHA.* Red-crested Plantain-Eater.

As will be seen in Mr. Monteiro's observations on the preceding species, he notices the present bird as having been found near Novo Redondo. It is often seen in collections from Angola, but has apparently not been yet procured by Anchieta south of the River Quanza.

Adult.—General colour above grass-green, many of the feathers with a coppery lustre; back, rump and upper tail coverts deeper green, slightly shot with steel-blue, the tail also deep green; wings coloured like the back, the primaries deep crimson, edged and tipped with black, the outer secondaries green at base, the innermost entirely green; head and nape dull crimson, the crest feathers tipped with white; forehead washed with olive-green; sides of face, neck and under surface of body bright grass green; the abdomen, thighs and under tail-coverts ashy-black; under wing-coverts dull ashy-brown, slightly washed with green; bill yellowish; feet black. Total length, 12 inches; wing, 6.8; tail, 5.0; tarsus, 1.45.

Fig. Schl. and Westerm. Toerak. pl. 6.

132. *SCHIZOERHIS CONCOLOR.* Grey Plantain-Eater.

Sir Andrew Smith gives a good account of the habits of this species, which was originally described by him. He says:—"It was upon reaching 25° 24' south latitude, a point where the rivers began to flow to the eastward, and the country to acquire a partial clothing of dwarf trees and brushwood, that this species was first discovered." Dr. Exton found it abundantly in Mosilikatze's country, and Mr. T. E. Buckley says that it is "a very common species throughout the Transvaal and up to the Matabili country. They go about in

small flocks; and their peculiar cry, something like the mewing of a cat, often betrays their presence. They often raise and lower the crest, and are not very easy to see by reason of their colour." In the Zambesi it is, according to Dr. Kirk; "rather a common bird in wooded country at the foot of mountains; named by the natives, from its cry, 'Kwe-kwe,' which it utters while perched on the top of some of the higher trees."

Mr. Andersson gives the following account of the species:—"This is one of the commonest birds in Damara Land; and it is also found abundantly in the Lake-regions and at the River Okavango. It is partial to localities abounding in large trees; and when prominently perched, with crest erect, it is not unlike a gigantic Coly; it also climbs and flies like the Colies, which it strongly resembles in its general habits. It is usually found in small flocks and feeds on berries and seeds, especially that of a mistletoe and of other parasitical plants, and also on fruits, young shoots and insects. The Damaras call this species 'Ongoro-oroquena,' from the extraordinary and almost human cry with which it frequently startles the traveller who is passing near its perch. It is sometimes very easy to approach these birds, whilst at other times they are so shy that they will defy the utmost exertions which may be made to obtain them. On January 5th, 1867, I obtained three eggs of this species, of a dull bluish-white colour, at Omapju, from a boy, who told me that the nest which contained them was composed of sticks roughly put together, and situated in a tree at some distance from the ground; and, on March 1st, I met with a nest in Ondonga placed in a tree, but at no great elevation, which also contained three eggs, but much incubated." According to Mr. Monteiro, the bird is also very abundant at Benguela and Mossamedes, and it has been procured by Anchieta in both these districts, particularly on the Rio Chimba and at Huilla in the latter country: at the last named place it is called 'Quele' from its cry. It extends its range into Angola proper, whence specimens exist in the Lisbon Museum, and whence we have seen examples shot by Heer Sala at Galungo.

The following letter was addressed to the author by Dr. Exton:—"I beg leave to call your attention to a question raised by Mr. P. L. Sclater, of the Zoological Society of London, relative to the crest of *Schizorhis*. In a paper by Mr. Sclater, in No. 1, of the

second volume of the 'Student and Intellectual Observer,' on 'Turacoës and their distribution,' there occurs the following passage ; 'Although some of these birds—the false *Turacoës* (*Schizorhis*)—are provided with a crest, I doubt whether that organ is ever erected and depressed after the manner of the true Turacoës.' With regard to *S. concolor*, I have had frequent opportunity of noticing the elevation and depression of the crest as one of the most common habits of the bird. In travelling through the Bechuana country one often comes upon a party of five or six of these birds, hiding from the mid-day heats under the sheltered portions of denser foliage near the centre of a large tree. Whilst yet undisturbed, the crest lies flat on the head, and can only be seen as a tuft projecting from the occiput. But their first act on becoming aware of an intruder, is to run along the branches, either to the summit of the tree or to the extremity of a branch commanding a good look-out, where, with crest fully erected and well thrown forward, they keep up a constant reiteration of their note. If but little alarmed they move rapidly from branch to branch, frequently jerking up the crest, and assuming an attitude of attention. Again, after flight from one tree to another, on alighting they first rest on a branch, with the body somewhat horizontal, and the tail drawn nearly to the perpendicular, as if assuring themselves of their equilibrium, and then raising the body, elongating their neck and at the same time elevating the crest, they seem to take an observation as to the security of their new position. So much is this a habit of the bird, that during the conversational difficulties of my earlier intercourse with the Bechuanas, when inquiring for the nest of *Schizorhis* (the native name of which is 'Ma-quaai,') as soon it dawned upon the mind of a native what bird I meant, he has imitated its note, accompanied by a sudden jerking up of the hand, with his fingers extended to their utmost, as if at the same time to mimic the elevation of the crest. In the same paper Mr. Selater mentions that 'Mr. J. J. Monteiro, speaking of the grey False Turaco (*S. concolor*), as observed in Benguela, expressly states that the crest feathers are always carried erect.' In my own experience, the observation of *Schizorhis* was an every-day occurrence ; and, as I have stated, when undisturbed (also when in flight), very little of the crest is to be seen ; but it is invariably carried erect on the least alarm. I may here mention a peculiar scream of *S. concolor*. I was one day walking along a low ridge of rocks, from which I

flushed an Owl, the common *Bubo maculosus*, that flew to some distance to a clump of trees. Presently I heard an agonized scream, such as is made by a young antelope when just seized by a dog; and so exact a repetition of the sound was it, that even my dogs were deceived by it, and rushed off in the direction whence it came. I also sent off a Kafir boy, and presently followed myself, when I discovered it was the frightful scream of *Schizorhis*, of which a party were collected around the Owl I had previously disturbed, and whose presence appeared to be the exciting cause. At a later period I had a second opportunity of verifying this observation."

Forehead with a long crest, which, with the entire plumage, is greyish; quill-feathers dark-brownish; tail very long, hoary grey, with a deep greenish gloss, particularly towards the tip; legs purplish black; iris brown. Length, 19 inches; tail, 10; tarsus, 1.4; wing, 9.

Fig. Schl. and Westerm. Monogr. Toerak, pl. 13.

Fam. CUCULIDÆ.

133. CUCULUS CANORUS.

European Cuckoo.

The European Cuckoo visits Africa during the northern winter, but, as it has been more than once confounded with the ordinary Cuckoo of the Cape (*C. gularis*), we have not at present any specific details as to its range in the colony. It may be distinguished from the last named bird by having the upper mandible black as well as the nostrils, and by not having bars across the tip of the outer tail-feather. Mr. Ayres has shot it in Natal, but considers it very rare there. Our friend Mr. F. A. Barratt, has also killed it at a farm about sixteen miles north-east of Bloemfontein: elsewhere in South Africa it has not been recorded, but Mr. Andersson says it is occasionally observed in Damara Land. Specimens were in his last collection also from Ondonga, and Senor Anchieta has likewise procured it at Biballa in Mossamedes.

Adult Male.—Above ashy grey, much darker on the back, where it is glossed slightly with greenish; the head, rump, and upper tail-coverts much paler grey; wing-coverts dark grey, with scarcely any

greenish gloss; quills brownish, the secondaries slightly glossed with greenish in some lights, the inner web broadly and numerously barred with white, these white bars, however, not occupying more than two-thirds of the quill; tail blackish, tipped with white, the centre feathers showing an indication of a tiny white spot along the shaft, a little plainer on the three outer ones, becoming larger towards the outermost, the four external feathers also minutely spotted with white on the inner web, these also increasing in size towards the outer feather, at the base of which they form irregular bars: sides of the face, entire throat, and fore neck pale blue-grey; rest of the under surface of the body white, transversely barred with rather narrow lines of greyish black; vent and under tail-coverts whiter, indistinctly barred with blackish, the bars on the longer tail-coverts broader, but further apart; under wing-coverts white, shading into greyish on the edge of the wing and lower coverts; bill horn-black, with a little yellow at the gape and on the base of the lower mandible; feet yellow, nails brownish; iris and eyelid yellow. Total length, 13 inches; culmen, 1.15; wing, 8.8; tail, 7.5; tarsus, 0.9.

Fig. Levall. Ois. d'Afr. v. pls. 202, 203.

134. CUCULUS GULARIS.

South African Cuckoo.

As mentioned on the preceding page the white bars on the outer tail-feather distinguish this Cuckoo, which is otherwise a close ally of *C. canorus*; its yellow nostrils are also a good character. It is rare near the sea-coast, but becomes more plentiful towards the interior of South Africa. Le Vaillant records it from Caffraria. During his recent excursion to the Matabili country, Mr. T. E. Buckley only observed it once, on the River Meathly in Bamangwato, on the 24th of October, 1873, when he thinks it was on migration. He adds:—"It is shy and restless, continually flying from one tree to another, generally in the same line of flight. It flies like our common Cuckoo, but more deliberately; its note, too, in the same manner, is more slowly uttered, the first syllable not being in such a high key."

Mr. Andersson writes:—"This Cuckoo is pretty common in the rainy season throughout Damara Land, and in some parts of Great Namaqua Land. Its flight is very rapid and zig-zag; but it does not move far at a time, usually taking refuge, after being disturbed,

in the nearest convenient tree." He also procured a specimen in Ondonga, and Anchieta has met with it at Humbe on the Cunene River.

Adult male.—Above bluish grey, rather glossed with brownish on the head and back, and decidedly clearer grey on the rump and upper tail-coverts, the lateral feathers of the last-named being transversely spotted and barred with white; wing-coverts dark greyish-brown, primary coverts and quills rather darker, especially the secondaries, which are glossed with greyish, the inner webs very distinctly barred with white; tail ashy grey, the outer feathers browner and all tipped with white, before which a distinct blackish bar crosses the end of the tail, this being much more distinct when viewed from underneath; the centre feathers marked with longitudinal drops of white along the shaft, these increasing in extent towards the outer feathers, which are also notched or spotted with white on the inner web, until on the last they form more or less perfect bars across the feather; sides of the face and entire throat bluish grey, rather lighter on the lores and fore part of the cheeks, the fore neck tinted with pale russet; remainder of under surface creamy white, transversely barred with greyish brown, these bars becoming more zig-zag in shape on the under tail-coverts; under wing-coverts white, with irregular cross markings of grey; axillary plumes white, barred like the breast; bill yellow on the lower mandible and on the base of the upper one, including the nostrils, becoming blackish on the edge of the culmen and the tip of both mandibles; feet yellow. Total length, 12 inches; culmen, 1.0; wing, 8.5; tail, 6.5; tarsus, 0.85.

Fig. Levaill. Ois. d'Afr. v. pls. 200, 201.

135. CUCULUS SOLITARIUS.

Red-chested Cuckoo.

This Cuckoo, known among the colonists by the name of "*Pietmijnvrouw*," from its call resembling these words, is a periodical visitant over the whole colony, extending even as far as the Cape peninsula.

Mr. Atmore informs us that in 1870, the first specimen of this Cuckoo was observed at George, on the 13th September; in our experience they generally made their appearance near Cape Town from November up to Christmas time, and Victorin records it from the Knysna in October and November. It has been sent from Natal

by Mr. Ayres, but we are not aware of any other occurrence within our limits, excepting the specimens obtained by Mr. Monteiro at Novo Rodondo in Benguela, and by Senor Anchieta at Capangombe in Mossamedes. Their food consists of caterpillars and several species of *Hymenoptera*. Le Vaillant states that they deposit their eggs, which are of a pinkish colour, dotted with clear brown spots, in the nests of the "Capocvogel," "Jan Fredrik" (*Cossypha caffra*), and other small birds. Our friend, Mr. L. du Toit, confirms this statement as regards the "Jan Fredrik," as also does Mr. Fred. Barber, who adds to the list the nest of the Cape Canary (*Crithagra canicollis*). He says the egg is of a dark brown colour.

Adult.—Above greyish, with a slight gloss of oily green on the scapulars and secondary feathers, the rump and upper tail-coverts darker and inclining to cindery grey; quills brown, barred with white near the base of the inner web; tail purplish black, glossed with greenish near the base, tipped with white and marked with one or two white spots along the shafts of the feathers, the inner web also slightly marked with white on its edge; throat clear bluish-grey; fore neck deep ferruginous, with slight indications of blackish cross bars; rest of under surface fulvous white, banded with blackish, inclining to clear fawn on the under tail-coverts, where the cross bars are narrower and more zig-zag in shape; bill horn-black, yellowish at base of lower mandible and along basal edge of upper one; feet deep-orange, claws yellowish; iris reddish hazel.

Fig. Levail. Ois. d'Afr. v. pl. 206.

136. CUCULUS CLAMOSUS.

Black Cuckoo.

This Cuckoo, which is a true *Cuculus* with rounded and swollen nostrils, must not be confounded with *Coccytes serratus*, which has oval nostrils and a long occipital crest: its black colour will distinguish it from every other species of Cuckoo found in South Africa.

Le Vaillant states that the "noisy Cuckoo" is common about the Sunday and Swartkop Rivers, and throughout Camdeboo, depositing its eggs in the nest of the "Capocier" (*Drymæca maculosa*). It has also been found in the neighbourhood of Grahamstown and was sent by Mr. T. C. Atmore from Elands' Post and the Katberg. Mr. Ayres has procured it in Natal and gives the following note:—"This

bird has a very loud, harsh note, and is more shy than the generality of Cuckoos ; it is active, remaining but a short time in the same spot ; it feeds on caterpillars ; it visits this part of the country periodically, disappearing during the winter months." Mr. Buckley states that it was a common species throughout Bamangwato and the Transvaal, where he says that its note may be heard almost any time of the day or night. Mr. Andersson writes :—"I first observed this species in the neighbourhood of the River Okavango, but only very sparingly ; and the few individuals, which there came under my notice were so excessively wild and wary that I only succeeded in bagging some after an immense deal of trouble and smart shooting. They were invariably perched on lofty trees, where they uttered loud cries, which were my only guide to their whereabouts ; and before I got near they would leave their perches and dart with lightning speed through the neighbouring thickets. They were wild shots these ! On a subsequent occasion I observed a flock of fully a dozen of these Cuckoos creating a desperate hubbub, on the 21st of December, at Objimbique. I have also obtained specimens of this Cuckoo from Lake N'gami." Senor Anchieta has also procured it at Biballa in Mossamedes.

Adult male.—Above glossy greenish black, with a slight shade of dull indigo on the interscapular region ; quills brown, the primaries whitish near the base of the inner web, where there are remains of brownish bars, the innermost secondaries greenish black like the back ; tail greenish black, tipped with white, all the feathers more or less inclining to brown on the inner webs ; under surface of body black, with a slight greenish gloss, not so glossy as the back, some of the under tail-coverts tipped with brownish white ; bill black ; feet yellow, claws black ; iris dark brown. Total length, 12 inches ; culmen, 0.95 ; wing, 7.2 ; tail, 6.2, tarsus, 0.75.

Fig. Levaill. Ois. d'Afr. v. pls. 204, 205.

138. CUCULUS SMARAGDINEUS.

Emerald Cuckoo.

Chalcites smaragdineus, Layard, B. S. Afr. p. 251.

The Emerald Cuckoo of Southern Africa has by many people been considered to be a distinct species from the bird inhabiting Western Africa, and was called *C. splendidus* by the late Mr. G. R. Gray, but

after careful examination we have not been able to recognize the specific distinctness of the two birds, and as we know from the writings of Von Heuglin and Dohrn that the Emerald Cuckoo migrates from Abyssinia and from Western Africa and only appears in South Africa during the summer months, it is more likely that there is only one species throughout the Continent.

The Emerald Cuckoo is abundant at the Knysna, and throughout all the forest regions to the eastward along the sea-coast. The males are killed in a proportion of at least ten to one female, from their habit of perching on the topmost branches of trees, and from thence uttering their loud call of love or defiance. This is easily imitated by a whistler, and the bird will answer the whistle, and remain on the look out for its supposed foe, until the shooter creeps up within range.

Captain Shelley found them fairly plentiful about Durban and Pincetown, where they frequent the thick forest. Mr. Ayres also writes respecting the species in Natal:—"These splendid birds, though not by any means plentiful, are easily obtained in consequence of their loud call, which they make at short intervals. They will remain on the same tree, and nearly the same bough, for hours together; they feed principally on caterpillars, but sometimes catch the winged females of the white ant as they rise from the ground, darting upon them similarly to the Flycatchers or Drongo Shrikes. It has a swift dipping flight, similar to that of the Wagtails, and when disturbed generally flies to a good distance. It frequents bushy country near the coast."

It has not occurred to Mr. Andersson in Damara Land (though he believes he saw it), nor to Senor Anchieta in South Western Africa, but is met with in the interior of Angola proper.

Adult male.—Above brilliant metallic emerald-green, the plumage having somewhat of a scaly and velvety appearance; wings and tail of the same metallic green as the head, this colour likewise extending over the sides of the face and throat as far as the fore neck; rest of under surface bright golden yellow, the under tail-coverts broadly barred with metallic green; the quills and tail glossed underneath with metallic green, the bases of the primaries whitish, the outer tail-feather also spotted on the outer web and tipped with white; under wing-coverts golden yellow, the outer ones green; bill greenish grey, blackish along the line of gape and at tip, malachite-green at

angle of mouth; feet and bare orbits lead-colour; iris sometimes brown, sometimes greyish (*Heuglin*).

Female.—Different from the male. Above metallic green, thickly barred with rufous, the quills similarly marked, excepting on the primaries, where the bars are more or less obsolete, leaving the ground-colour brown, the quills brown underneath, very distinctly notched with rufous or rufous white; under surface of body metallic green barred with white, a little more narrowly on the under wing-coverts; tail brown, the middle feathers glossed with metallic green, and washed with rufous, the outer feathers white internally washed with rufous, and spotted near the tips and on the inner web with metallic coppery green.

Fig. Vieill. et Oud. Gal. Ois. i. p. 33, pl. 42.

138. CHRYSOCOCYX CUPREUS.

Golden Cuckoo.

Chalcites auratus, Layard, B. S. Afr. p. 250.

This is the commonest of the metallic Cuckoos, and it is to be distinguished from *C. smaragdineus* by its white abdomen and banded flanks. In this respect it resembles *C. klaasi*, but is larger than that species and has the tail metallic greenish-blue, spotted with white.

This beautiful little Cuckoo, known by the name of "*Didric*," from its oft-repeated mournful cry of "*Di-di-di-didric*," is extremely abundant throughout the Karroo. At Nel's Poort, near Beaufort, we have frequently seen a dozen or more in a morning, while their loud notes were incessantly ringing in our ears; they are, however, so shy that we only procured three specimens in as many months. When calling, they perch on the summit of some dead branch, ready to do battle with any male, or engage in an amorous chase after any female that comes within their ken. They pursue each other with great ardour, turning, twisting, and dashing about with much rapidity. The stomachs of those examined contained nothing but small insects chiefly swallowed whole.

We also obtained specimens at the Knysna, and from still farther to the eastward. It appears in Mr. Chapman's collection and has been sent from Colesberg.

In Natal, Captain Shelley found it the rarest of the three metallic Cuckoos about Durban, where he only saw it in collections. Mr.

Ayres writes:—"I found these Cuckoos plentiful in December, among the low mimosa thorns and wood bordering the rivers and streams in the upper districts of the colony of Natal, and also among the fruit-trees in the scattered town of Potchefstroom. They are most fond of apple-trees, where, I think, they find the caterpillars suited to their taste and upon which they appear entirely to feed. Their note, which is loud and monotonous, is frequently uttered whilst they are flying high over head. Early in the morning they are particularly fond of chasing each other, frequently so high as to be almost out of sight. They are often chased by the Sparrow and other birds, which appear at once to know a stranger. Like most of our Cuckoos, they appear in summer and are away during the winter months." Mr. Barratt has procured several specimens recently near Rustenburg.

Mr. Buckley observes:—"A common species during our return journey, from which it appears the bird is a summer visitant. I found it throughout the Bamangwato and North Transvaal districts." In Dr. Kirk's paper on the Birds of the Zambesi, he writes as follows:—"Rare; found at the foot of Moramballa Mountains and halfway up the Shirè, in a wood: it frequents forests. One specimen is in Dr. Dickerson's collection; probably from near the same locality." The same gentleman has also found it higher up on the Eastern Coast at Zanzibar.

Mr. Andersson writes:—"This beautiful species is by no means uncommon in Little Namaqua Land; but to the north of the Orange River I have only met with it in the neighbourhood of the River Okavango, where it is both scarce and shy, and near Otniovapa, where I observed two of these birds pairing on the 11th January." Mr. Monteiro has shot this Cuckoo in Benguela, and Mr. Sala also shot specimens at Kattenbella in the same country, while Senor Anchieta has met with it at Gambos in Mossamedes and at Humbe on the river Cunene.

Le Vaillant states that it lays a white egg, and gives an account of the manner in which it is carried in the mouth, to be placed in the nests of those birds which are selected as foster-mothers for its neglected offspring. Eggs sent to Canon Tristram from Natal by Mr. Ayres appear to be "like some of the lighter coloured eggs of the British house-sparrow, and also very like the egg of the great reed-warbler (*Calamoherpe arundinacea*) from which, however, it may be

distinguished by its rich gloss and by being slightly smaller and more elliptical." (Cf. J. H. Gurney, *Ibis*, 1868, p. 163). Mrs. Barber says that they lay pure white eggs in the nests of *Fringillaria vittata* and all the *Nectariniæ* and remain constantly in the neighbourhood of the nest watching over it safely. Mr. Jackson has found pure white eggs in the nests of *Hyphantornis capitalis*, which we suspect are the eggs of this Cuckoo, and we are inclined to think that Mr. Ayres is mistaken in his identification, and that his sparrow-like eggs belong to another species.

Adult.—Above metallic green, changing to golden green, sometimes with a coppery gloss, according to the light; a streak down the fore part of the head, and a distinct eyebrow, white; ear-coverts coppery green; cheeks, sides of neck, and underparts white, the sides of the body as well as the under wing- and tail-coverts barred, the sides of vent streaked with dull metallic green; wings metallic green above, like the back, varying with the light, the inner greater wing-coverts and the quills externally spotted with white, the primaries more minutely; under surface of quills ashy brown, with oval spots or bars of white on the inner web; lateral upper tail-coverts externally white; tail metallic green, all except the two middle feathers tipped with white, the outermost spotted with white on both webs, vanishing towards the centre feathers; "bill dusky above, horny beneath; legs dusky; iris and orbit scarlet." (*Blanford.*)

Total length, 8·5 inches; culmen, 0·7; wing, 4·25; tail, 3·4; tarsus, 0·65.

Fig. Levaill. Ois. d'Afr. v. p. 46, pls. 210, 211.

139. CUCULUS KLAASI.

Klaas's Cuckoo.

This is the smallest of the African metallic Cuckoos, and is distinguished from *C. cupreus* by its smaller size and white tail, spotted with coppery-green.

Klaas's Cuckoo is not uncommon in most wooded parts of the colony, extending even as far as the Cape peninsula. It is, however, not nearly so abundant as the foregoing, from which it is easily distinguished by its cry.

Mrs. Barber says, in its nesting and other habits it resembles the preceding species. Victorin met with it at the Knysna in November and in the Karroo in January. Mr. T. C. Atmore has procured it near Elands' Post, and according to Captain Shelley it was not

uncommon in the neighbourhood of Durban and Pinetown, at both of which places he shot specimens. Mr. Ayres also observes:—"These birds are more active than *C. smaragdineus*, not remaining so long in the same place; they also have the dipping flight of the Wagtails, but do not call so frequently, and their note is not so loud. They feed on caterpillars." Only once did Mr. Andersson fall in with it, when he shot a single specimen on the Swakop River in Damara Land. Anchieta has procured it at Biballa in Mossamedes, and on the Cunene river.

Adult male.—Above metallic green, changing with the light to fiery bronze and golden green; the sides of the face and of the neck as well as the wings coloured like the back and subject to the same reflexions; under surface of quills greyish brown, very numerous and distinctly notched on the inner web with white; four middle tail-feathers golden green, with a slight coppery reflexion, especially towards the tips, the other feathers white, with a spot of golden green near the tip of the outer web, and three or four of the same colour on the inner web; under surface of body pure white, with a few broad longitudinal streaks of golden green on the upper thigh-feathers, the sides of the upper breast also bright golden-green, like the back; "bill dusky; legs pale; feet brownish olive; iris brown; orbit very pale green" (*Blanford*). Total length, 7·0 inches; culmen, 0·7; wing, 4·1; tail, 3·2; tarsus, 0·55.

Female.—Above brown, the head uniform; interscapular region barred with dull rufous; rest of the upper surface barred with dull rufous and metallic green, broader and more distinct on the wing-coverts, narrower and less plain on the lower back, rump, and upper tail-coverts; quills brown, the secondaries coloured like the back, the primaries notched externally with pale rufous; under surface of quills ashy brown, deeply notched with pale rufous on the inner web; tail brown, with a subterminal spot of coppery green on the centre feathers, the next one glossed with copper-colour and notched externally with pale rufous, the three outermost white, with a conspicuous spot of coppery green near the tip, and more or less remains of pale rufous notches and brown bars on the inner webs; car-coverts brown like the head; rest of under surface dull white, with narrow brown cross lines, the sides of the upper breast uniform brown; thighs barred with pale rufous and metallic green, like the back; under wing-coverts pale rufous, with brown cross-lines.

Fig. Levaill, Ois. d'Afr. v. pl. 218.

140. COCCYSTES GLANDARIUS.

Great Spotted Cuckoo.

This bird, which can be told from the other species by its ashy-grey crest contrasting with the brown back, and by the white spots on the wings, is a migrant from Europe, and is of rare occurrence within the colony. We have seen three specimens from Caffraria and one was also contained in Captain Bulger's Windvogelberg collection. The British Museum possesses an example from Port Elizabeth. Mr. Herbert Trevelyan of the 32nd Light Infantry procured a single example at King William's Town. Mr. Barratt has also shown us a specimen which he shot in November, 1874, among the mimosa bushes on Modder River: he says that they return there every year. Numerous specimens were collected by the late Mr. Andersson in Ondonga, and he says that it is not uncommon during the wet season in Damara Land, and also about the river Okavango. Anchieta has also forwarded it plentifully from Huilla and Capangombe in Mossamedes, as well as from the river Cunene.

Adult male.—Above brown, somewhat inclining to olive-brown, the scapulars slightly, the wing-coverts and inner secondaries more conspicuously tipped with whitish; quills darker brown above, the inner primaries narrowly edged with whitish at the tips, the inner face of the quills whitish; lower back, rump, and upper tail-coverts brown like the back, the outermost of the latter white on the outer web, the inner ones tipped with white; tail brown, broadly tipped with white; crown of the head and crest bluish grey, with narrow blackish shaft-lines; sides of the face and hind neck rather darker brown, the ear-coverts washed with grey; throat and chest yellowish white, the former somewhat tinged with greyish, with indistinct hair-like blackish shaft-lines; rest of under surface purer white, the flanks shaded with greyish; under wing-coverts yellowish, the outer ones and the axillaries white, the latter somewhat shaded with ashy; bill brown, yellowish at base of lower mandible; feet bluish, shaded with brown; iris pale brown. Total length, 15 inches; culmen, 1.1; wing, 8.15; tail, 9; tarsus, 1.3.

Adult female.—Generally similar to the male, but having a faint rufous tinge on the inner webs of the primaries.

Fig. Dresser, B. Europe, pt. xxviii.

141. COCCYSTES CAFER.

Levaillant's Cuckoo.

Oxylophus afer, Layard, B. S. Afr. p. 253.

This large Crested Cuckoo is distinguished by its black-striped throat. It is not of frequent occurrence in South Africa, and we have only seen two specimens, from Swellendam, where they were procured by Mr. Cairncross. Wahlberg shot it on the Limpopo. "Like the rest of the Cuckoos found in Damara Land," writes Mr. Andersson, "this species is only a periodical visitant during the rainy season, and takes its departure long before the return of the dry weather. I have heard its note on the river Okavango as early as September, but it is a scarce bird in that district, and very rare in Damara Land. It always appears in pairs, and is of a rather shy and retiring disposition."

Adult male.—Above shining greenish black, the head deeper black and ornamented with a long crest of lanceolate feathers; lores and ear-coverts dull black; quills brown, the inner webs white at the base, the primaries also externally white at the base, causing a large alar speculum, the inner secondaries greenish black like the back; tail greenish black like the rest of upper surface, broadly tipped with white, the inner webs showing somewhat of a purple tinge; under surface of body buffy white, the feathers of the throat, breast, and under tail-coverts, black in the centre, giving a thickly striped appearance, the flanks also somewhat mottled with black centres to the feathers; under wing-coverts white, streaked with black, the lower ones entirely black; bill black; feet brown, tinged with lead-colour; iris dark olive. Total length, 15·5 inches; culmen, 1·1; wing, 7·4; tail, 10·2; tarsus, 1·05.

Fig. Levaill. Ois. d'Afr. v. pl. 209.

142. COCCYSTES JACOBINUS.

Black and White Cuckoo.

Oxylophus melanoleucus, Layard, B. S. Afr. p. 252.

This species inhabits the same country as *C. serratus*, and was mistaken by Levaillant and Verreaux for the hen of that bird; it is however quite another species. Like *C. glandarius* it has a whitish breast, but can be told by the absence of spots on the wing, and by

its black upper surface. From *O. cafer* it is distinguished by its smaller size, and by the absence of black streaks on the throat and breast.

In a letter to the author, Mr. H. Bowker observes: "There is another Cuckoo which I cannot quite make out from your book, but I think it is *O. melanoleucus*, very common in Albany and appearing early in October. It lays its eggs in the nest of the black forked tail Spreo (*Dicrurus musicus*), and also in that of the Woodpecker. It looks after its young to see that the foster parents are attentive to them. I once watched a Woodpecker's nest, and when the nurses brought food to the nest they were always followed by one of these. After the Woodpeckers left, always looked into the nest to the right and then sat near until the return of the Woodpecker, when the same thing was repeated; on examining the nest I found four fine young Cuckoos in it."

Mr. T. C. Atmore's collections made near Elands' Post included examples, and Mr. Ayres has procured it in Natal and the Transvaal. Mr. F. A. Barratt informs us that he has shot the bird near Pochefstroom and also at Rustenburg in January, 1875. Mr. T. E. Buckley collected it on the Limpopo and in the Transvaal territory, where he found it abundant: as he only saw it on his way down from the Matabili he considers it to be a summer visitant.

Mr. Andersson says:—"This is about the most common Cuckoo in Damara Land, the first to arrive with the rainy season; I have also received specimens of it from Lake N'gami. I believe it breeds in Damara Land, having seen young birds barely able to fly. This species has a true Cuckoo's note, and is very swift of flight and quick in its movements." Anchieta has found it on the River Cunene, and at Huilla, Biballa and Gambos in Mossamedes.

Adult.—Head, which is ornamented with a long crest, and entire upper surface glossy greenish black, the tail tipped with white; primaries brown, white at the base both internally and externally, forming a large white alar spot; sides of face black; under surface entirely dull white, with a yellowish tinge on the throat and breast; under wing-coverts yellowish white, the lower ones greyish; flanks shaded with dusky grey; bill and feet black; iris yellow. Total length, 13.6 inches; culmen, 1; wing, 6.4; tail, 8; tarsus, 1.5.

Young.—Brown, the quills paler; tail brown, tipped with white, the centre feathers glossed with greenish; a white alar spot as in

adults; under surface of body entirely yellowish white, the lower under wing-coverts brown; bill horn-brown.

Fig. Levail. Ois. d'Afr. v. pl. 208.

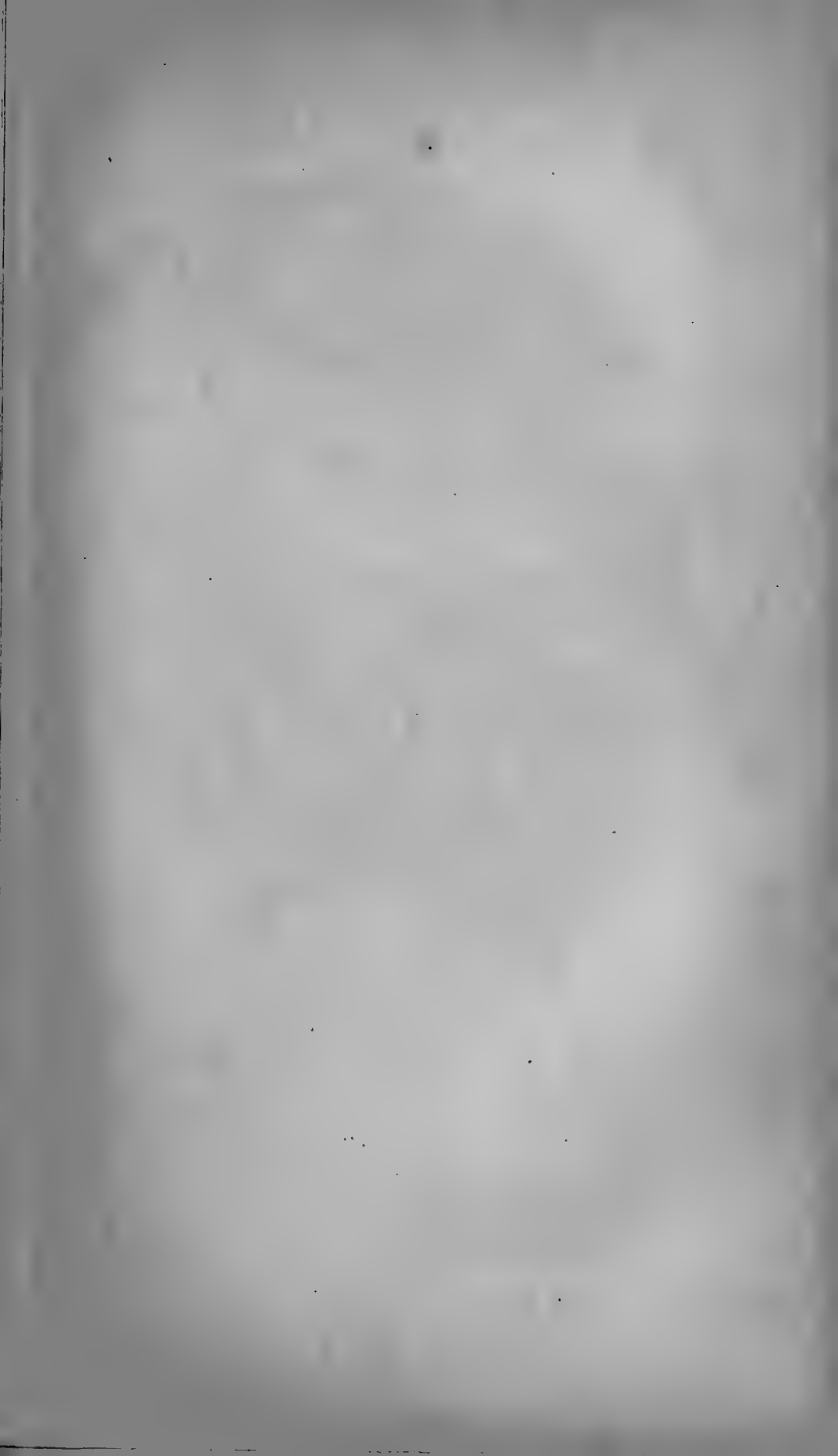
143. *COCCYSTES SERRATUS.*

Black Crested Cuckoo.

This species can easily be told from any of the other Crested Cuckoos of South Africa by its entirely black colour both above and below.

It is abundant in mimosa bushes throughout the Karroo and extends into the Cape peninsula, and has also been received from all parts of the colony to the eastward. This bird v^{as} ag^o th^e earl^y about the new year, whence the name of "Nieuwejaarsvogel" and very rare it has acquired among the colonists. It evidently lays at ^{the} sh^o as we took a mature egg from the body of one that was killed at Rondebosch. The egg was white, glossy, and rounded at each end: axis, 13''; diam., 11''. The stomach contained caterpillars, beetles, maggots, and flies, but the chief mass consisted of termites. We found them in considerable abundance at Nel's Poort, usually in pairs, frequenting the trees along the river banks. Mr. Atmore writes that the "eggs are white, and usually deposited in the nest of the 'Geelgat' (*Pycnonotus capensis*)."
We saw it near Alice, at the farm of Barend Woests in March. Mr. H. Bowker writes: "It calls frequently during the night, particularly about nine or ten o'clock. I have found their eggs and young in the nests of *Sigelus silens*."

"In Natal," writes Mr. Ayres, "these birds feed on caterpillars, ants, and other insects, in search of which they hop about amongst the thick creepers, principally frequenting small, low, isolated bushes. They are weak on the wing, and do not take long flights, but are migratory, arriving in October and leaving in March. The gizzard of this bird is most curious, the inner skin is lined with hair like the hair of a young mouse, and is quite separate from the flesh of the gizzard." Mr. Gurney comments on this as follows: "It will be recollected that a similar appearance of the stomach being lined with hair frequently occurs in specimens of *Cuculus canorus*, and that these hairs were ascertained by the late Mr. Thompson of Belfast to be those of the larvæ of the Tiger Moth, on which the Cuckoo frequently feeds. (See P. Z. S. 1834, p. 29.)





1. CEUTHMOCHARES AUSTRALIS
2 — — — — — ÆREUS

Mr. Ayres says that it appears in Potchefstroom about November, and leaves again before the winter sets in. Although the occurrence of the bird in Damara Land proved to have been erroneously recorded, the present species is most probably found there, as Senor Anchieta has procured it at Biballa in Mossamedes.

Adult male.—Above glossy greenish black, with a long crest of the same colour : under surface of body also greenish black, but a little duller than the back ; quills brownish, the secondaries glossed with green like the back, the primaries white at the base of both webs, forming externally a very large alar speculum ; tail greenish above, inclining to purplish brown underneath ; bill black ; tarsi slate coloured ; iris nearly black. Total length, 12·5 ; culmen, 1·0 ; wing, 6·15 ; tail, 7·6 ; tarsus, 1·05.

Fig. Levaill. Ois. d'Afr. v. p. 39, pl. 207.

144. CEUTHMOCHARES AUSTRALIS.

South African Coucal.

(PLATE V., fig. 1.)

Zanclostomus aeneus, Layard, B. S. Afr. p. 247.

In a paper on the African Cuckoos, (P. Z. S. 1874, p. 509,) the editor pointed out that the Coucal of South Africa is a distinct species from *C. aeneus* of Western Africa, (Plate V., fig. 2,) as will be seen by reference to the plate ; instead of having a purple tail, this organ is green in the southern bird.

It is an inhabitant of Natal, where Mr. Ayres says that it "is rather a rare bird, and frequents the dense bush, where it creeps about like the Colies. Its habits resemble those of *Centropus superciliosus*, but it is not so active. It feeds on locusts and large grasshoppers." Captain Shelley writes: "I shot two specimens at Durban, where they frequent the upper branches of the higher bush, rendering it very difficult to see through the thick foliage." Captain Watson informs us that he found it rather common on the Umgeni River. Dr. Kirk states that it is found in the Zambesi, where it is a native of the plains.

Adult.—Head and hinder part of neck ashy grey, with a slight wash of olive ; back dull metallic olive-green, shading into oily green on the rump and upper tail-coverts ; wing-coverts uniform with the back, as also are the quills, the under surface of the wing being ashy brown with a very faint shade of greenish ; tail metallic

oily green, the two middle feathers having a slight shade of bronze ; sides of face, throat, and fore part of chest whitish, with a yellowish shade ; lower part of belly greyish, the under tail-coverts metallic green ; bill yellow, with brown mark at base of culmen ; iris beautiful dark red. Total length, 13·5 inches ; culmen, 1·2 ; wing, 4·9 ; tail, 8 ; tarsus, 1·15.

145. *CENTROPUS SENEGALENSIS.*

Lark-heeled Cuckoo.

Centropus burchelli, Layard, B. S. Afr. p. 146.

This Cuckoo is found all over Africa, and although specimens from the southern part of the Continent are brighter in colour than those from West Africa, we cannot see any real grounds for their separation.

We have received several specimens of this lark-heeled Cuckoo. One was shot in "Grootevadersbosch," near Caledon, by the Hon. T. H. Vigne ; another near Swellendam, by Mr. Cairncross. Specimens have also been shot near Graham's Town and other places.

Mr. T. E. Buckley informs us : "It was first observed on the Crocodile River, but was also found in all suitable places as far into the Matabili as I went. Being fond of hiding itself, it is not often seen unless accidentally flushed, but its loud note betrays its presence. It inhabits the thick reeds and bushes wherever there is water, far from which it is never found."

Dr. Kirk says that it was very common in all the grassy borders of rivers, but is looked upon by the natives with disgust, and never eaten.

The following note is given by Mr. Andersson : "This species is found abundantly at Lake N'gami, but I have observed it nowhere else. It occurs singly or in pairs, and perches on lofty trees—but also frequents reedy thickets, to the interior of which it usually retreats when alarmed or pursued. Its flight is heavy and clumsy. Its food consists of insects, and it is partial to locusts and grass-hoppers."

Le Vaillant states that he first met with this species near the Gamtoos River, and that it makes its nest in holes of trees, laying four eggs, of a reddish-white colour. Mr. Atmore says, "it inhabits palmiet vleys and feeds on locusts and large insects of all kinds." Mr. H. Bowker writes, "The Vley Lourie builds its nest in the centre

of a thick bushy tree or amongst the shoots from a cut forest tree (Pollard?) It is about three feet in length by a foot in diameter with an opening in the middle cavity in the inside rather flat. The young may be perceived from the outside. I never saw but two nests, one with a single young bird in it, the other an old one made of small sticks. This bird is called the 'Rain bird' by the Kaffirs, and is said to call before a change in the weather. N.B. Inside of nest daubed with mud." His note contained a sketch of an oblong oval nest made of twigs with a flattened oval opening near the centre.

Head dull black, with a greenish tinge when viewed from the light, the shafts glossy black; interscapulary region, scapulars, and wing-coverts dull brownish rufous, the shafts glossy chestnut; greater coverts and quills bright rufous, with dusky tips, the inner secondaries dull brownish rufous with an olivaceous gloss; lower back and rump dusky, minutely barred with dull ochre; upper tail-coverts and tail dull greenish, inclining to oily green, the former generally with obsolete bars of ochre; feathers under the eye and ear-coverts black, like the head; entire sides of face and neck, as well as the under surface of body, more or less deep ochre, inclining to white on the centre of abdomen, the shafts glossy fulvous, especially distinct on the throat and sides of neck, the flanks with remains of dusky cross bars; under wing-coverts pale buff, inner surface of wing dull rufous; bill and feet black.

Young.—More dingy above and paler below than the adult; head dull brownish; upper surface barred across with dusky black, with remains of dusky bars on the sides of the breast and flanks; upper tail-coverts and tail barred more or less distinctly with pale ochre; beak horn-brown, the lower mandible yellowish.

Fig. Levaill. Ois. d'Afr. v. p. 72, pl. 219.

146. CENTROPUS SUPERCILIOSUS.

White Eyebrowed Lark-heeled Cuckoo.

By many people the present bird has been considered to be the young of *C. senegalensis*, but it may be distinguished at once by its broad white eyebrow.

A fine specimen of this bird was sent to us in the flesh, during the winter months, from Swellendam by the Hon. R. Southey; its stomach contained insects. Mr. Rickard has obtained it both at Port Elizabeth and East London: near the latter

place it is common. It has also been found in Natal by Mr. Ayres. He writes: "This bird frequents the dense bush, and principally lives amongst impenetrable creepers, where it hunts about in search of the insects which it feeds upon; if disturbed, it flies but a short distance. The note is a loud, melancholy, cooing noise; they call most in wet weather; they are fond of getting up into trees that are covered with creeping plants, and sunning themselves; they generally fly on to the lower part, and gradually hop upwards till they gain the top, but they can fly a very short distance at a time, and are easily caught if chased out into the open grass, though they lie very close, and it requires a good dog to find them; if disturbed they immediately fly to the thickest cover at hand, and commence running like the Rails. They feed on grasshoppers, caterpillars, and other insects." Mr. Rickard narrates that in the stomach of one he killed he found a *Zosterops*, in that of another a small snake, locusts, and caterpillars.

Captain Shelley observes: "This is the common *Centropus* about Durban. I shot a few specimens; but they were in such bad plumage, both in March and April, that I did not preserve them."

Mr. T. E. Buckley shot a male in the Transvaal on the 5th July, 1873, and says that its habits did not differ from those of *C. senegalensis*. Mr. Andersson does not appear to have procured it in Damara Land, but Senor Anchieta has found it on the Coroca and Chimba Rivers, as well as at Capangombe in Mossamedes. Mr. Sala sent several specimens from Kattenbella in Benguela, and according to Mr. Monteiro it is abundant everywhere in Angola.

Adult.—Head and hind neck blackish or brownish black, the feathers under the eye and ear-coverts also black; over the eye a broad stripe of yellowish white; all the feathers of the hind head and neck distinctly streaked down the centre with yellowish white; centre of back and scapulars dull rufous brown, all the feathers mesially streaked with whitish, these stripes being further bordered with blackish on each side, causing them to stand out in bolder relief; wings dull rufous above and below, the quills tipped with dusky, the inner secondaries inclining to olive-brown, the least wing-coverts streaked with whitish, like the scapulars; lower back dusky black, transversely barred with dull ochre; upper tail-coverts and tail greenish black, with somewhat of an oily-green gloss, the latter narrowly tipped with white, the upper tail-coverts barred with dusky

ochre; under surface of body yellowish white, the feathers of the sides of the neck whitish in the centre, this streak margined on each side with black, giving a very distinctly striped appearance, the shafts of the breast feathers whitish, but without the black lines on them; sides of the body, flanks, and under tail-coverts narrowly barred with blackish; under wing-coverts pale rufous, with obsolete streaks as on the sides of the neck; beak black; feet bluish slate-colour; iris bright crimson. Total length, 16·3 inches; culmen, 1·35; wing, 6·25; tail, 8·3; tarsus, 1·55.

Fig. Rüpp. N. W. Vög. p. 56, t. 21, fig. 1.

147. *CENTROPUS MONACHUS.* Purple-headed Lark-heeled Cuckoo.

This fine Lark-heel is closely allied to the foregoing species, but is slightly larger and has the head purplish-blue instead of greenish-black. It is found in North Eastern and in Western Africa, and has been procured as low down as Mosambique on the East Coast. Senor Anchieta has collected specimens at Huilla in Mossamedes and Caconda in Benguela, as well as at Ambaca in Angola.

Adult.—Entire head and neck black, with a brilliant purplish-blue gloss, the shafts glossy black; centre of the back and entire wings bright chestnut, the tips of the primaries and the inner secondaries olive-brown; rump dusky black, glossed with purplish blue; upper tail-coverts greenish; tail brown with a dull greenish gloss; under surface of the body yellowish white, the flanks and abdomen inclining to ochre, the shafts rather distinct, especially on the throat; under wing-coverts buff, the lower ones chestnut, like the inner face of the wing; bill and feet black; iris red. Total length, 15·4 inches; culmen, 1·25; wing, 7·2; tail, 9·3; tarsus, 1·9.

Fig. Rüpp. N. W. Vög. p. 57, Taf. 21. fig. 2.

148. *CENTROPUS NIGRORUFUS.* Natal Lark-heeled Cuckoo.

Le Vaillant found this species near the Zwart River, and the description given below is from a Natal skin procured by the late Professor Wahlberg on the 28th November, 1840. It may be distinguished from the other Lark-heels of South Africa by its black abdomen.

Female.—Head and neck all round, fore neck and chest deep black, the shafts to the feathers glossy black; rest of underparts also black, but the black shafts not so distinct; interscapulary region

deep chestnut, with rufous shafts to the feathers; wing-coverts paler rufous, crossed with narrow blackish bars and very distinct fulvous shaft-stripes to the feathers, these characters being more decided on the lesser and greater coverts, nearly obsolete on the median ones; quills pale rufous, with dusky tips and rufous shafts, the inner secondaries crossed with alternate broad bars of black and rufous or fulvous, with distinct fulvous shafts; middle of the back pale rufous, minutely barred with black; lower back, rump, and upper tail coverts glossy black; tail black, the middle feathers barred with fulvous brown; under wing coverts and entire under surface of wing rufous; bill and feet black. Total length, 13 inches; culmen, 1.1; wing, 7.0; tail, 7.7; tarsus, 1.55.

Fig. Levaill. Ois. d'Afr. v. p. 78, pl. 220.

Fam. INDICATORIDÆ.

149. INDICATOR SPARRMANNI.

White-eared Honey-Guide.

Indicator albirostris, Layard, B. S. Afr. p. 242.

This species has only reached us from Swellendam, where it was shot both by Mr. Cairncross and Mr. Atmore: it is perhaps more abundant in the Eastern districts. Mr. W. Atmore writes that it is found chiefly in the Ruggens, being more plentiful about Heidelberg than elsewhere. Mr. T. C. Atmore procured it at Eland's Post, and Mr. T. E. Buckley met with the species from the north of the Transvaal into the Matabili country. On the western side it has been sent from Gambos in Mossamedes by Senor Anchieta. In north-eastern Africa and Senegambia the present species appears to be much more common than within our limits.

Its habits resemble those of the other Honey-Guides. Mr. Buckley writes: "Extremely pertinacious in its habit of following one in order to conduct to a bee's nest, chattering incessantly until it gains its point, or is knocked over with the gun. The natives, however, strongly object to their being shot."

General colour brownish-grey, lightest on the breast, and fading to pure white on the belly, vent, and thighs, these latter marked with broad streaks of brown; rump white, streaked in the same way;

outer margins of all the wing-feathers dirty yellowish-white, those of the secondaries being the most-marked; ear-tufts white; chin and upper part of throat black; the two middle tail-feathers entirely brown; the next pair have the inner webs, with the exception of the tip, white, and the outer three are all white, except at the tips; the outermost feather is in this, and *I. major*, considerably the shortest. Length, 7'' 6''' ; wing, 4'' 4''' ; tail, 3'' 3'''.

The female wants the black throat of the male, but can always be distinguished by the brown stripes on its flanks, this character being the best to distinguish the species.

Fig. Temm. Pl. Col. 867.

150. INDICATOR VARIEGATUS.

Scaly-throated Honey-Guide.

We shot a solitary specimen of this Honey-Guide at the Knysna, as it was fitting about some bushes in the forests. Victorin procured it in the same district, and Mr. H. Atmore has forwarded it to us from George. His brother, Mr. T. C. Atmore, also collected it at Beaufort. We know very little of the distribution of the present species, as it has not been recorded from any other place in South Africa, and the only other locality whence we have seen specimens is Mombas on the east coast. It must certainly occur in the intermediate localities, and has, perhaps, been mistaken for the female or young of one of the other species. Le Vaillant considered it to be the hen of *I. variegatus*, an idea disposed of by Professor Sundevall, who received dissected specimens of male and female from Wahlberg.

General colour above dull olive-green, changing to yellow on the wings; below dirty yellowish-white, immaculate on the centre of the belly and vent, but much variegated on the throat, breast, flanks, and thighs, with brown; forehead speckled with white. The tail consists of twelve feathers, thus marked: two innermost pair all brown; one pair following white, with portion of inner web brown; three outer pair white, with brown tips; the outermost pair very short. Length, 7'' 6''' ; wing, 4'' 4''' ; tail, 3'' 4'''.

This species has no white rump, this part of the upper surface being uniform with the rest of the back. The flanks are streaked with dusky brown, and the abdomen is whitish, the mottled feathers not extending lower than the breast.

151. INDICATOR MAJOR.

White-backed Honey-Guide.

In November, 1865, while at Tygerhoek, on the River Zonder End, we shot a specimen clinging to the upright branch of a tree like a Woodpecker. We subsequently saw a single bird at the entrance of Cogman's Kloof in December, and fancy it is pretty generally distributed throughout the colony.

Le Vaillant found this species and *I. variegatus*, which he mistook for the female, all along the South-Eastern Coast, as far as Kaffraria. We have received it from Messrs. Atmore and Cairncross, killed at Swellendam and George. Le Vaillant states they build in holes of trees, and lay four white eggs, and Mrs. Barber says that they place their eggs in the nests of *Pogonorchynchus torquatus*, which is common at Highlands. The same lady writes with respect to the alleged habit of the bird leading to a snake or a leopard:—"What I wrote to you in a former letter is the opinion of many old bee-hunters in this part of the country, who have no faith in the popular belief, that leading to the leopard is done on purpose. My nine brothers, who were all brought up in this country, were all of them great hunters, as well as sportsmen; and during all the years of their experience while they were living at Tharfield, where bees' nests were exceedingly plentiful, and where they were constantly in the habit of following these birds, never once did the Honey-Guide ever lead them, *purposely*, to any noxious animal. Many times in following the bird through dense woods have they started various kinds of creatures; but if they did not neglect the bird for the purpose of hunting, she would continue her flight towards the bee's nest, regardless of the startled animals. One of my brothers once, while following a Honey-Guide through a dense forest near the Kowie, passed directly through a drove of wild pigs. They were of course more frightened than he was, and rushed about in every direction; but my brother knowing the popular belief, and wishing to test it, took not the slightest notice of the wild pigs, but passed on, keeping his eye on the bird, who went steadily on her way, until she arrived at the nest she intended to show, regardless of the pigs.

"I have other reasons for not believing the story. Why should the Honey-Guide waste her time in leading people to leopards, jackals,

wolves, and so forth? These creatures are not her natural enemies; she would gain nothing by doing it—no advantage whatever; and I have ever found that in nature there is nothing done in vain, or in an empty purposeless manner. There is always a reason for the peculiar habits and actions of birds and animals of all kinds; and therefore why should a bird, which does not even rear her own young, and has not the care of a nest, fear or care about these animals? Why should the Honey-Guide, unlike all animals, do this thing without any reason for doing it?

“And again, when the bird has arrived at the nest she intends to show, there is an alteration in the notes of her voice. An old bee-hunter knows this in an instant, and knows when he ought to commence searching for the nest. Now this alteration never takes place when animals of various kinds are startled in passing through the forest while following the bird. Hence I conclude that she does not intend to show where these creatures are, or the alteration in her voice would take place.”

General colour above, brown, with a tinge of yellow on the forehead; ear-coverts whitish, and beneath them a dark-brown line; chin, throat, and neck, yellow, fading into white on the sides, belly, and vent; thighs immaculate. The tail, as in *I. variegatus*, consists of twelve feathers, thus marked: first centre pair all brown; second pair following, brown, with terminal half of the inner web white; the three outer pair, with the tip and outer lower portion of the outer web, brown; the outer pair very short. Size similar to that of *I. variegatus*.

The white rump of this species renders it liable to be mistaken for *I. sparrmanni*, but it may be told at once by its uniform whitish flanks which have no brown streaks, by the yellow wash on the head, and by the absence of a yellow shoulder patch.

Fig. Vieill. Gal. Ois. pl. 46.

152. INDICATOR MINOR.

Little Honey-Guide.

This little species is by far the best known of the African *Indicatoride*. Victorin obtained his specimens in the Karroo in January, and at the Knysna in December. Le Vaillant gives the Swartkop and Sunday's Rivers as other localities, and it probably extends all along the south-east coast.

Mr. Atmore procured it at Blanco, and writes thus: "May 26, 1864. I have had another good opportunity of watching the habits of *I. minor*. I used to wonder where they got all the bees-wax that is usually in their gizzards, and the other day I found out. There was a male at a bee-hive as busy as possible catching bees. After watching him for some time, Tom shot him, and his gizzard was full of bees' legs, with the wax on them. He is held in no repute here as an Indicator; but *I. major* is, and he is scarce." Mr. Atmore has mistaken the pollen of the bee for wax. The bird's habit of capturing bees like a fly-catcher is interesting; but his most singular statement follows. We had asked him for information upon certain points, and he writes: "I can't answer your queries yet, but I can tell you that *I. minor* kills and eats small birds as savagely as *Lanius collaris*! The very first I shot was in the act of eating a sparrow that I saw him kill in flight: I suspect the others of similar propensities." In another letter he writes: "Eggs white, in nests of *Dendropicus menstruus* and *Pogonorhynchus leucomelas*."

Mrs. Barber says that with them it lays in the nests of *Barbatula pusilla*.

Mr. T. C. Atmore has sent it from Eland's Post, and Captain Shelley and Mr. Ayres have both procured it in Natal. Dr. Kirk obtained it in the Zambesi district, and the late Mr. Andersson writes: "I have met with it sparingly in Damara Land throughout the year; and I also observed it in Great Namaqua Land." Dr. Kirk gives the following note on the species as observed by him in the Zambesi. "The Honey-Guide is found in forests, and often far from water, even during the dry season. On observing a man, it comes fluttering from branch to branch in the neighbouring trees calling attention. If this be responded to, as the natives do by whistling and starting to their feet, the bird will go in a certain direction and remain at a little distance, hopping from one tree to another. On being followed, it goes further; and so it will guide the way to a nest of bees. When this is reached, it flies about, but no longer guides; and then some knowledge is needed to discover the nest, even when pointed out to within a few trees. I have known this bird, if the man after taking up the direction for a little then turns away, come back and offer to point out another nest in a different part. But if it do not know of two nests, it will remain behind. The difficulty is, that it will point to tame bees in a bark

hive as readily as to those in the forests. This is natural, as the bee is the same; the bark hive, 'Musinga' as it is named, being simply fastened up in a tree and left for the bees to come to. The object the bird has in view is clearly the young bees. It will guide to nests having no honey, and seems equally delighted if the comb containing the grubs be torn out, when it is seen pecking at it."

General colour above, yellowish-brown, the yellow brightest on the wing-feathers; head ashy-brown; cheeks, chin, throat, breast, and belly, cinereous; vent white; thighs faintly maculated with brown; moustache blackish; tail composed of twelve feathers, thus marked: two inner pair all brown, four outer pair white, with base and tips brown. In this species the outer pair are but very slightly shorter than the next. Length, 5' 9''' ; wing, 3' 7''' ; tail, 2' 6''' ; tarsus, 10·6.

Fig. Temm. Pl. Col. 542, fig. 2.

153. PRODOTISCUS REGULUS.

Brown Honey-Guide.

This peculiar little bird was discovered by the late Prof. Wahlberg in South-Eastern Africa, and one of the original specimens from Port Natal is in the editor's collection, and will shortly be placed in the British Museum. Nothing is known of its habits, but it may be distinguished from all the other Honey-Guides by its thin bill and nearly uniform brown plumage.

The description here given is taken from a paper on the Indicatoridæ contributed by the editor to Mr. Dawson Rowley's "Ornithological Miscellany."

Adult female.—General colour earthy-brown, including the sides of the face and neck; a tuft of white feathers on each side of the lower back; underneath rather more ashy-brown, the centre of the body and under tail-coverts yellowish-white, the latter with a few hair-like shaft-streaks; under wing-coverts white, the feathers near the edge of the wings brown; wings brown, the quills darker, the secondaries edged with whity-brown; tail dark brown, the three outer feathers white on the outer web extending for more than half of the two outermost, but less extended on the third; bill and feet blackish. Total length, 5 inches; culmen, 0·5; wing, 3·0; tail, 2·15; tarsus, 0·45.

Fig. Sharpe in Rowley's Orn. Misc. part iv.

Fam. CAPITONIDÆ.

154. POGONORHYNCHUS TORQUATUS. Black-collared Barbet.

Laimodon nigrithorax, Layard, B. S. Afr. p. 233.

This Barbet is a bird of the eastern districts. Mr. Rickard says it is rather plentiful near East London, and it is not uncommon about Graham's Town, and Mr. T. C. Atmore collected an abundant supply of specimens near Eland's Post, where it was found feeding on fruit and berries. Mr. F. A. Barratt observes: "I have noticed these birds near Pretoria and in Kaffraria. I shot several near Rustenberg, where they abound, especially about the fruit-gardens." Mr. Ayres has procured them in Natal, and Captain Shelley writes: "Very common about Pinetown, but I never met with them nearer the coast: they were generally in pairs, frequenting the scattered trees or the edges of woods." Mr. T. E. Buckley obtained one specimen close to the Limpopo, near Pretoria, where he considers it must be rather a rare bird. Dr. Kirk states that it is common in open forests of the Zambesi valley, frequently to be found on fig-trees. It occurs also higher up the coast at Mombas, while Speke procured it at Uzaramo. On the western side of the continent it has been found by Anchieta at Huilla and Biballa in Mossamedes, and again at Pungo Andongo in Angola. Mr. Barratt says it has a harsh, disagreeable note. "Their food," writes Mr. Ayres, "appears principally to consist of small fruits and berries, which they swallow whole. Their note is particularly loud; the syllables *kook koro*, repeated eight or ten times would give a good idea of it; frequently both male and female call at the same time, and when perched close together keep up a quick succession of bows to each other, bowing at the repetition of each note."

The genus *Pogonorhynchus*, to which the present species and the next belong, is characterised, according to the Messrs. Marshall, our best authorities on the family, by its strongly toothed bill. The coloration of the species is its best distinguishing character, and its large size. The only other South African species which has anything like a red head and black pectoral collar is *Trachyphonus cafer*, which is at once distinguished by its long black crest, black back, yellow rump, and crimson upper-tail-coverts.

Top of head and front, sides of head, chin, throat, and gorget,

brilliant scarlet, all bounded by a band of glossy black, more or less broad; back and shoulders yellowish brown; quill-feathers of wings and tail dark-brown, margined with bright-yellow, the latter very slightly so; under parts ashy-white, marked with sulphur yellow; base of bill sparsely covered with long bristles; bill black; feet black (*Buckley*), brown (*Ayres*), slaty brown (*Shelley*); iris reddish brown (*Ayres, Shelley*), dark brown (*Buckley*).

Fig. Marshall, Monogr. Capit. pl. x.

155. POGONORHYNCHUS LEUCOMELAS.

The Pied Barbet.

Laimodon leucomelas, Layard, B. S. Afr. p. 232.

Laimodon unidentatus, id., t. c. p. 233.

This Barbet is common in mimosa bush throughout the Karroo, and has apparently a very wide range, having been received from Beaufort, Swellendam, Knysna, Kaffraria, Colesberg, Hopetown, Kuruman, and Damaraland. It does not occur, as far as we yet know, in Natal, and Mr. T. E. Buckley says that they were first seen by him about the trees in Pretoria; he also found them from the north of the Transvaal into the Matabili country. Mr. Barratt states that he has often seen this Barbet in the Transvaal, and has also received it from Marico. Mr. Buckley met with it as far north as the Tatti, but it has not been recorded from the Zambesi. On the western coast, however, it extends much further, and according to Mr. Andersson, it is "found from the northern border of Great Namaqua Land (south of which it was not observed), as far north as the river Okavango; and it also occurs at Lake N'gami. In the neighbourhood of Objimbinque it is rather abundant." The same gentleman also procured specimens in Ondonga, while Anchieta has procured it on the Rio Coroca in Mossamedes. Mr. Monteiro collected several of this Barbet in Benguela, and it even ranges into Angola proper, from whence specimens have been forwarded to the Lisbon Museum.

Mr. Andersson remarks that in Damara Land, it is "found singly or in pairs, and is remarkable for its clear-ringing and far-sounding notes, which, though heard at all hours of the day, are most frequent in the early morning. Its food consists chiefly of fruit and seeds; but it will to some extent accommodate itself as regards food to the

produce of the locality in which it happens to be located. It is rather a lively bird, and sometimes suspends itself below the fruit on which it is feeding, and makes its repast whilst hanging in that position."

According to our own experience, it is a solitary bird, never more than one pair being seen together, and that but seldom. Its call is similar to that of the Indian *Xantholæma hæmacephala*, viz., "poo-poo-poop," three syllables, constantly repeated. While uttering this cry, it remains stationary in some tree, but evidently expends much labour on its monotonous call, its body being jerked up and down the while. It feeds on fruits and berries, and is said to build in hollow trees; but we were not fortunate enough to obtain its nest. Mr. Atmore writes: "Feeds on seeds and insects. I see them frequently feeding on the ground. I know of a tame one which roved about unconfined. It eat meat, bread, sugar, corn, in fact anything—appeared very much attached to its mistress, and came regularly into the house to be fed. It disappeared at the pairing season, so I suppose it got married! They nest in holes of trees, but don't make the holes. Eggs spotted." Mrs. Barber also says the latter are spotted, but Mr. H. Jackson sends us eggs of three species which are white, elongated and roughish. Axis, 11''; diam. 8''. We found it common in the Albany division, and one evening took five out of the stem of an aloe at Talk Farm, whither they had retired to roost. We were assured by Mr. White, the owner of the farm, that they had bred there, making the hole themselves.

From the other African tooth-billed Barbets the present species is distinguished, according to the Messrs. Marshall, by the following characters: small size, black bill, crimson forehead, and black occiput, throat and centre of the breast.

General colour above, black, pencilled with yellow; forehead deep crimson; a stripe extends from the nostril, over the eye, to the back of the head; the first part of this is yellow, the last part white; a broad white line also extends from the corner of the bill down the side of the throat; chin and gorget black; belly dirty white, mixed with grey; wing-secondaries and tail-feathers margined with yellow; "bill dark-brownish horn-colour; feet and toes slaty-brown; iris umber-brown. (*Andersson.*)" Length, 6''; wing, 3'' 6''; tail, 2''.

Fig. Marsh. Monogr. Capit. pl. xii.

156. BARBATULA PUSILLA.

Little Tinker Barbet.

Megalæma barbatula, Layard, B. S. Afr. p. 234.

The members of the genus *Barbatula* are distinguished from the *Pogonorhynchi* by the absence of the tooth in the bill, which is also sharp and pointed. They are all birds of small size, and the South African species can be divided into two sections, viz. those which have the back black streaked with white or yellow, and those which have the upper surface entirely black.

The present species belongs to the yellow-streaked section, and is at once recognisable by its red crown. Mr. Rickard notes its occurrence at East London: it inhabits the euphorbia thickets of the eastern province, especially about Eland's Post, where Mr. T. C. Atmore obtained a nice series of specimens. The note is often heard, but the bird itself is seldom seen, on account of its small size and creeping habits: they feed on berries. [Mr. Ayres writes: "The note of this curious little bird so much resembles the tapping of a hammer on an anvil (having that peculiar metallic ring) that it is called in Natal the Tinker Bird. It is silent during the winter months, commencing its monotonous cry in the spring, and continuing it throughout the summer. They are numerous, but not easily seen, in consequence of their small size, and their habit of sitting quietly on the tops of thick bushy trees. When in search of food, they climb and creep about the thick foliage of trees. They inhabit the coast-bush, being seldom found ten miles inland; those which I have seen at that distance from the coasts were silent. The stomach of the specimen sent to England contained mulberries." It is found in North-eastern Africa, whence the birds run rather smaller.

The following description is copied from Messrs. Marshall's Monograph:—Sexes alike; a narrow frontal band black; top of the head bright red; upper plumage black, variegated longitudinally with sulphur-yellow; upper tail-coverts entirely of that colour; wings and tail earthy brown; lesser wing-coverts broadly bordered with golden; greater wing-coverts and quills edged with the same colour, shading into creamy white on the tertiaries, inner webs at the base yellow; tail narrowly edged with sulphur-yellow; under surface greenish-yellow; throat and under tail-coverts lemon-yellow; bill black; legs and feet dark greenish; irides dark brown. Length, 4'' 6; wing, 2'' 4; tail, 1'' 2.

Fig. Marsh. Monogr. Capit. pl. xlviiii.

157. BARBATULA EXTONI.

Exton's Yellow-headed Barbet.

This pretty little species can be at once distinguished from the foregoing by its yellow crown. It is a larger form of the ordinary Yellow-headed Barbet of Western and North-eastern Africa (*B. chrysocoma*). The southern species was distinguished by the author in the 'Ibis' for 1871 (p. 226), and named after Dr. Exton, who procured the typical specimen at Kanye, a native town in the Bechuana country (lat. 24° 50' S. long. 25° 40' E.), midway between the Marico and the Kalahari desert. Another specimen, shot by the late Professor Wahlberg, in the Transvaal, is in the editor's possession. Dr. Exton says that the stomachs of the three specimens procured by him contained the fruit of a species of mistletoe.

Upper parts greyish-black, verging to pure black on the head, mottled with greenish-white spots, smallest and roundest on the back of the head and neck, longer and more elongated on the back; rump greenish-yellow; lesser wing-coverts and primaries on the outer-edge bordered with orange-yellow; tail-feathers narrowly edged with dirty-white; a brilliant orange patch occupies the anterior portion of the vertex, separated from the bill by a broadish black bar, coalescing with the pure black of the head, and succeeded by a narrow white bar, which covers the nostrils and passes backward under the eye; two short white bars proceed from the edge of this suborbital streak, and are divided by black bars from each other and from the greenish-yellow of the throat and chin; eyebrow small and white. All the under parts dirty pale ashy, more or less tinged with green or greenish yellow. Total length, 4·6 inches; wing, 2·7; tail, 1·3; tarsus, 0·6.

158. BARBATULA BILINEATA.

Bridled Barbet.

Megalaima bilineata, Layard, B. S. Afr. p. 234.

The present species has never been met with by collectors, since it was described by the late Professor Sunderall, in 1850, from specimens collected by Wahlberg, in "Lower Caffraria." Dr. Reichenow has, indeed, lately recorded it from various localities on the West Coast of Africa, but we think the specimens referred to by him are *B. subsulfurea*, a smaller species and otherwise different.

The Bridled Barbet may be distinguished by its black back and

orange rump from the other South African species : it is the sole representative in the southern part of the continent of the black-backed section of the genus *Barbatula*. As we have not personally examined a specimen, we transcribe the description given by the Messrs. Marshall :—Sexes alike : upper plumage shining black, with a green tinge ; a narrow frontal band, continued down the sides of the face, and one over the eye, down the side of the neck, white ; these two stripes separated by a broad black band, the latter from the throat, which is white, by a narrow black moustachial streak ; rump golden yellow ; lesser wing-coverts broadly tipped with sulphur yellow ; greater coverts, wings, and tail brownish-black, edged on the outer web with the same colour ; under surface pale yellow ; flanks grey ; tail underneath grey ; bill, black ; legs and feet, brownish ; wing, 2'' 5 ; tail, 1'' 6.

Fig. Marsh. Monogr. Capit. pl. 4, fig. 2.

159. SMILORHIS LEUCOTIS.

White-eared Barbet.

Megalaima leucotis, Layard, B. S. Afr. p. 234 (1867).

This Barbet was discovered in Natal by the late Professor Wahlberg, one of whose specimens is in the Editor's collection. It appears to be strictly a bird of Eastern Africa ; having been found besides only in Mozambique by Professor Peters, and in Uzanga, by Baron Von der Decken. Nothing has, as yet, been recorded respecting its habits and economy.

For the description, we are again indebted to the work of Messrs. Marshall.

Sexes alike : the head and neck are black, the shafts of the head feathers being stiff and shining, and elongated beyond the webs ; the rest of the upper plumage is dull brown. A broad line behind the eyes extending down the sides of the neck, the abdomen, and under wing and tail-coverts, snow white. The sides of the face, throat, and breast are brownish black, the shafts of the feathers of the throat being elongated into fine hair-like bristles ; the flanks brown, broadly tipped with white. The rictal bristles of this species are not very strongly developed. The bill is plumbeous black ; irides, yellow ; legs and feet brown. Length, 8'' ; wing 3'' 4 inches.

Fig. Marshall, Monogr. *Capitonidæ*, pl. 52.

160. TRACHYPHONUS CAFER.

Le Vaillant's Barbet.

Capito vaillantii, Layard, B. S. Afr. p. 235.

This singularly coloured bird is chiefly found in the interior of South-eastern Africa. It was procured at Kurrichaine by the late Sir Andrew Smith during his expedition into Central Africa, and was named by him *Pollysticte quopopo*, this being, as Dr. Exton informs us, the Bechuana name for "Woodpecker." It has also been recorded as having been obtained by the Mm. Verreaux in Mosilikatze's country, but Dr. Exton informs us again that this means the Marico or Mariqua district, on the borders of the Transvaal, from which Mosilikatze was formerly ejected by the Boers, and is not the present Matabili country. It is, however, found in the latter locality, as Dr. Exton obtained examples near Kanye. Mr. Ayres shot one specimen "amongst the trees on the banks of the river Limpopo, where it was apparently a solitary bird: the stomach contained insects and fruits." Mr. Buckley writes, "This species is very common north of Pretoria, all along the Limpopo river; but I did not observe it beyond Bamangwato. It creeps along the boughs of the trees like a Woodpecker, for which I often mistook it; it is by no means a shy bird." Mr. F. A. Barratt procured his specimens in the bush under the mountains at Rustenberg, and it certainly occurs in the Zambesi district as Dr. Kirk obtained specimens at Tete during the Livingstone expedition. It has also been found by Senor Anchieta at Huilla in Mossamedes.

Dr. Exton writes, "The note of this bird is a continuous trill, somewhat resembling the quick 'tap, tap, tap, of *Dendrobates*,' when at work on a decayed tree. I obtained three specimens by following the sound from tree to tree. When calling, they usually perch on the uppermost twig, and their peculiar jerk of the body whilst producing the sound, can then be visibly distinguished. The female has the same note as the male. In a fresh specimen the bill is greenish-yellow, tipped with black: iris, reddish-brown; gizzard contained berries, and shreds of leaves; that of the female only contained shreds of leaves."

The following good description of the bird is extracted from Messrs. Marshall's Monograph.

Entire head brilliant chrome yellow, each feather edged with crimson at the tip, this latter colour predominating on the cheeks; back of the head, nape, and a large occipital crest glossy blue-black; a spot on the ear-coverts black tipped with white; upper part of the back, scapulars and wing-coverts glossy blue-black banded with pure white; lower part of the back and rump black washed with rich chrome yellow, this colour alone showing on the rump; upper tail-coverts rich crimson; quills brownish black, grey at the base of inner web, the outer web spotted with white; tail black, in some lights appearing very distinctly barred, all the feathers broadly tipped and sparsely spotted with white; chin, white; throat, chrome tipped with crimson, and shading into beautiful lilac on the breast; a band of black across the upper part of the breast with a few spots of lilac; rest of the breast white, passing on the lower part into chrome streaked with crimson; flanks and abdomen chrome; legs and feet dull brown: orbital skin blackish.

Fig. Marshall, Monogr. Capit. pl. 56.

161. STACTOLEMA ANCHIETÆ.

Yellow-faced Barbet.

It was only as late as the year 1869, that this species was made known to naturalists, and as yet no other specimens have been recorded beyond those originally obtained by Anchieta. By him the bird was discovered at Caconda in Benguela, and it therefore must be regarded as a bird of Southern rather than of Western Africa. Nothing has as yet been recorded concerning the habits of this singular bird, and the description given below is taken from the well known work of the Messrs. Marshall.

General plumage reddish-brown, forehead and sinciput, throat and a spot at the base of the lower mandible sulphur-yellow; occiput, nape, and sides of the neck and breast shining black, the former covered with numerous small spots, and the latter with longitudinal streaks of sulphur-yellow; superciliary eye-stripe, cheeks, and ear-coverts white; primaries and tail brownish-black, secondaries with the exterior web edged with greyish-white; under wing-coverts, lower belly, and under tail-coverts white; tail underneath ashy-grey; irides reddish-brown; bill, legs and feet black.

Fig. Marshall, Monogr. *Capitonidæ*, pl. 73.

Fam. PICIDÆ.

162. CAMPETHERA CAPRICORN.

Capricorn Woodpecker.

As far as is yet known this species is only found in South-Western Africa, having been first obtained by the late Mr. Andersson in Damara Land. He procured a male bird during his first trip there, and a female was afterwards obtained by him on the Cunene river. These are the only specimens of his collecting that we have seen. His notes are as follows:—"I never met with this species in Great Namaqua Land; and in Damara Land proper it is scarce. I do not remember to have seen it much south of Omanbondé; but on my journey to the Okavango I found it more frequent in the neighbourhood of that river, though even there it was of comparatively rare occurrence. It appears to be a migratory bird, as I never saw it during the dry season." Senor Anchieta has also met with the species at Capangombe and in Mossamedes.

The following description is from one of Mr. Andersson's specimens: the species may be told at a glance by its yellow rump slightly spotted with black. *Adult female*.—Above olive brown, barred across with yellow and white, the bars of the latter colour being mostly concealed, the shafts white or at least brighter yellow, forming a distinct streak in the centre of the yellow bars; hinder neck entirely ashy brown; rump and upper tail-coverts bright yellow, with spots of brown in duplicate series or a single subterminal one; tail dull olive, blackish at tip with bright yellow shafts, all the feathers crossed with bands of dark brown, very indistinct on the centre ones, but plainer on the outer feathers, which have about nine dark bars, the interspaces fulvous brown shading off into whitish on the outer web, the last small feather distinctly barred with white; wings brown, strongly washed with olive-yellow, the least coverts minutely, but the median and greater series distinctly barred with white, the subterminal bar much plainer; primary-coverts brown narrowly edged with olive-yellow; quills brown with golden shafts, the primaries externally washed with olive yellow, and indistinctly notched with paler yellow on the outer web, these notches lighter on the secondaries, the innermost of which are barred across and broadly tipped with white; crown black, thickly clouded with round spots of

white, the hinder part of the crown and nape crimson; a loreal streak running from the base of nostril to below the eye, and another just over the hind part of the eye, white; below the former a brown streak is drawn from above the base of the bill to the ear-coverts which are also brown, inclining to yellowish white on their hinder margin; feathers at base of lower mandible and cheeks yellowish white; sides of neck also yellowish white, most of the feathers spotted with black; from the hinder ear-coverts down the sides of the neck an indication of a blackish streak; throat, brown; rest of under surface of body bright yellow, paling into sulphur yellow on the abdomen and thighs, the latter being mottled with brown bases; sides of upper breast spotted or mottled with brown, most of the feathers being of this colour and barred across with white or yellow; under wing-coverts yellow, the lower ones spotted with brown; quills brown below with yellow shafts and notched with yellow on the inner webs; "bill brown slate-colour; legs and toes lead-coloured; iris, claret-coloured" (*Andersson*). Total length, 8.5 inches; culmen, 1.1; wing, 4.95; tail, 3.4; tarsus, 0.9.

The male differs from the female by having the whole of the crown crimson as well as a broad moustache of the same colour: the brown stripe on the sides of the face and the brown throat are absent.

Fig. Newton, Ibis, 1869, pl. ix.

163. CAMPETHERA BENNETTI.

Bennett's Woodpecker.

Like the preceding bird, Bennett's Woodpecker differs much in the sexes, the female having a blackish-brown throat, as in *C. capricorni*. The absence of the conspicuous yellow rump, however, distinguishes it from that species, this part of the body being banded across with yellow, as in all other South African *Campethere*. Sir A. Smith, whose typical specimens are in the British Museum, states that it inhabits the country about and beyond Kurrichaine. Mr. Ayres obtained a pair near the river Limpopo, and Professor Sundevall notes that Wahlberg procured several specimens in the Transvaal, in about 24° south lat. Dr. Exton fell in with the species near Kanye in the Matabili country.

Adult male.—Above brown washed with olive-yellow and everywhere barred across with yellow or white, the white bars predomi-

nating on the rump and upper tail-coverts, some of the bars on the latter being tinged with bright yellow; crown of head and nape crimson, a broad streak along the sides of the face, drawn from the base of the bill below the eye and including the ear-coverts, yellowish white, cheeks crimson, forming a broad moustache; throat yellowish-white, unspotted; rest of under surface yellowish white, inclining to bright yellow on the breast, and to sulphur-yellow on the sides of the body and abdomen, all the under surface spotted with black, the sub-terminal marks very distinct, most of the plumes with an additional concealed spot of black, except on the flanks, where all the feathers have several bars of greyish black; upper wing-coverts dark brown, washed with olive-yellow and having a narrowly indicated shaft-line of yellow, all of the feathers having a spot of white at the tip, the greater series with additional bars of whitish, irregular in shape and extending generally a little more than half across the feather; primary coverts uniform dark brown, externally shaded with olive; quills dark brown, with bright golden shafts, all the primaries externally washed with yellow and barred or notched on the outer web with whitish, the secondaries tipped and barred across with white; tail dark brown, strongly shaded with yellow towards the tips which are black, the shafts golden, all the feathers barred across with obscure yellowish brown, these bars plainer and whiter on the small external feather. Total length, 8 inches; culmen, 1.2; wings, 4.8; tail, 2.8; tarsus, 0.9.

Adult female.—Similar to the male, but differing very much in facial features, as follows: crown of head black, thickly mottled with rounded spots of snow white, with an occipital band of crimson feathers; from the base of the bill below the eye runs a line of dark brown enclosing the lower ear-coverts; cheeks greyish white, mottled with black bases to the feathers; the throat chestnut brown.

Fig. Malherbe, Monogr. Pic. ii. pl. 165.

164. *CAMPETHERA ABINGTONI*.

Golden-tailed Woodpecker.

*Campethera chrysur*a, Layard, B. S. Afr. p. 238.

This species has always been set down as an inhabitant of Western Africa, having been originally described by Swainson in his little work on the birds of that locality. Malherbe and Sundevall, however, who have both monographed the Woodpeckers, confess to

their never having seen an example from the western side of the continent, nor have we ourselves been more fortunate. Swainson gives no exact locality for his species, and our impression is that it is a bird of South Africa alone. Sir A. Smith procured specimens near Port Natal, and as his description of *C. abingtoni* clearly refers to the present species, we have resuscitated the latter name published in 1836, over that of *C. chrysurus* of Swainson, which was not published before 1837. Mr. Gurney, in his early lists of Natal birds, identified specimens sent to him by Mr. Ayres as *C. chrysurus*, but he afterwards (*Ibis*, 1862, p. 37) referred to the species as *Dendromus smithii*. The British Museum, however, possesses one of Mr. Ayres' specimens collected about this time, and we believe that the first determination was right, and that there was no need to change the name. As far as we are at present aware, the species is confined to Natal, where, according to Mr. Ayres, it is found all the year round. The following notes are from his pen:—"This Woodpecker makes a hole, for the purposes of incubation, in the trunk of a decayed tree, just large enough at the opening for the bird to enter, but becoming wider inside, and reaching downwards to a depth of a foot or eighteen inches; it lays its eggs on the bare wood, without making any nests." Later on he observes:—"These Woodpeckers are to be found throughout the colony, wherever there is bush-land, singly or in pairs; their note is loud and harsh; they are very restless in their habits, constantly hunting for food as if they never obtained a sufficiency; ants and other insects appear to be their usual food, which they search for and catch on the rough bark of trees; they also hammer away at dead boughs, from which they extract soft grubs, &c.; their flight is heavy and dipping."

We are indebted to Mr. Sydney Cuthbert for a specimen of this bird from Suazi Land.

Adult male.—Above olive-green, the bases to the feathers lighter, all the dorsal plumes spotted with olive-yellow, the subterminal one being diamond-shaped; lower back and rump barred across with white, the bars always pervaded more or less with an olive tinge, the upper tail-coverts somewhat shaded with golden brown and barred with darker brown, the shafts being yellowish; upper wing-coverts more distinctly olive-brown than the back, somewhat shaded with golden, all of them spotted with yellowish white, the shafts being also of the latter colour; quills deep brown, externally shaded

with olive, the shafts yellowish brown, whitish brown on the primaries, all the feathers notched with yellowish white on the outer web, and largely indented with white on the inner one; tail dark brown, the shafts golden-yellow, paler below, all the tail feathers externally notched with pale brown, and with whitish on the inner web, these half-bars being about six or seven in number; crown of head crimson, more clear on the nape, the frontal and vertical plumes showing the greyish bases to the feathers; sides of face yellowish white, including the lores, the ear-coverts minutely spotted with black, a mark of which appears on the upper edge of the ear-coverts behind the eyes; a very small malar stripe of crimson, much mottled with black; under surface of body pale sulphur yellow, the throat whitish, with only a few black specks, which on the chest and fore-neck are very broad, somewhat irregular in shape and on many feathers appearing like two spots joined together, these streaks becoming narrower on the breast, and again slightly dilating into spade-shaped spots on the flanks; the abdomen yellow in the centre, the sides of it minutely spotted with black, these spots becoming larger on the under tail-coverts; some of the flank feathers with a few indistinct greyish black bars; under wing-coverts yellowish with a very few black spots, more frequent near the edge of the wing, the lower series whitish with narrow dark brown transverse bars, the lower surface of the quills dark brown, largely notched with pale yellow on the inner webs; "iris light reddish brown; bill dark brown, the under mandible with a yellowish tinge; tarsi and feet very dull green" (*Ayres*). Total length, 7.5 inches; culmen, 1.0; wing, 4.2; tail, 2.95; tarsus, 0.8.

Adult female.—In general similar to the male, but differing in the coloration of the head, which is black, very minutely spotted with white, the nape with a large crimson crest; no red malar stripe, this being replaced by a black one spotted with white.

Fig. Malherbe, Monogr. *Picidae*, pl. 94.

165. *CAMPETHERA SMITHII*.

Smith's Woodpecker.

Ipagrus brucei, Gurney, in Anderss. B. Dam. Ld. p. 221.

Dendrobates striatus, Layard, Ibis, 1871, p. 227.

The plumages of the present species are very little understood, and it will be necessary to procure a very large series of carefully

collected specimens before we can hope to understand the sequence of changes through which this bird passes. After careful consideration, however, we have come to the conclusion that the bird first described by Malherbe as *C. smithii* is the same as the Woodpecker subsequently described by him as *C. brucei*, and more recently still by the author of the present work as *Dendrobates striatus*. The latter title must in any case be suppressed, for re-examination of the subject shows us that the Matabili bird must be the true *C. brucei* of Malherbe. Whether the Damara species is identical with the one from the Matabili country is at present rather difficult to say; inasmuch as all the specimens collected by the late Mr. Andersson show considerable difference when compared with other examples from South Eastern Africa. None of the latter, as yet examined by us, have shown the black cheeks and throat which appear to characterize the adult plumage of the Damara bird. The chief distinguishing mark of *C. brucei* is perhaps its regularly banded mantle, which is numerous and distinctly barred across with yellow, or yellowish white: this however is, perhaps after all, a doubtful character, for it would seem as if there was a regular transition in a large series from spotted to barred specimens.

C. brucei was originally described by Malherbe from the Bechuana country, and Professor Sundevall records two specimens which he doubtfully separates from the above-named bird as *C. smithii*, as obtained by the late Professor Wahlberg on the Limpopo river on the 29th October and 11th November, 1843. Dr. Exton shot three specimens at Kanye in the Matabili country. Mr. Andersson says that it is not unfrequent in Damara Land, and he also shot it in Ondonga: one specimen, which we believe to be referable to this species, was obtained by Mr. Monteiro in Angola. Senor Anchieta has obtained it in Mossamedes at Capangombe, Biballa, and Gambos.

Adult male.—Above dusky greenish, everywhere barred across with greenish yellow or dull white, all the feathers having a terminal bar of the same, and lighter median spots of a diamond shape in the centre of the bars: this spotted appearance is very distinct on the mantle, but is not seen on the lower back and rump, nor on the upper tail-coverts, where the cross bars are very regular; wings olive brown, the coverts minutely spotted with yellowish white, the greater series having a narrow yellowish shaft-line with indications of a few whitish bars on the inner web; primary coverts brown,

washed with olive and minutely spotted with yellowish white; quills brown, externally golden olive and having golden shafts, all of them externally spotted with yellowish white, producing rather a barred appearance on the inner secondaries; upper tail-coverts washed with golden yellow and barred across like the rump; tail dark brown, all the feathers with bright golden shafts and yellow tips, crossed with lighter bars of golden brown, the inner webs notched with whitish and the outer webs spotted with the latter colour also, especially the small spurious one, which is regularly barred across with whitish; crown greyish, the feathers tipped with crimson, the occipital crest bright crimson; feathers round the eye blackish; nasal bristles, lores and a broad band below the eye embracing the ear-coverts white, the latter minutely spotted or streaked with black, especially near the upper margin; a short malar streak of crimson-tipped feathers not reaching much beyond the hinder line of the eye; hinder cheeks white, minutely spotted with black; throat and chest for the most part black, spotted with white, the plumes of the fore-neck with margins of yellowish white, more or less encroaching on the black centres, and in some instances forming a cross-bar; rest of under surface of body yellowish white, the breast distinctly streaked with black, the flanks barred with the same; under tail-coverts whitish with a few irregular spots or streaks of dull black; under wing-coverts yellowish white with very distinct rows of large blackish spots, forming bars on the greater series; quills brown below, with large yellow notches on the inner web, the shafts golden; "bill bluish brown; legs and toes greyish green; iris pink wine-colour" (*Andersson*). Total length, 9 inches; culmen, 1.25; wing, 4.8; tail, 3.1; tarsus, 0.9.

Female.—Similar to the male, but apparently never so black on the throat, and having the crown black with tiny round spots of white, the occipital crest only crimson.

Fig. Malherbe, Monogr. Pic. ii. pl. 93.

166. *CAMPETHERA NOTATA*.

Knysna Woodpecker.

Campethera nubica, Layard, B. S. Afr. p. 238.

This species is distinguished from the other South African Woodpeckers by its thickly spotted under-surface, which is covered with large black spots from the chin to the vent. We have received

specimens from Mr. Henry Bowker from the Transkei, and from Mr. Arnott at Colesberg. Mr. H. Atmore has collected it at George, and Le Vaillant cites the George forests and the Gamtoos river as habitats for the species. Mr. Andersson also procured it at the Knysna; it is found about Graham's Town, and was sent to us by Mr. T. Atmore from Elands' Post. Le Vaillant states that it lays four eggs marked with brown on a bluish ground, and Mrs. Barber informs us that it is the foster parent of *Coccystes jacobinus*.

Adult male.—Olive-green above, with indistinct small transverse bars and a few diamond-shaped subterminal spots of paler olive yellow; quills brown, externally olive near the base, the secondaries olive-brown, duller than the back, transversely barred with yellowish white, the primaries externally spotted with yellow, notched on the inner web with white, the shafts brown; tail olive-brown, shaded with greenish, and crossed with six bars of yellowish, the tips of the feathers dull golden, the shafts golden brown; head greyish black, all the feathers tipped with scarlet, the occipital crest entirely bright scarlet; lores yellowish, minutely spotted with black; ear-coverts whitish, streaked with black; fore part of cheeks scarlet, forming a small moustache, the rest of the sides of the face and sides of neck yellowish white, thickly mottled with black, the feathers being black with a narrow whitish edging; entire under surface of body yellowish, white on the throat, thickly spotted with black, the spots rounded and very large on the breast, rather more diamond-shaped on the abdomen, the flanks barred with dusky black; under wing-coverts yellow spotted with black like the breast; iris hazel. Total length, 8·5 inches; culmen, 1·10; wing, 4·15; tail, 3·2; tarsus, 0·9.

Adult female.—Similar to the male, but having the head black minutely spotted with white, the occiput only scarlet.

Fig. Malherbe, Monogr. Pic. ii. pl. 95.

167. GEOCOLAPTES OLIVACEUS.

Ground Woodpecker.

Colaptes olivaceus, Layard, B. S. Afr. p. 239.

[This singular bird presents a remarkable instance of the adaptation of creatures to the localities wherein their lot is cast. Though belonging to the Woodpecker family, it never pecks wood, but bores its way into the banks of rivers, sides of hills, or the walls of mud-buildings, in search of its prey, and for a home for its young. It

also seeks for food on the ground, in the same manner as the Golden-winged Woodpecker of North America; its flight likewise struck me as very similar.]

It excavates a hole, sometimes several feet in depth, in which to deposit its eggs, which are pure white, and from three to five in number: axis, 13''; diam., 11''.

Families seem to keep in company until the arrival of breeding season separates them. They feed together, and roost together in some deserted hole, while their loud, harsh cries, as they call to each other, may be heard for a considerable distance.

Major Bulger procured this species near Windvogelberg, and Mr. T. Atmore has sent us a pair from Colesberg. It seems to be pretty common throughout the colony, and extends to Natal. Wahlberg procured it in worn plumage near Port Natal in January, and Mr. Ayres has shot it on the Mooi river. Mr. Buckley gives the following note: "Common in Natal, frequenting the open hills and sitting among the stones. I never noticed it among trees. These birds generally go about in parties of six or seven, probably the old birds and their young."

General colour, brown, mottled with dirty yellow; rump crimson; breast and belly pale crimson, in the male, who has also an indistinct crimson moustache; in the female these parts are brown; tail above, dark-brown, barred with yellow, the tip ridged, and golden-orange; below brown, glossed with golden-yellow, the yellow bars also showing; "beak and legs black; iris orange in male, dark-red in female" (*Buckley*). Length, 10"; wing, 5" 3"; tail, 3" 9".

Fig. Malh. Monogr. Pic. ii., pl. 111.

168. *DENDROPICUS NAMAQUUS.*

Bearded Woodpecker.

Denbrobates namaquus, Layard, B. S. Afr. p. 236.

This Woodpecker is apparently not found within the limits of the colony, though Le Vaillant states that he noticed it in Kaffraria. Mr. Ayres has procured it in the Transvaal, where also Mr. Buckley met with a pair, which were engaged in making their nest, on the 7th of July, 1873. Dr. Exton shot the species at Kanye, in the Matabili country, and Dr. Kirk obtained it at the Murchison Rapids on the river Shirè in March, but he says that it is a much rarer species in the Zambesi country than *D. hartlaubi*, and is, moreover,

limited to certain localities. Mr. Andersson writes as follows: "I have scarcely ever seen this Woodpecker in Great Namaqua Land, but have found it (very sparingly) throughout Damara Land, and as far north as the river Okavango, where, and at the Lake N'gami, it is more numerous than in Damara Land, though no species of Woodpecker can be said to be common in any of the countries of South Western Africa." Mr. Andersson also procured it in Ondonga, and Anchieta has forwarded this species from Huilla and the Chimba river in Mossamedes.

Upper parts, dull-green, barred with dirty-yellow; forehead black, each feather tipped with white; top of head crimson in the male (black in female); back, black; cheek, chin, and throat, white, the latter crossed by two black lines, one passing over the ear from the corner of the eye, the other extending from the base of the lower mandible to the shoulders; under parts greenish-grey, faintly barred with dirty-yellow; shafts of wing and tail feathers, yellow, as are also the tips and underside of the latter, and the upper coverts. "Bill greenish-grey, legs and toes greyish-olive, iris of a red-wine colour." (*Andersson.*) Length, 8" 6''; wing, 5"; tail, 3" 6''.

Fig. Malh. Monogr. Picidæ. I. pl. 42.

169. DENDROPICUS HARTLAUBI.

Hartlaub's Woodpecker.

This little Woodpecker is very closely allied to *D. cardinalis*, from which it differs in the yellower tint of the under surface, and in the very distinct red tinge which pervades the upper tail-coverts, and which, Professor Sundevall says, is found in the young birds as well as the old. He gives its habitat as extending from Port Natal into the tropical districts of South Africa. Dr. Kirk says that it was frequent in all the woods in the Zambesi and Shirè valley. Mr. Andersson procured a specimen in Damara Land, and Professor Wahlberg also met with it at Walfish Bay on April 27th, 1854.

The species differs only from *D. cardinalis* in the points above mentioned, which are not sufficiently strongly marked to render a detailed description necessary. According to Mr. Buckley, the bill is black, the legs greenish-grey, the iris dark-red. Total length, 5.8 inches; culmen, 0.75; wing, 3.6; tail, 2.2; tarsus, 0.6.

Fig. Malherbe, Monogr. Pic. I. pl. 44.

170. *DENDROPICUS CARDINALIS.*

Cardinal Woodpecker.

Dendrobates fulviscapus, Layard, B. S. Afr. p. 237.

This little Woodpecker has a wide range over the colony. Victorin shot it in the Karroo in January, and we have received it from Rondebosch, Beaufort, Colesberg, and the Knysna. Mr. Atmore has procured it near Eland's Post, but as yet we have seen no specimen from Natal. Mr. Buckley found it in the Transvaal and also in Bamangwato, while Dr. Exton brought specimens from Kanye. The following note is extracted from Mr. Andersson's work:—
 "This pretty little Woodpecker, though it cannot be said to be abundant, is the commonest of all those found in Damara and Great Namaqua Land, and is also tolerably numerous at Lake N'gami. It is a comparatively tame species, and is sometimes found singly, but more often in pairs; it usually frequents trees of moderate size, situated in the more scanty woods or on the banks of periodical watercourses."

Senor Anchieta has obtained it also at Humbe on the Cunene river, and also at Caconda in Benguela; and Mr. Monteiro has recorded its occurrence at Little Fish Bay.

It affects the dead stumps of Euphorbias and Aloes; and reminded us, from this peculiarity, of the Indian *P. maharattensis*, which constantly keeps to the "Candelabra euphorbia" of Ceylon. Le Vaillant states that they lay from five to seven white eggs. A pair breed annually in an old apple tree on Mr. Melck's farm, at the Berg river, and they had riddled the branches with their holes. We were too late for the eggs in September, as the nests then contained young birds.

General colour above, sepia-brown, barred all over with dirty-yellow or white; forehead brown; top and back of head crimson; under parts grey, striped on the breast, and barred on the belly and vent with the colour of the back; shafts of the wing and tail feathers, and underside of the latter, golden-yellow. Female resembles the male, but has the crimson of head replaced by dark-brown, approaching to black; bill bluish-grey in male, black in female; iris dark red (*Buckley*); bill greenish-slaty; legs and toes green, tinged with slate-colour (*Andersson*). Length, 6"; wing, 3" 9"; tail, 2" 6".

Fig. Malh. Monogr. Pic. pl. 43, figs. 1, 2, 3.

171. *DENDROPICUS MENSTRUUS*. Red-vented Woodpecker.

Dendrobates griseocephalus, Layard, B. S. Afr. p. 236.

This is a strictly South African species, and is not uncommon in all wooded parts of the colony. Victorin found it at the Knysna from May to July, and again in October; and Mr. Andersson also procured specimens in the same locality. Mr. Atmore has sent examples from Eland's Post, and Mr. Ayres remarks that in Natal it frequents the dense bush, both on the coast and inland, and it seems to occur on the Drakenberg mountains for their entire extent, as Mr. Barratt shot two individuals on their northern slope, near Macamac. Le Vaillant states that it breeds in holes of trees, and lays four white eggs. This we can confirm: they are white and shining, rather truncated at the obtuse end. Axis, 10''; diam. 7''.

General colour above, rich olive-yellow; crown of head, rump, and upper tail-coverts, brilliant crimson; sides of head and upper parts cinereous. The female resembles the male in all except the crimson crown, which in the former is cinereous; irides reddish. Length, 7'' 6''; wing, 4'' 6''; tail, 3''.

Fig. Malh. Monogr. Pic, ii. pl. 62.

Fam. YUNGIDÆ.

172. *YUNX PECTORALIS*. Red-breasted Wry-neck.

This very distinct species has been sent only from Natal and the eastern districts of the colony. Mr. Ayres seems to have found it not uncommon in the former country, and a very large series of specimens was procured by Mr. Atmore in the neighbourhood of Eland's Post; it has also reached us from Butterworth, Transkei, whence a single specimen was sent by Mr. Henry Bowker. It occurs about Graham's Town.

Above, brown, profusely variegated with fine markings of black, and different shades of grey; a line of black feathers extends from the crown of the head down the neck, ending between the shoulders; outside webs of the wing-feathers barred with rufous; tail barred with black; centre of chin and throat, deep chestnut; belly and vent

dirty-white; each feather with a dark-brown line down the shaft; under tail-coverts rufous; iris ashy-hazel. Length, 6" 6''; wing, 3" 6''; tail, 2" 3''.

Fig. Gray and Mitch. Gen. B. pl. 112.

Fam. PSITTACIDÆ.

173. AGAPORNIS ROSEICOLLIS.

Rosy-faced Lovebird.

This little Parrot is not known to occur within the limits of the colony, but it was found to be very plentiful on the Limpopo by Mr. Orllepp, who says that they are great favourites with the Boers, who keep them as pets along with the little Nacht-apie (*Galago moholi*). It also probably occurs in the Zambesi region, as Dr. Kirk observes that a smaller species of Parrot, which he believes to be the present one, was found "in one spot, limited to about twenty miles, on the Shire, between Nyassa and the rapids. It was never seen elsewhere, but was found there on two occasions. It is gregarious." Sir J. Alexander procured it in Namaqua Land, and Mr. Andersson gives the following good account of its habits in South-Western Africa:—

"This pretty little species is very generally distributed over Damara and Great Namaqua Land, and is also found on the Okavago and at Lake N'gami. It is always observed in small flocks, and seldom far from water, to which it resorts at least once in the day, and is consequently not a bad guide to a thirsty traveller; though if he be inexperienced, it would hardly avail him much, as it frequently happens that the drinking-places resorted to by this and other water-loving birds, are of but small compass and strangely situated. This species is very swift of flight, and the little flocks in which it is observed, seem to flash upon the sight as they change their feeding-grounds or pass to or from their drinking-places; their flight, however, is only for a comparatively short distance at a time. They utter rapid and shrill notes when on the wing, or when suddenly disturbed or alarmed. Their food consists of berries and large berry-like seeds. This bird does not make any nest of its own, but takes possession of nests belonging to other birds, especially *Philetærus socius* and *Ploccpasser mahali*. I cannot say whether it forcibly ejects the rightful owners of these nests, or

merely occupies such as they have abandoned; but in the case of the first-named species, I have seen the Parrots and the Grosbeaks incubating in about equal numbers under the shelter of the same friendly roof. The egg is pure white, not unlike a Woodpecker's, but more elongated."]

Mr. Andersson also procured it in Ondonga, and Mr. Monteiro says that it is very abundant from Mossamedes to Novo Redondo. Senor Anchieta has sent specimens from Capangombe and the river Chimba in the same district, as well as from Humbe on the Cunene river as well as from Kattenbella in Benguela, where also Mr. Sala met with the bird: it probably occurs on the West Coast of Africa as far up as the Gaboon, as a specimen from the latter locality is in the editor's collection.

General colour pale green; forehead and eyebrows red; face and neck in front, rosy; lower wing-coverts, blue-green; rump and upper tail-coverts, azure; tail scarlet, tipped with green, before which is a sub-terminal black band, the centre feathers entirely green, the outer webs edged with green, "bill greenish-white; legs blue with the faintest tinge of green; iris intensely dark brown" (*Andersson*). Length, 6''; wing, 4.0''; tail, 2''; tarsus, 0.5.

Fig. Bourjot, Perroq. pl. 91.

174. AGAPORNIS PULLARIA.

West-African Lovebird.

This species is included in the present work on the strength of a statement made by Dr. Reichenow in his account of the birds sent by the German expedition to West Africa, viz.—that many specimens of this small Parrot are exported from the Coast stations of Benguela as well as Loango. We can understand its occurrence in the latter locality, but we think that as *A. roseicollis* is the only Lovebird known as yet to inhabit Benguela, some confirmation is necessary before the present one can be received as a South African bird; at the same time the Rosy-faced Lovebird certainly occurs in Western Africa, above the Quanza, and it is by no means impossible, therefore, that *A. pullaria* is also found both above and below this river.

General colour grass-green, including the ear-coverts and sides of neck; under surface of the body brighter green than the back; frontal band, remainder of sides of face and throat, red; rump

azure-blue; upper tail-coverts light green; tail scarlet tipped with light green, before which is a sub-terminal band of black; under wing-coverts greyish-black. Total length, 5 inches; wing, 3.1; tail, 1.8; tarsus, 0.35.

Fig. Bourj. Perroq. pl. 90.

175. PSITTACUS ROBUSTUS.

Le Vaillant's Parrot.

These large African Parrots are divided by Dr. Finsch, our greatest authority on these birds, into two sections distinguished by their brown or yellow under wing-coverts. The present bird has them brown, and can therefore only be compared with the West-African *P. fuscicollis*. Professor Barboza du Bocage has recently diagnosed the two species very carefully, and he gives the following characters for *P. robustus*:—"Brownish-green, the feathers of the back and wings blackish in the centre; lower back, rump and abdomen bright green; primaries, secondaries and tail obscure brown, narrowly bordered with olive; head, neck and breast rather bright yellowish-dusky colour; forehead and cheeks, slightly reddish; bend of the wing and tibial region vermilion; bill dull white; feet black. Total length, 5 inches; wings, 8''; tail, 4.0''; tarsus, 0.7."

Le Vaillant's Parrot is rather difficult to obtain, and the few specimens that have reached us have all been from the Knysna and the Eastern frontier seaboard. Mr. Atmore procured it near Eland's Post, and Captain Bulger at Windvogelberg. Dr. Kirk says that it is a much rarer species on the Zambesi than *P. fuscicapillus*. Le Vaillant states that they breed in hollow trees, and lay four white eggs, about the size of those of pigeons. According to Dr. Kirk the food consists of wild fruit and the kernels of nuts. We have not seen any specimens from Natal, and the only reference to its occurrence in that Colony is given by Mr. Gurney, who writes (*Ibis*, 1873, p. 255): "Mr. E. C. Buxton informs me that during a recent visit to Natal he saw two young Parrots in that colony which had respectively been taken from nests at Cremer's, Unyemi Falls: one of these he identified as *P. robustus*: the other, which was of a much smaller species, he was unable satisfactorily to identify in consequence of the bad condition of its plumage."

Fig. Le Vaill. Perroq. pl. 130.

176. PSITTACUS FUSCICOLLIS.

Brown-necked Parrot.

Professor Barboza du Bocage gives the diagnosis of this species as follows: "Olive-green; the secondaries uniform with the back; the primaries and tail brown, slightly bordered with olive-green; lower back, rump, and upper tail-coverts light yellowish-green; head, neck, and breast, olive grey; the forehead broadly, the cheeks obscurely red; bend of the wing and tibial region vermilion; iris chestnut; bill dull white; feet black." Total length, 11·5 inches; wing, 8·2; tail, 4·5; tarsus, 0·6.

Specimens which were obtained by Anchieta at Humbe on the Cunene river have been identified as belonging to this species by Professor Bocage, and he concludes that the examples obtained by Andersson in Ondonga and Damara Land belong to the present bird and not to *P. robustus*, to which they had been referred, and this we find on a re-examination of the specimens to be actually the case. Thus the following note of Mr. Andersson refers to *P. fuscicollis* and not to *P. robustus*: "I have met with this Parrot in the country of Ovaquenyama, where it is very abundant, but very difficult to approach; and in fact it is only to be obtained in the morning and evening, when it comes to the water during the dry season."

177. PSITTACUS MEYERI.

Meyer's Parrot.

This and the two following species have yellow under wing-coverts. None of them occur within the limits of the Cape Colony, but to the northward they are not rare, and are much prized as cage-birds. Mr. Ayres says that they occur near the Limpopo, and throughout the bush-veldt of the Transvaal. Mr. Ortlepp also found them plentiful on the above-named river. Dr. Exton found them frequent in the Matabili country, generally keeping to high thorn bushes, and Mr. T. E. Buckley writes as follows: "This was the only Parrot seen during the journey. It is common from the north-west of the Transvaal to the Matabili country. These birds are seen either in pairs or small parties, and are not shy. Their cry is a very shrill note, repeated several times, and generally uttered when flying; their flight is extremely rapid, during which time the blue on the rump is very conspicuous." Mr. F. A. Barratt says: "I shot one in the bush near Rustenberg, and saw a few more; I

have received them from Marico and from the northern parts of the Transvaal." Mr. Andersson writes as follows:—"This Parrot is a rare bird in the middle portion of Damara Land; but further north, at Okamabuté, it is common, and also in the Lake-regions; with the occasional exception of a few stray individuals, it does not occur further south than Omabondé, which may be said to constitute its usual southern limit. Its habits and notes closely resemble those of the succeeding species, *P. rueppelli*. Senor Anchieta has collected it at Biballa in Mossamedes, and at Caconda in Benguela."

General colour, dusky brown with a band of yellow across the crown (sometimes absent); small wing-coverts forming a shoulder-patch, edge of wing and under wing-coverts, bright yellow; lower back, rump and upper tail-coverts, bright greenish blue; under surface of body, dusky brown; the abdominal plumes edged with bright green; vent and under tail-coverts entirely of the latter colour; thighs, yellowish, "bare skin surrounding the eye, black; bill, darkish horn colour, with a tinge of green; legs and toes, greenish black; iris, deep bright red orange" (*Andersson*). Total length, 8.5 inches; wing, 6.1; tail, 3.0; tarsus, 0.5.

Fig. Rüpp. Atl. Taf. 11.

178. PSITTACUS RUEPPELLI.

Rüppell's Parrot.

Like *P. meyeri* this is a northern species, but is apparently plentiful in certain parts of Southern Africa, though not found so far south as the foregoing bird, nor does it occur in the eastern parts. It is found in various localities of Western Africa, and was collected by Mr. Monteiro in Benguela, where he observed it to be common from Novo Redondo to Mossamedes. Senor Anchieta has obtained it at Capangombe in Mossamedes, and also at Humbe on the Cunene river. Mr. Andersson gives the following note:—"This species is common in Damara Land, but is chiefly found in the middle and southern parts of that country; it is always met with in small flocks of about half-a-dozen individuals, and seems to prefer the larger kind of trees. It is rather shy, and when quietly perched amongst the branches is very difficult to perceive, until its presence is betrayed by the cries it utters as soon as it conceives itself to be in danger; these are at first shrill and isolated, but increase in strength and frequency till it leaves its perch, and are usually continued during

its flight, which is generally short, but very rapid. It is rarely found far from water, which it usually frequents twice a day. It feeds on seeds and berries, sometimes also on the young shoots of trees and plants."

General colour both above and below smoky-brown, the wings and tail rather darker; sides of face greyish, the ear-coverts decidedly inclining to silvery-grey; lower back, rump, and upper tail-coverts, fine blue; smaller wing-coverts forming a shoulder patch, edge of wing, and under wing-coverts, yellow; thighs, yellow; vent and under tail-coverts, washed with blue; bill and feet, dark horn colour; iris, orange. Mr. Andersson gives the following remarks on the variation of plumage in this bird:—"Messrs. Strickland and Scater state that the blue on the upper and under tail-coverts is wanting in the female; but I have now lying before me more than one individual of that sex in which this blue plumage is present. I have, however, examined others in which it was absent, but which, in all other respects, appeared to be adult; whilst in other quite young specimens, I have found the rump and the upper tail-coverts nearly as blue as in the adult; and I have also specimens in which the blue is present both above and below, but which have none of the usual orange-yellow on the elbow or on the thigh, but only on the under wing-coverts. Whether or not these variations are merely accidental, I have been unable to decide." Total length, 8·5 inches; wing, 5·6; tail, 3·1; tarsus, 0·5.

Fig. Gray, P. Z. S. 1848, pl. 5.

179. PSITTACUS FUSCICAPILLUS.

East African Parrot.

This seems to be as Dr. Kirk remarks, the most common of the Parrot tribe in Eastern Tropical Africa, and it has been found at various places from Uzaramo southwards to the Zambesi region; here Dr. Kirk says it is called "Goe," and he states that it is "usually found in small flocks or in pairs; feeds on fruits, such as figs, &c., but also eats native millet and maize. Its clear scream may be heard at a great distance!"

General colour, above dull green; the quills externally shaded with obscure bluish green; lower back, rump and upper tail-coverts, bright green, the latter inclining to yellow; head and neck all round olive brown; the sides of the face, grey, inclining to hoary on the ear-coverts; lorcs, fore part of cheeks and feathers above

and below the eye, blackish-brown; rest of under surface of body bright green, marked with yellow on the flanks and vent; under wing-coverts bright yellow; thighs uniform with the abdomen. Total length, 7·5 inches; wing, 5·8; tail, 1·8; tarsus, 0·5.

Fig. Finsch & Hartl. Vög. Ostaf. taf. vii.

ORDER PASSERES.

Fam. TURDIDÆ.

180. *TURDUS LITSITSIRUPA.*

South African Thrush.

Turdus strepitans, Layard, B. S. Afr. p. 127.

We have received specimens of this Thrush from Kuruman and Colesberg. Sir A. Smith writes:—"Immediately upon reaching Kurrichaine this Thrush began to appear in the thickets, and we continued to acquire occasionally a specimen even in the vicinity of the Tropic. It seeks its food upon the ground, and when so occupied its resort is readily discovered by the natives from the noise it makes in scratching the ground, or in displacing rubbish and decayed leaves which conceal the insects it is seeking." It has not occurred to Mr. Ayres in Natal, but Captain Shelley saw a specimen which had been killed at Durban. Mr. T. E. Buckley remarks that it was not often seen by him during his journey to the Matabili country; he procured a pair in the Transvaal, and Mr. Ayres obtained it on the river Limpopo. In the Bechuana country, where Dr. Exton met with the species, it is called, "Chu-chu-roo-foo." Anchieta has obtained it at Humbe, on the Cunene river, and in Mossamedes at Huilla, Capangombe and Quillengues.

We extract from Mr. Andersson's work the following account of this Thrush in Damara Land. "This Thrush is pretty abundant in Damara and Great Namaqua Land, especially the former; it also occurs in the Lake Regions. It is partially migratory, only a few remaining in Damara Land throughout the year. It lives chiefly on insects, for which it searches at the roots of trees and amongst low bushes, old leaves, and decayed wood. It scratches somewhat after the manner of fowl, and is thence called by the Bechuans, the 'Ground-scraper;' it also runs with great celerity. It lives singly or in pairs, and occasionally perches on the topmost branch of some

lofty tree. It utters a plaintive half-song, half-call, just as if it were troubled with a bad cold. This species breeds about Objimbinque; and I took a nest containing three young on the 29th of October, it was built on a branch about ten feet from the ground, and was composed exteriorly of grass, the interior being lined with down and feathers."

Front and top of head, brownish-grey; back of head, neck, back, and rump, ash-coloured; under parts ochraceous-white, dotted all over with dark-brown spots; under the eyes are two black bands, one semi-lunate, extending from the base of the bill to the back of the eye, the other downwards from the eye to this lunate band; bill, black, yellow at base (*Buckley*); upper mandible, horn colour; lower mandible, yellowish (*Andersson*); legs, light greenish-yellow (*Andersson*); ochre in male, light brown in female (*Buckley*); iris, dark hazel (*Buckley*); double ringed, yellow and red (*Ayres*). Length, 8" 6"; wing, 5" 2"; tail, 3'.

Fig. Smith, Ill. Zool. S. Afr. Birds, pl. 37.

181. TURDUS LIBONYANUS.

Kurrichaine Thrush.

Sir A. Smith first procured specimens of this Thrush in the neighbourhood of Kurrichaine, actively engaged, in the thickets which occur on the banks of the river, scraping among the decaying leaves for its food. We have never seen a specimen from any part of the colony. Dr. Exton procured this rare species at Kanye. In December he writes, "At this season of the year they are in pairs, but their uncommonly shy habits and peculiar tactics make it most difficult to obtain a knowledge of their peculiarities. I thought Captain Harris never pursued the 'Black Buck' with more ardour than I have done this Thrush! I have never seen one on the ground as stated by Sir A. Smith. It seems very local, keeping to the same patch of bush or portion of forest, where I have seen and hunted the same pair on repeated visits. Its food consists of small berries and insects, chiefly *Coleoptera*." Dr. Kirk procured specimens in the Zambesi district. Mr. Andersson only obtained it at Ombongo, in Damara Land, and he observes, "In all my wanderings north of the Orange River, I have but once met with this Thrush, which I then fell in with in the neighbourhood of the river Okavango."

Above, deep yellowish-grey; top of the head strongly shaded with brownish-red, margins of some of the feathers of the wing showing a pale buff-orange; middle tail-feathers and outer webs of

the rest, deep broccoli-brown; the inner webs, brownish-red, distinctly tipped with white; throat white, tinged with ochre-yellow, and margined on each side by a series of small spots, of a dark brown, forming two longitudinal bands; breast, light yellowish-grey, with an orange tinge, which becomes brighter on the belly and inner surface of the shoulders; middle of belly and vent, white; bill, feet, and claws, yellow. Length, 9"; wing, 4" 6"; tail, 4".

Fig. Smith, Ill. Zool. S. Afr. Birds, pl. 37.

182. *TURDUS GUTTATUS.*

Natal Thrush.

This Thrush seems to be entirely confined to Natal, where it was first discovered by Sir Andrew Smith. The only specimens which we have seen were from this colony. Sir A. Smith states that "none were found beyond the forests which border upon Port Natal. Those which we have seen were found in damp retired situations, and when discovered were actively employed, beneath the brushwood, in search of food."

Upper parts, rich yellowish-brown; eyebrows and sides of the head dirty white; the latter with three umber-brown stripes; under parts white, spotted with good-sized umber-brown spots; two white bars across the wings when at rest; tail, yellowish-brown; the three lateral feathers on each side broadly tipped with white. Length, 9" 6"; wing, 4" 10"; tail, 4".

Fig. Smith, Ill. Zool. S. Afr. Birds, pl. 29.

183. *TURDUS OLIVACEUS.*

Olivaceous Thrush.

Turdus obscurus et *T. olivaceus*, Layard, B. S. Afr. p. 128.

We do not now believe in the differences which are supposed to separate the two Thrushes of South Africa, as we did in the first edition. An examination of a large series shows that the Transvaal bird cannot be separated from that of the colony, and we cannot therefore admit *Turdus deckeni* as an inhabitant of South Africa, believing as we do that the Transvaal birds referred to this species by Mr. Gurney are specifically the same as *T. olivaceus*. The proportions of grey and orange on the breast vary exceedingly, and Sir A. Smith seems to have described as *T. obscurus* a peculiarly grey specimen, but we believe that it does not represent a distinct form or even geographical race.

At some seasons of the year, when fruit is ripe and apples and pears fall off the trees, and rot on the ground, this Thrush may be found in great abundance in orchards about Rondebosch. It utters

no song, but only a short hurried cry when alarmed, and flying upward to the topmost branches of the thickest trees, amid which it endeavours to conceal itself. If unsuccessful in this, it launches itself off and makes for the nearest thicket,—its voice and manner reminding the observer of the European blackbird. It breeds in thick bushes, making a nest like that of the blackbird, and lined with fibres and roots. The eggs, large for the size of the bird, are generally four in number, of a light verditer blue, mottled with irregular patches of brown, thickest on the obtuse end: axis, 15''; diam., 11''.

Victorin did not seem to have collected specimens at the Knysna, but Mr. Andersson procured it here. Mr. Rickard has found it in the neighbourhood of East London and Port Elizabeth, and Mr. T. C. Atmore has sent it from Eland's Post. In Natal, writes Mr. Ayres, "These Thrushes appear to be more numerous during the winter than the summer months. They frequent the bush range along the coast, and are tolerably plentiful. I sometimes find their claws much worn, as if employed in scratching for their food. They very seldom utter a note, and might well be called the 'Silent Thrush.'" We have also received specimens from the late Mr. R. Moffat, killed near Kuruman, and Sir Andrew Smith obtained his examples of the bird he named *T. obscurus* towards Delagoa Bay. He says that "it is a solitary bird, inhabiting damp, secluded thickets and brush-wood skirting the banks of rivers, and is generally seen in such localities actively employed in displacing the decayed vegetation, which occurs upon the surface of the soil, covering the insects and worms on which it feeds." Mr. Ayres also observes concerning the species in the Transvaal: "These Thrushes are common in Potchefstroom all the year round, but are silent and retiring in their habits, frequenting thickets and dense hedgerows, and occasionally uttering a low short chuck, very similar to that of the Redwing of Europe." Our friend, Mr. F. A. Barratt, shot several at Macamac in the Lydenburg district. Andersson gives the following note:—"Messrs. J. and H. Chapman brought away specimens of this Thrush from the Lake-regions: but I have never met with it to the west of the Lake-country. It is one of the commonest species in the Cape Colony, where it is partially migratory, being found most abundantly at the grape and fruit-season: it is fond of almost all kinds of fruit, but when these fail, it subsists on beetles and other insects."

All the upper parts very dark olive-brown; throat underneath dirty white, speckled with dark brown; breast cinereous-brown; belly and flanks deep rufous; vent dirty white; a few dark-brown spots are distributed on the chest, flank, and vent; upper mandible horn-colour; lower mandible and legs orange; bill yellow, the ridge of the upper mandible dark brown; feet pale yellow; iris, light ashy brown (*Ayres*). Length, 10''; wing, 4'' 9''; tail, 3'' 9''.

Fig. Le Vaill. Ois. d'Afr. pls. 98, 99.

184. *TURDUS GURNEYI*.

Gurney's Thrush.

Very little is known of this fine Thrush. Mr. Ayres observes concerning it: "This bird I shot in the bush on a precipitous range of hills about six miles beyond Pieter-Maritzburg; it is, I believe, the only one I have seen, and I know nothing of its habits." It has occurred once in Abyssinia, but is represented on the west coast of Africa by the closely allied species, *Turdus crossleyi*, *Sharpe*.*

Above, olive-brown; spots between the eye and the bill, throat, chest, and flanks, cinnamon; belly and under tail-coverts, pure white; tail, coloured as the back; two rows of white spots across the wing, bill, dusky; iris, hazel; tarsi and feet, dusky (*Ayres*). Length, 6'' 5''; wing, 4'' 5''; tail, 3'' 3''.

* *Fig.* Gurney, Ibis, 1864, pl. 9.

185. *TURDUS VERREAUXI*.

Verreaux's Thrush.

This Thrush was discovered by Senor Anchieta at Caconda in Benguela, and the following is a translation of Professor Barboza du Bocage's original description:—

Of rather small size: above grey; the eyebrow fulvous white, the ear-coverts streaked with dusky; underneath whitish-buff; the chin, throat, and breast, marked with dusty triangular spots; middle of the abdomen and vent, whitish; the sides of the body, pale buff, the feathers bordered with dusky at the tip; under wing-coverts fulvous; quills, dusky brown, margined on the inner web with fulvous; greater wing-coverts spotted at the tip with fulvous; tail greyish, obsoletely banded with dusky; bill, horn-colour; feet, pale; iris, brown. First primary very short, the second equal to the 5th. Total length, 8·8 inches; wing, 5·0; tail, 3·55; tarsi, 1·1; bill, 1·05.

* Mr. Gurney has just presented a second specimen to the British Museum: it was obtained by Mr. Ayres in the Macairac district.—*R. B. S.*

186. CRINIGER FLAVIVENTRIS.

Yellow-breasted Bulbul.

Sir A. Smith discovered this species near Port Natal, where he found it entirely confined to thickets, amongst which it searches for insects, never descending to the ground; and Captain Shelley writes:—"Another very common bird about Durban, where its loud notes may be constantly heard—and it is not unfrequently seen, as it does not hide itself so carefully as most of the other bush-birds." Dr. Kirk obtained it in the Zambesi district. It also occurs in S.W. Africa, Mr. Andersson having procured two specimens at Ovaquenyama in Damara Land. Senor Anchieta has also met with it at Humbe on the Cunene river, and at Biballa in Mossamedes.

Upper parts of head, back, rump, and tail, olive-brown; outer vanes of some of the quill-feathers, slightly edged with green; chin and throat, pale straw-yellow; breast and flanks, greenish-yellow; centre of belly and vent, yellow; "bill, horn-colour, slightly paler towards the base of the mandible; legs, leaden-grey; iris, brown" (*Shelley*). Length from point of bill to tip of tail, 9"; wing, 4"; tail, 4" 2".

Fig. Smith, Ill. Zool. S. Afr. Birds, pl. 59.

187. PHYLLASTREPHUS CAPENSIS.

Cape Bristle-necked Thrush.

We found this species rather plentiful at Grootervadersbosch, near Swellendam; it is also found in the Knysna district, where specimens were collected by Andersson and Victorin, the latter meeting with them from March to June, and again in September. It is not mentioned in Mr. Rickard's East London list, nor did he find it near Port Elizabeth. To the eastward of Grahamstown it appears not uncommon, though from its retiring habits it is seldom procured. Captain Shelley observes:—"This is the commonest bush-bird about Durban. If one waits in a likely spot for a short time, they rarely fail to make their presence known by their constant jarring notes, as they approach quite close, keeping, however, well hidden amongst the leafy parts near the ground. I always met with them in pairs or in small family parties." The Messrs. Chapman procured a specimen at Lake N'gami, and Anchieta has forwarded others from Humbe on the Cunene river, and Biballa and the Rio Chimba in Mossamedas.

Mr. Andersson states that they feed on seeds, and Mrs. Barber

sends us the following account of their habits, which we are able to confirm from our own personal observations :—"Dwellers in woods, they love the deepest and most shady parts of the forest, where they are seldom noticed; they build their nests in low situations, amid the thick underwood that grows beneath the tall forest-trees, and seldom lay more than two eggs; if the female is disturbed, she utters one shrill note, as she flies away, letting her mate know danger is near. The notes of this bird are low and croaking, somewhat resembling those of a frog; there is no perceptible difference between the male and female." A nest forwarded by this lady is composed of coarse grass, moss, roots, and hair. The eggs are creamy white, densely blotched with purple-brown at the thick end, the blotches being confluent: axis, 11''; diam., 8''.

General colour, dull olive-green; chin, throat, and centre of belly, pure white; flanks, olive-green; shafts of wing and tail-feathers white. Length, 8''; wing, 3'' 8''; tail, 4''. Mr. Andersson says that "the iris is yellow; the upper mandible, horn-colour; the lower bluish; tarsus, bluish." Captain Shelley, writing on specimens shot by himself in Natal, notes as follows:—"Beak, horn-colour, inclining to white on the lower mandible; irides, hazel; legs, pale pinkish grey." He adds, "They occasionally differ in size, two females measured respectively, 8.5 and 7.9 inches." The above differences in the colour of the soft parts probably arises from difference of age or season.

Fig. Le Vaill. Ois. d'Afr. pl. 112, fig. 1.

188. *ANDROPADUS IMPORTUNUS.*

Sombre Bulbul.

Criniger importunus, Layard, B. S. Afr. p. 137.

The "Boschvogel," as it is called, is not very rare in the neighbourhood of Cape Town, and also occurs at the Knysna, whence we have seen a number of specimens obtained by the late Mr. C. J. Andersson, and Victorin procured it in the same district in April, May, and July. Le Vaillant states that he found it plentiful from Duivenbok's River to Algoa Bay, and both Messrs. Atmore and Cairncross have forwarded it from Swellendam. According to Mr. Rickard it occurs both near East London and Port Elizabeth, and quite recently Licut. Trevelyan has sent us a specimen captured in

the neighbourhood of King William's Town; it was also included in Mr. T. C. Atmore's collections from Eland's Post. Captain Shelley found it very common in the bush about Durban, and it occurs as high as Macamac and the Lydenberg district, where Mr. F. A. Barratt obtained several examples.

Le Vaillant calls this bird "L'Importun," but we have not found it to manifest its presence by its importunity, as says that author. We have generally found it in thickets, moving quietly about in search of insects, and darting upon them while at rest: we have sometimes, but rarely, seen it on the ground, scraping among dead leaves. Le Vaillant states that it builds on branches of large trees, and lays four or five eggs, marked with olive-colour; and Mr. Atmore informs us that it nests near the ground, the eggs being like those of *Lanius collaris*. This would agree with Le Vaillant's statement that they are marked with olive-colour. Mr. Ayres observes:—"In Natal these birds are very destructive to fruit, but fortunately are not nearly so numerous as the *Pycnonoti*. They inhabit the dense brush generally. They are not easily seen in consequence of their sombre green plumage and their habits of hiding, to which they trust for safety, rather than to flight. Their note much resembles the 'chisick' of the House Sparrow at home, but is much louder; they have also a short warbling song. Besides fruit, insects form a considerable portion of their food."

General colour uniform dull olive-green, lightest on the under side; feathers of the wings and tail edged with yellow; some thin, long, hair-like bristles protrude from the back of the head; bill black, with serrations near the tip of the upper mandible; legs horn colour; iris "very pale yellow" (*Shelley*), "pale green" (*Ayres*). Length, 7" 9"; wing, 3" 9"; tail, 3" 9".

Fig. Le Vaill. Ois. d'Afr. pl. 106.

189. ANDROPADUS HYPOXANTHUS, SHARPE. Yellow-breasted Bulbul.

Two specimens of this new *Andropadus* were collected by Dr. Kirk, at Tette, in the Zambesi country, and were doubtfully referred to *A. flavescens* by the late Mr. Gray. The examination, however, of the true *A. flavescens*, shows that the Zambesi bird is not the same, as it differs in its brighter and more yellow colour above, and below it is of a brilliant yellow, without any of the dark olive brown

shading on the throat and sides of the body, the thighs and under wing-coverts in *A. flavescens* being tawny or slightly rufous yellow.

Again, it shows a striking resemblance to *Criniger flaviventris*, of which it is an almost literal copy, but independently of the serrated notches at the end of the bill, which show that the bird is an *Andropadus*, it may be also distinguished by its bright yellow lores and by its black bill and legs, these being brown in the *Criniger*.

Adult.—Above olive-brown with a yellowish tinge, the wings and tail being of the same colour; lores light yellow, the forehead also slightly shaded with this colour; ear-coverts olive brown with faint stripes of yellow, the cheeks also yellowish like the under surface, the centre of the body, thighs, edge of the wing and under wing-coverts, yellow; lower margin of quills brown, yellow along the edge of the inner web; bill and feet black. Total length, 7.8 inches; culmen, 0.7; wing, 3.7; tail, 3.8; tarsus, 0.85.

190. *ANDROPADUS FLAVOSTRIATUS*.

Barratt's Bulbul.

The present bird was found by Mr. F. A. Barratt in the Lydenburg district, and was described as new by the editor. The British Museum also contains a single example procured by Dr. Kirk on the river Shire. It is by no means a typical *Andropadus* like the other two South African ones, but has a very long thin bill like a true *Criniger*, and may prove on a subsequent revision of the group, to belong to the latter genus. At present we have kept it as an *Andropadus*, as it bears evident affinity to some of the West African species, which are still included in the last-named genus.

Adult female.—General colour, above olive-brown, with somewhat of a yellowish tinge; head dusky grey, the lores and feathers round the eye greyish white; ear-coverts grey, with narrow white shaft-streaks; cheeks greyish white; throat pure white; rest of under surface whitish, the feathers edged with greenish yellow, causing the breast to appear *streaked* with that colour; sides of the body dull greenish olive, deepening on the lower flanks and under tail-coverts; thighs greenish olive; under wing-coverts dull yellow, marked with brown near the edge of the wing; scapulars and least wing-coverts coloured like the back; rest of the wing brown, all the feathers externally washed with olive, inclining to golden brown on

the outer webs of the secondaries ; upper tail-coverts and tail brown, strongly washed with olive-green ; "bill, tarsi, and feet, ash-colour ; iris, ashy hazel." Total length, 7.4 inches ; culmen, .75 ; wing, 3.45 ; tail, 3.5 ; tarsus 1.

191. PYCNONOTUS CAPENSIS.

Red-eyebrowed Bulbul.

Considerable confusion has existed with regard to the *Pycnonoti* of Africa, and in 1871 the Editor, in criticising the conclusions of Drs. Finsch, Hartlaub, and Von Heuglin (P. Z. S. 1871, p. 131) endeavoured to establish that in South Africa there were three species of yellow-vented Bulbuls, *P. capensis*, *P. nigricans*, and *P. tricolor*. More recently Dr. Reichenow has contended for the recognition of one only, *P. capensis*, and he believes that the dark plumaged bird is the young of the white-bellied species. As is the case with the other authors above mentioned, he has discarded the wattled eye-ring as an obscure character, but it is really of the first importance. In the first edition it was stated to be *white* in the present species, and so it is in the dried skin, but in life, Captain Shelley found it to be of a "dull dark red," and therefore Le Vaillant's figure of the "Brunoir," which has hitherto been kept distinct on account of the red eye-rings drawn by him, if it can be recognised at all, must be intended for the present bird. Under these circumstances we admit only *two* species, but we shall be obliged for any information tending to elucidate the question in any way. *P. capensis* cannot, however, be the young stage of *P. tricolor*, for we owe to the kindness of Lieut. Trevelyan an immature bird of the latter, which is coloured exactly like the adult and has the same white breast, only the plumage is more fluffy, and the brown colour much paler and more rufescent, especially on the margins of the wings: the head is black, but not so intense as in the old bird. *P. capensis* has not a black head, but is brown both above and below, having only the centre of the abdomen white, gradually shaded with yellow as it approaches the under tail-coverts, which are bright yellow.

The "Kuif-Kop," as it is called by the colonists, is found in great abundance in the neighbourhood of Cape Town, and indeed throughout the whole colony. They migrate according to the fruit season, and are especially partial to figs and grapes. They also feed largely

on the berries of the "Persian Lilac," and when that tree is in fruit any number might be shot by a person lying in ambush near. When feeding, they keep up a continued chattering, and as they usually go in flocks of ten or fifteen in number, their presence is soon detected.

These birds conceal their nests so skilfully, that they are rarely detected, notwithstanding their numbers. It is composed of rootlets, lined sometimes with hair and feathers, and is generally placed in the fork of a tree or large bush. The eggs, three or four in number, are a lovely pale pink, densely spotted and blotched with dark pink and pale purple, presenting a most beautiful appearance: axis, 11"; diam., $7\frac{1}{2}$ ".

Victorin procured the present species at the Knysna, as did Andersson also. We have noticed that a specimen procured by Mr. H. Atmore, at George, was smaller than the ordinary Cape examples, measuring only 3.55 inches in the wing, and 0.8 inch in the tarsus, but whether this is a sexual difference or indicative of a small race, we do not know. The range of the species is certainly confined to the colony, and it probably does not extend beyond the neighbourhood of East London and Port Elizabeth. Mr. Rickard records it as common near the former place, but not so plentiful at the latter as the next species.

General colour, brown; the head a little deeper in colour, but not blackish; wings and tail, darker brown; under surface of body brown like the upper; the centre of the belly whitish, washed with yellow towards the vent; under tail-coverts bright yellow; "a dark red wattled eyelid" (*Shelley*). Total length, 8.2 inches; wing, 3.8; tarsus, 0.85.

Fig. Dresser, B. Eur. part xxxix.

191. *PYCNONOTUS TRICOLOR.*

Black-eyebrowed Bulbul.

After the observations made in the foregoing paragraph it is not necessary for us to say more than that this, the second species of *Pycnonotus*, is to be told by the absence of a wattle round the eye, the eyelid being simply rather swollen and black, and by its white breast and belly, the brown chest ending in a tolerably well-defined line: it is likewise distinguished by its black cap.

This Bulbul is more a bird of the Eastern districts, but we found it replacing *P. capensis* at Nel's Poort. Major Bulger sent it from

Windvogelberg, and according to our correspondent, Mr. Rickard, it is common at East London. To Lieut. H. Trevelyan we are indebted for a very interesting young bird from King William's Town, which we have referred to above. Mr. Moffat forwarded us a specimen from Kuruman, and Mr. Ortlepp informs us that it is plentiful near Colesberg, where it does great damage to ripe fruit, and especially figs. Captain Shelley found it very common about Durban and Pinetown, and a note on the species in Natal, by Mr. Ayres, is given below. Mr. E. C. Buxton also tells us that when in the last-named colony he procured it on the Mooi River. Mr. Ayres has collected specimens in the Transvaal and here also Mr. Buckley found it "common throughout the country." It was in Dr. Exton's Kanye collections, and also in Mr. F. A. Barratt's from the Lydenberg district. Dr. Kirk says that it is one of the commonest birds in the Zambesi country, and is "a good songster, though not equal to *Crateropus kirkii*." Mr. Andersson procured two specimens in South Western Africa, one at Ovvaquenyama in Damara Land, and the other at Ondonga, which may be referred to this species, and Anchieta has sent it from Humbe on the Rio Cunene, and from Capangombe in Mossamedes, as well as from several localities in Angola, whence the bird was first described by Dr. Hartlaub. It certainly ranges as high as the Congo on the western side, and as far as Mombas on the eastern coast.

Mr. Ayres observes:—"These birds live entirely on fruits and berries, and are very destructive in our garden, devouring indiscriminately bananas, loquats, peaches, papaws, Cape gooseberries, and all other soft fruits. They are very numerous; they build generally in a fork of a tree, towards the top, and lay from three to five eggs. These birds often get intoxicated by eating fruit that is over-ripe and has undergone fermentation, more especially the Cape gooseberry; and when in this drunken state are easily caught, as they can fly but a few yards at a time, and then not straight, soon tumbling to the ground. The berries of the Syringa trees have the same effect on them, as also the fruit of the Banyan fig. Other birds that live on these fruits become intoxicated in the same way. If a hawk, or other bird of prey, makes its appearance, these Bulbuls begin to chatter at a furious rate; and if he settle, a lot of them will frequently mob him; but the hawk, I have observed, takes no notice of them."

Mr. Henry Jackson has sent us eggs of this species, precisely similar to those of *P. capensis*, and writes that "the nest is a cup, slightly formed, in a tree."

General colour, brown, slightly darker on the wing and tail feathers, the latter pale at the tips; head slightly crested, and black, as is also the chin and upper part of throat; lower parts brown, like the back, the breast and belly white, flanks brown; vent, brilliant citron-yellow; "bill and legs black; iris dark claret" (*Buckley*); "eyelids black, thick, but not wattled" (*Shelley*). Length, 7" 9"; wing, 3" 9"; tail, 3" 5".

Fig. Sharpe, P. Z. S. 1871, pl. vii. fig. 2.

N.B.—Although for the present admitting only two species of *Pycnonotus* in South Africa, we do not regard the matter as settled, for Mr. T. E. Buckley writes under the heading of *P. nigricans* (*Ibis*, 1874, p. 369):—"There seem to be two sorts, one with a flesh-coloured cere round the eye;" and Mr. Andersson describes a bird as common in Damara Land which has the eyes "rather pale yellowish-red, and the skin round the eye bright orange" (Cf. Gurney in Andersson's B. Dam. Ld. p. 119). The distribution of the species and their characters must be left, however, to the naturalists in South Africa to work out from personal observations.

193. CRATEROPUS BICOLOR.

Pied Babbling-Thrush.

Sir Andrew Smith procured this species between the Ky-Gariep and Kurrichaine. Lieut. H. Trevelyan has recently sent us a specimen procured not far from King William's Town.

In the Transvaal Mr. Ayres has obtained it, and Mr. Buckley writes as follows:—"Common throughout the north of the Transvaal into the Matabili country, and first met with at Eland's river. The habits of this and of *C. jardinii* are similar. They go in flocks from tree to tree, following each other almost in single file. When one commences its peculiar sort of chuckling note, it is followed by the others, the noise increasing until it is almost deafening. They creep about the bushes with wonderful care; and if a wounded one gets into a tree, it is extremely difficult to retrieve it. They have a skimming sort of flight."

Dr. Exton, who procured it in the Matabili country, also states that "its habits resemble those of *C. jardinii*, but it is more

frequently found among low bushes on the dry plains, whilst the last-named species is rarely found away from vleys and rivers. The stomachs were full of black ants and small seeds." We have recently seen specimens of this Babbler from the Victoria Falls, Zambesi.

The following interesting note is given by the late Mr. Andersson : — "This species is common throughout Damara and Great Namaqua Land, and is also found in the Lake-regions; it always occurs in flocks of many individuals, and creeps and glides through the mazes of tangled wood and dense thickets with amazing ease and celerity. When alarmed, it flies slowly from tree to tree, its flight being feeble. It climbs excellently, and also seems equally at home upon the ground. I was fortunate enough to fall in with a nest of this species on the 15th of October, 1866; and, considering how common the bird is, I wonder that I have not met with more nests; this one contained three eggs, in every way very similar to those of *Crateropus melanops*. The nest was situated in a fork on the very top of a small anna tree, some ten or twelve feet from the ground; it was composed externally of fine twigs and coarse grasses, and was lined with somewhat finer grass; it was circular, deep, and very compact. I could both see and hear the parent bird whilst we were robbing the nest; but it did not come near or appear very solicitous. On the 11th of December, 1866, I observed a family of these birds, consisting of an old pair and their young, hopping about in an anna wood, almost as carelessly and fearlessly as Robins. One of them, evidently the female, led the way, followed by the young, which uttered a querulous, subdued note. In the young birds the tail and wings are of somewhat the same colouring as those of their parents; but the body differs much from the colour of the adult bird, being grey or brownish-grey, instead of white."

General colour, white; with black wings and tail, bill, and legs; feathers of the back very thick and fluffy; tail rounded; "bill and feet black: iris reddish-orange" (*T. E. Buckley*). Length, 10"; wing, 5"; tail, 4" 7".

A second specimen killed by Mr. Buckley on the 31st of July, 1873, had the iris "light yellow." The one with the orange iris was shot on the 16th of October of the same year, so that the colour of the eye varies, probably with age.

Fig. Jard. Edinb. N. Phil. Journ. L. pl. 3.

194. CRATEROPUS JARDINII.

Jardine's Babbling-Thrush.

The expedition under Sir Andrew Smith first obtained this bird in lat. 25° 24' S. We have received a few specimens from Kuruman, and Dr. Exton found it common throughout the Bechuana and Matabili countries. Mr. Ayres has forwarded a specimen from Natal and writes as follows:—"I found these birds inhabiting the bush near the Tugela: there was a family of eight or nine together, but I only succeeded in getting the specimen sent. They have a loud chattering note, and a rather heavy flight; the stomach of the bird sent contained caterpillars. I have never met with them on the coast, and believe they are entirely confined to the upper districts; they are, however, also found on the river Limpopo." It also occurs in the Transvaal, where both Mr. T. E. Buckley and Mr. Ayres have obtained it. Mr. Buckley observes:—"The description of the habits of *C. bicolor* will answer equally for this species. I took a nest of this bird on the banks of the Limpopo, on the 23rd of November. It contained but one egg; but the parent bird was close to the nest, which was about the size of a Blackbird's, deep and coarsely lined, and placed in a small but very thorny tree. The eggs were of a blue colour, like a Thrush's, without spots." It does not occur apparently in the Zambesi district, but is here replaced by the closely allied *Crateropus kirkii*. Mr. Andersson procured some individuals of this species on the Cunene river, on the 25th June, 1867, and Senor Anchieta has obtained it at Huilla in Mossamedes. Sir Andrew Smith gives the following account of its habits:—"The first specimens of this bird were obtained in latitude 25° 24' S., and, as we have reason to believe, upon the extreme limit of its southern range. Where the species was first discovered, only a few specimens were observed; but, by the time we had reached a degree more to the northward, they occurred in great abundance. Spots covered with reeds, such as are seen along the margins of many of the rivers of the country they inhabit, appeared to form their favourite feeding places; and though when disturbed, they would leave those for a time, and take up their abode among the brushwood with which the banks of the stream were more or less covered, they invariably returned to the haunts they had left when the cause which had led them to remove had ceased to exist. While lodged among the reeds they were

almost incessantly in motion; and from their being generally associated in great numbers, the noise occasioned, partly by their flitting from one stem to another or climbing, and partly by the harsh cries they uttered, more especially on the appearance of danger, rendered even a temporary residence in the vicinity of their haunts quite disagreeable. Though they evidently preferred, as resorts, the situations described, yet, where reeds did not occur, they were occasionally found among the brushwood remote from rivers; and in these positions they also displayed an extremely restless disposition; scarcely were they observed to enter a bush or thicket before they were seen leaving it from the opposite side, for an adjacent one. Though such was their common practice, there were times when they appeared less disposed to hasty changes, and when they were to be noticed, not simply following a tortuous course, but even ascending and descending among the branches; nay, even visiting the ground below and around the bushes. As far as we had opportunities of judging, they feed exclusively upon insects; and those which were killed when among the reeds, seemed to have committed great havoc upon the larvæ of *Gryllidæ*, &c. while those obtained among the brushwood appeared principally to have fed upon coleopterous insects."

Above, olive-brown; feathers of the head dark brown, edged with greyish-white, imparting to the bird a scaled appearance; chin, throat, breast, and anterior portion of belly, ashy-brown, marked with elongated white spots; posterior portion of belly and vent, yellowish-grey, tail, dark-brown; centre pair of feathers strongly tinged with grey; all crossed by dark-brown bars, only visible if held in certain positions; "bill, black; tarsi and feet, dusky; iris, bright reddish-yellow" (*Ayres*); "bill and feet, black; iris, dark red" (*Buckley*). Length, 10"; wing, 4" 6"; tail, 4" 3".

Fig. Smith, Ill. Zool. S. Afr. Birds, pl. 6.

195. CRATEROPUS KIRKII, SHARPE.

Kirk's Babbling-Thrush.

Dr. Kirk, who identified this species as *Crateropus plebeius* of Rüppell, says that it was common in long grass near rivers in the Zambesi country. He writes as follows:—"Found in flocks of five or six. A noisy bird in the reeds, but a fine songster when perched on the *Borassus*-palms in the early mornings during the rainy season."

This species may shortly be described as similar to *C. jardinii*, but much smaller and differing in having the region of the eye blackish, the cheeks uniform greyish-brown, and all the feathers of the crown and neck tipped with grey. Total length, 7·8 inches; culmen, 0·8; wing, 3·85; tail, 3·85; tarsus, 1·25.

196. *CRATEROPUS HARTLAUBI*. Hartlaub's Babbling-Thrush.

This species was discovered by Senor Anchieta at Huilla in Mossamedes and he has also procured it at Gambos in the same district and at Caconda in Benguela. Mr. Andersson met with it on the River Cunene, where he procured two specimens on the 25th of June, 1867.

The present bird may be described as very similar to *C. melanops*, but easily recognisable from this and every other brown Babbling-Thrush of Southern Africa, by its white rump. Total length, 9·3 inches; culmen, 0·85; wing, 4·5; tail, 4·5; tarsus, 1·5.

197. *CRATEROPUS MELANOPS*. Dark-faced Babbling-Thrush.

Mr. Andersson discovered this Babbling Thrush in Damara Land, and gives the following description of its habits:—"I have only met with this bird in the northern district of Damara Land, and in the parts adjacent towards the north and east; there it is common, and, when not too much disturbed, becomes quite familiar with man. During my encampment in the desert, on my return from the Okavango, there was scarcely a day that a family of these birds did not pay me a visit, coming quite close to my tent, searching for insects amongst the *débris*, and especially attaching themselves to my cook's establishment. The favourite resorts of this species are tangled brakes, where it restlessly hops about amongst the bushes, gradually descending to the ground, exploring on the way, and searching about the roots and amongst the fallen dry leaves for insects and their larvæ. It is gregarious in its habits; and several of its nests are frequently found on the same bush or in the immediate neighbourhood of each other. The nest is firmly constructed of fine twigs lined with some softer materials. The eggs are of a greenish-blue colour, smooth at the extremities, but quite rough on the central parts, with numerous little tubercles."

General colour above brown, with obsolete lighter edgings to the feathers, the wings and tail much darker brown; the lower back, rump, and upper tail-coverts inclining to sandy brown, the latter darker; crown of head, sides of face and throat hoary grey, the feathers tipped with the latter colour, the grey colour especially distinct over the eye and on the ear-coverts; lores and plumes below the eye black; plumes of the throat and fore-neck brown, margined with hoary grey; rest of under surface of body pale fulvous brown, inclining to white near the vent; thighs and under wing-coverts brown. Total length, 9.5 inches; culmen, 0.9; wing, 4.4; tail 4.7; tarsus, 1.4.

198. *AETHOCICHLA GYMNOGENYS*.* Bare-faced Babbling-Thrush.

This handsome species was described by Dr. Hartlaub from a specimen obtained by Mr. Monteiro in Benguela, and Senor Anchieta has procured it at Capangombe in Benguela and in Mossamedes. Mr. Monteiro says that they were "common at Novo Redondo and Benguela in the thick wood and under brush, flying in small flocks, and most discordantly noisy."

Adult.—Crown of head and nape white; hinder neck and the sides of the same tawny rufous; upper surface of body dark brown, with indistinct rufous-buff edgings to the feathers inclining to whitish on the outer wing-coverts; wings blackish brown; lower back greyish brown; rump white; upper tail-coverts brown with greyish tips; tail blackish brown; sides of face, region round the eye and ear-coverts, bare; cheeks and chin white; rest of under surface creamy white; the sides of the body, under wing-coverts, and inner webs of quills, tawny rufous; the throat and fore-neck with transverse bars of dusky brown. Total length, 9.3 inches; culmen, 0.9; wing, 4.2; tail, 4.3; tarsus, 1.25.

199. *NEOCICHLA GUTTURALIS*. Anchieta's Babbling-Thrush.

[The present bird was described by Professor Barboza du Bocage as a *Crateropus*, but he pointed out at the time that it was rather an

* Although described as a *Crateropus*, it seems to me advisable to institute a distinct genus for this bird on account of its naked face, a most prominent character.—*R. B. S.*

aberrant member of the genus. Having sent the type to England for the purpose of being figured in his new work, I enjoyed the opportunity of examining it, and I find that, although closely allied to *Crateropus* and to *Cichladusa*, it differs from both in the shortness of the first primary, which does not nearly equal the tarsus in length, whereas in both the above-named genera this quill is as long or even longer than the tarsus. Again the upper tail-coverts are extremely long, falling short of the tip of the tail only by $1\frac{1}{2}$ times the length of the tarsus, whereas in the other two genera the distance between the tip of the upper tail-coverts and that of the tail itself is more than double the length of the tarsus. I therefore propose the name of *Neocichla* for it. *R. B. S.*]

Only one specimen of this bird is known at present, the typical one in the Lisbon Museum, procured by Senor Anchieta at Huilla in Mossamedes. The following description is from that specimen.

Adult female (type of species).—Head and neck grey; back and scapulars brown, with straw-coloured margins to the feathers; lower back, rump, and upper tail-coverts ashy, somewhat inclining to creamy brown; wing-coverts brown glossed with purple, the outer ones purplish black; quills purplish black, shading off into brown at the tips, the secondaries externally white, forming a broad longitudinal bar down the wing, the innermost brown, edged with fulvous inclining to white at the tip; tail purplish black tipped with white, more broadly on the outer feathers, the two centre ones paler brown, a shade of this colour being also apparent on the inner webs of most of the others; entire sides of face and throat light grey, rather paler than on the crown and shading off into a black patch on the fore-neck, the lower feathers of which are edged with fulvous; rest of under surface orange buff, inclining to white in the centre of the abdomen and under tail-coverts; under wing-coverts like the breast; bill black; iris, bright yellow. Total length, 8 inches; culmen, 0·8; wing, 4·2; tail, 3·6; tarsus, 1·2.

200. *CHELOPS FRENATUS.*

Rufous-breasted Rock-Babbler.

This bird is, as far as we yet know, peculiar to mountain ranges. We have seen it between Caledon and Swellendam, in How-Hoghte, and once in Bains Kloof on the Wellington side. Mr. W. Atmore, however, declares that it is more widely distributed, and is common



CHÆTOPS AURANTIUS.

on all the mountains that he has been up. He says that they nest in the crevices of the rocks, and that their eggs resemble those of the Cape Robin (*Cossypha caffra*) but are larger.

It frequents the tops of the hills and high elevations on their stony sides, and seeks its food, consisting of insects, about stones and rocks. In habits it much resembles the Rock-Thrush, and, like it, is fond of perching on the summit of some conspicuous stone or ant-hill, from which it surveys the surrounding prospect, and seeks for safety by immediate flight on perceiving the approach of a foe. It progresses by a series of enormous hops, its powerful legs being well suited to this end; while its strong pointed claws enable it to traverse with ease the inclined surfaces of slippery rocks. It conceals itself readily in holes, and, if wounded, seeks such a retreat in which to die. It is generally found in small families of three or four individuals.

Upper parts of head and back, ash-coloured, the centre of each feather being very dark; rump, chest, and belly, bright red-brown; vent and thighs ash-coloured; head with a white eyebrow and moustache; throat and cheeks black; wings black-brown, some of the feathers edged with rufous ash; secondaries tipped with white, causing the wing to appear crossed with a white bar; shoulders spotted with white, a few spots of the same colour between the white bar and the shoulder; tail-feathers, with the exception of the centre pair, tipped with white; legs, claws, and bill, black; eye bright-red; plumage very lax and fluffy, particularly about the rump; on being raised on this spot, it will be found to be ash-coloured, like the back, the rufous tint being quite superficial. Length, 9"; wing, 3" 7"; tail, 3" 7"; tarsus, 1" 7".

Fig. Temm. Pl. Col. 385.

201. CHÆTOPS AURANTIUS.

Orange-breasted Rock-Babbler.

(PLATE VI.)

This species, which we characterised as distinct in our first edition, was at first identified by European ornithologists as *C. frenatus*, but as we were at the time in possession of a series of both species, containing adult and young birds of both sexes, we affirmed the distinction of *C. aurantius*, and the information received since

that date has entirely confirmed the correctness of our supposition. *C. aurantius* appears to be a more eastern bird than *C. frenatus*, with a different range. Our first examples were sent to us by Mr. J. O'Reilly, from the neighbourhood of Graaf-Reinet, and Major Bulger obtained it near Windvogelberg. Mr. T. C. Atmore also procured it near Eland's Post, and Mr. Eyton's collection contains a pair said to have been sent from the vicinity of Port Natal.

Mr. O'Reilly writes as follows:—"Graaf-Reinet, January 2nd, 1863. Inhabits rocks in high mountain ranges. Scarce; very shy and cunning, usually frequenting places assimilating to its plumage. Continually on the hop, and seldom takes wing; when it does so, flies but a short distance. Always on the watch, seldom showing much more than its head above the stones. Found about Graaf-Reinet all the year round, and in pairs. Food consists of small insects of any sort; drinks in the evening. Note, a sharp chirp, particularly when surprised. Breeds in December. Nest built of grass and rock-mosses, in crevices among rocks. Eggs, three to four, green, with brown speckles."

Head and shoulders above, ashy-grey, streaked with black; back and rump brick-red; tail graduated, black, each feather, with the exception of the two central, tipped with white; this colour extending farther up each feather, until it attains its maximum in the short outside pair; throat jet-black, with a white band extending from the lower mandible to the breast; another smaller white line passes from the nostril over the eye, and terminates a little beyond it; breast and belly, a fine clear orange-rufous, or burnt sienna; wings black, each feather more or less edged with ashy-grey; a white bar extends across the wing; the plumage very lax and decomposed, particularly over the rump. Length, 8" 9"; wing, 3" 7"; tail, 4"; bill, 9"; tarsus, 1" 8".

202. CHÆTOS PYNOPYGIUS.

Damara Rock-Babbler.

The original specimen of this bird was sent home by Mr. Andersson in 1852, and was described by Messrs. Strickland and Sclater as *Sphenæacus pynopygius*. A second specimen shot by him on the Omaruru river was made the type of the editor's species *Chætops grayi*. It was again described by Professor Bocage as *Drymæca anchictæ*, so that for so rare a bird it has rather an

extensive synonymy. The last-named example was procured by Anchieta at Biballa in Mossamedes. Mr. Andersson's notes on the species are herewith extracted from his "Birds of Damara Land." "The only places where I can recollect having caught a glimpse of this rarely seen Rock-Thrush are the Kaaru River, Ongari Ombo, near Jacongana, Okamaluté, and, lastly, the Omaruru River, where I obtained one specimen on October 30th, 1866, which I found hopping about amongst some stones thickly overgrown with bush and coarse grass, and strewn with decaying wood. As soon as the bird perceived that it was observed, it immediately slipped into the thickest part of this tangled bush, and for some time I thought I had lost it; but after pelting it with stones it flew out and settled on the lower branch of a small acacia. I found, when shot, that its bill was very dirty, from which I infer that it seeks much of its food on the ground; its stomach contained only small whitish ants (not termites); its flesh was light coloured, and excellently flavoured. The iris was dark brown; the upper mandible, dark horn colour, the lower livid lead colour; the tarsi pale brown, the toes a shade or two darker; there was a space under the eye quite naked; the tail when closed was of equal breadth throughout, but was cuneated when expanded."

This species is distinguished at a glance from the other members of the genus by its small size and white throat and chest, the sides of the breast being spotted with black. Total length, 6·8 inches; culmen, 0·7; wing, 2·8; tail, 3·0; tarsus, 0·85; middle toe, 0·7.

Fig. Sharpe, P. Z. S. 1869, pl. 14.

203. MONTICOLA RUPESTRIS.

Cape Rock-Thrush.

Petrocincla rupestris, Layard, B. S. Afr., p. 129 (1867).

This is the largest of the three South African Rock-Thrushes, and is to be distinguished not only by its greater dimensions, but by its brown back.

We have seen it at Kalk and Simon's Bays, and on Table Mountain, and have received it from Swellendam, Beaufort, Colesberg, Graham's Town and Eland's Post. Victorin mentions his having obtained it in the Knysna district, in August, and Mr. Rickard has found it both at Port Elizabeth and East London. Mr. T. E. Buckley says that it was common in Natal, "where it may be

seen sitting on stones by the road-sides, in pairs or families. In its flight and habit of flirting its tail it resembles the Wheatear." Mr. Ayres also writes:—"Frequents the same localities as the previous species (*Saxicola pilcata*). The stomach of the specimen sent contained some of the Cape gooseberries, and some small stones." In a previous communication to Mr. Gurney, he makes the following observation respecting a specimen forwarded by him:—"Stomach contained insects and berries. This specimen and two others were together: I did not see them settle on rocks or stones, but they alighted on trees and fed on the nectar of the blossom of a species of aloe. I found them on a hill called the Changa, between Pieter-Maritzburg and Durban, a very precipitous country, where aloes and low bushes are plentiful."

Mrs. Barber informs us that it breeds in holes under rocks, and sends a nest, composed of fine roots and hair. Eggs, 3—5, of a light buff or dirty white, minutely freckled throughout with pale rufous; they are sometimes, however quite white; axis, 13"; diam., 9". Of its habits, she writes:—"The male sings a rather lively song; he does not commence early in the morning, at or before daylight, as the Robins do; but after the sun has warmed him he begins to pour forth his cheerful melody: his notes are clear, and rather pleasing, and he is fond of choosing a conspicuous situation whence he can be heard and seen to the best advantage."

The whole of the head and throat, dark ashy-blue; back and wings, dark-brown; the former with a deep rufous tinge, increasing towards the rump, which is entirely deep rufous; the tail is also rufous, with the exception of the two centre feathers; all the under parts deep rufous, lightest towards the vent; the female wants the blue head, otherwise she is like the male; bill, black; the gape and mouth, yellow; tarsi and feet, dusky (*Ayres*); feet, black; iris, dark-hazel (*Buckley*). Total length, 8·4 inches; culmen, 1·05; wing, 4·35; tail, 3·3; tarsus, 1·1.

Fig. Le Vaill., Ois. d'Afr., pls., 101, 102.

204. *MONTICOLA EXPLORATOR.*

Sentinel Rock-Thrush.

Petrocincla explorator, Layard, B. S. Afr., p. 130 (1867).

Not very common, but widely distributed. We have seen it

principally in rocky places about Table Mountain, and the face of the hills overhanging Simon's Bay and Kalk Bay. It appears to be a frequent species at Swellendam; and we have received it from Beaufort, Graham's Town, and Colesberg. Mr. Rickard states that it is common at Port Elizabeth, where it is not at all shy and frequents the roofs of the houses. He writes:—"I have often heard them sing at S. Paul's Church during service." Mr. T. C. Atmore has procured it near Hope Town. In Natal, says Mr. Ayres, "these birds are found in the open country and are generally seen perched on some low hillock or stone. They are solitary and not at all plentiful. Their food consists of small insects." According to our own experience, it is a shy and wary bird, keeping well out of gun-shot when pursued, flitting from rock to rock, running up their sloping surfaces, and keeping a good look-out from the extreme summit. It feeds on insects, but often takes a little vegetable food. In its nidification it resembles the preceding species and its eggs are also similar, as might have been expected. In size the present bird is smaller than *M. rupestris*, and has the back blue-grey instead of brown; on the lower surface the blue extends on to the fore-neck.

Head, neck, breast, throat, back, and shoulders, blue-grey; rump, belly, and vent, orange-red, inclining to buff on the vent and thigh; wing and outer tail-feathers deep brown, the former edged with light rufous; outer tail-feathers, orange-red, more or less marked with brown. Bill, tarsi, and feet, black; iris, dark-hazel (*Ayres*). Total length, 7 inches; culmen, 0.85; wing, 3.75; tail, 2.5; tarsus, 1.3.

Fig. Le Vaill., Ois. d'Afr., pl. 103.

205. MONTICOLA BREVIPES.

Short-footed Rock-Thrush.

This Rock-Thrush, which was originally discovered by Sir J. Alexander during his expedition to Damara Land, occurred plentifully in the late Mr. Andersson's collections from the same country. He writes:—"This species is not uncommon throughout Great Namaqua Land and the southern parts of Damara Land; and in one year I found it particularly abundant at Otjimbinque. In its habits and manners it resembles *Saxicola monticola*, and, like it, is partial to localities of a rocky nature, as also to abandoned "werfts" and villages. It is rather a voracious feeder, preying on all kinds of

insects, from the minutest beetle to the scorpion, of which I have found specimens in its stomach ; it also occasionally eats soft seeds." Senor Anchieta has procured it at Caconda in Benguela.

The bird may be described as follows. Above, blue as in *M. explorator*, but having a white eyebrow and the head and mantle more or less inclining to white ; on the under surface the blue colour is restricted to the throat as in *M. rupestris* and not, as in *M. explorator*, occupying the chest also ; bill, bluish-black, the base of the gape yellow ; legs and toes, bluish-black ; iris, reddish-brown. Total length, 6·5 inches ; culmen, 0·95 ; wing, 4·15 ; tail, 2·65 ; tarsus, 1·05.

206. *COSSYPHA BICOLOR.*

Noisy Chat-Thrush.

Bessonornis vociferans, Layard, B. S. Afr. p. 130 (1867).

This bird—which, from its singular cry, has acquired the name of "Piet-Myn-Vrouw," by which it is known to the colonists—is common in the Knysna and other forest districts, but is very difficult to procure, owing to its shy, retiring habits, and the thickets in which it lives. Its loud call may be heard on every side of the traveller, but not a single bird will show itself, and we only procured the few specimens which we did obtain, by remaining quiet in one spot and imitating their cry until one came within range ; then the difficulty often was to avoid blowing the bird to pieces, as the thickets are usually so dense, that the bird was almost within reach of the gun-barrel ere we saw it.

It feeds upon worms and insects, and has the general habits of a Thrush. Le Vaillant says he found it also in Kaffraria. Mr. Rickard tells us that it occurs near East London, and we have seen several specimens from Natal. Mr. Ayres says that in the latter colony they frequent the dense bush. "The food of these birds," he writes, "consists of berries, small fruits, and insects. In their movements and attitudes they much resemble the English Red-breast, and they are particularly fond of chasing one another about." Dr. Kirk met with the species in the Zambesi, and states that it was shot among the mango-trees at Shupanga. Mr. Andersson obtained a single example of this Chat-Thrush at Otjimbiqué in Damara Land on the 11th of December, 1865, but it does not appear to have

occurred to Senor Anchieta during his travels in South-Western Africa.

Adult.—General colour above slaty-grey, shading off into orange on the rump, the upper tail-coverts bright orange; quills blackish, externally washed with grey, the wing-coverts washed with bluish grey; two centre tail-feathers black, all the remainder bright orange, the external feathers blackish on the outer web, and some of the others with narrow blackish margins; lores, sides of face and ear-coverts, black; cheeks, sides of neck, and the entire under surface of body bright orange, the under wing-coverts uniform with the breast, the lower surface of the quills ashy-brown, inclining to greyish-white near the base of the inner web; "bill black; tarsi and feet light pinkish brown; iris very dark brown" (*Ayres*). Total length, 7·3 inches; culmen, 0·7; wing, 3·65; tail, 3·2; tarsus, 1·2.

Fig. Le Vaill., Ois. d'Afr. pl. 104.

207. COSSYPHA NATALENSIS.

Natal Chat-Thrush.

Bessonornis natalensis, Layard, B. S. Afr. p. 131.

A single specimen of this Chat-Thrush was obtained by Sir Andrew Smith near Port Natal, and the natives informed him that its habits were similar to those of *C. bicolor* of the Cape Colony. We have seen a few specimens from Natal, but it is not very common there. Captain Shelley met with it near Durban, amongst some scattered bushes in the more open country. It extends across the continent into South-western Africa, for it has been procured by Mr. Monteiro in Angola, and by Senor Anchieta at Biballa in Mossamedes. The latter observer states that it arrives from the interior like *C. bocagii*, and has the same name as that species, "*Maxoxolo*."

This species may be distinguished by the absence of an eyebrow, which makes it nearly allied to *C. bicolor*, of which species Mr. Gurney has fancied it may be the immature bird. It is, however, quite distinct, being smaller than that species, and having the lores and cheeks bright orange instead of black.

Adult.—Upper surface of body bluish grey, the mantle strongly washed with orange, the scapulars clearer grey; head and hind neck brownish orange, waved across with narrow greyish lines,

caused by the sudden appearance of the bases to the feathers ; lores, eyebrow, sides of face and entire under surface of body orange, rather paler on the abdomen ; all the wing-coverts clear bluish grey, blackish on the inner web ; quills dull brown, externally shaded with grey, the secondaries with a further external border of pale orange as on the back ; tail-feathers very pointed, the two centre ones dark brown, the others dull orange, the outermost broadly margined with brown on the outer web ; bill horn brown ; legs slate-coloured ; iris dark brown. Total length, 6·4 inches ; culmen, 1·7 ; wing, 3·25 ; tail, 3·0 ; tarsus, 1·0.

Fig. Smith, Ill. Zool. S. Afr. Birds, pl. 60.

208. *COSSYPHA CAFFRA.*

Cape Chat-Thrush.

Bessonornis phœnicurus, Layard, B. S. Afr. p. 131 (1807).

Bessonornis caffra, id. t. c. p. 132.

This is the Cape "Robin," and decidedly deserves the name. It is common in all the gardens, even in the midst of Cape Town, flitting along the gravel paths, scraping in the flower-beds, perching on the leafless summit of some deciduous tree, or the ridge of the house-top, and pouring out a short, robin-like song, which, when heard in the darkening twilight, reminds the listener of the familiar note of the "household bird with the red stomacher." It breeds in August and September, and its nest is placed in much the same situations, and built of the same materials, the eggs equal in number and resemble in form, size, and shape, those of the European bird, only rather less coloured, being of a dirty white or buff ground, more or less freckled with dull pale rufous ; axis, 11" ; diam., 7". Its food consists of insects, worms, &c., and when it hops from place to place in search of it, it droops its wings and jerks its tail, just like the Robin at home. Victorin met with it at the Knysna in September and November, and it seems to occur all along the Southern part of the African continent to Natal, as Mr. Rickard records it as common both at Port Elizabeth and East London. Captain Shelley writes :—"Very abundant in Cape Colony, especially in the pine-woods about Cape Town. In habits they are extremely lively, running swiftly when on the ground, at intervals spreading and erecting their fine rufous tails, and when on the

higher trees, constantly shifting their position." We have received specimens from Mr. Moffat at Kuruman and from Mr. Atmore from Hopetown. We have also seen specimens of Mr. Ayres' collecting both in Natal and the Transvaal. Mr. Barratt has recently met with it in the Lydenburg district.

Mr. Andersson says:—"This species is sparingly met with on the borders of the Orange River, whence it extends southwards to the Cape, where it is very numerous. It is of a most inquisitive nature, and seems to court the neighbourhood of man. It is very lively in its movements, either hopping and gliding amongst bushes and plants, or running along the ground with astonishing swiftness, generally accompanying all such movements by rapid expansions and depressions of its tail and wings. The male sings very pleasantly; and his notes have been likened to the following differently intoned syllables, *jan—fredric—dric—dric—fredric*, whence its colonial name of 'Jan frédric.'

Above, cinereous brown, inclining to rufous on the back and shoulders; rump deep rufous; wings and two centre feathers of tail, dark-brown; the rest deep rufous, more or less edged and tipped with dark-brown; a white line extends from the forehead over the eye; space between the eye and the bill, and ears black; throat, breast, and chin, orange; the rest of the under parts bluish-grey, inclining to white in the centre of the belly, and rufous on the vent; bill and legs black; iris dark hazel (*Ayres*). Length, 7"; wing, 3" 9"; tail, 3" 3".

Fig. Le Vaill. Ois. d'Afr. pl. 111.

209. COSSYPHA BOCAGII.

Bocage's Chat-Thrush.

This species forms another of the many interesting novelties for which we are indebted to the discoveries of Senor Anchieta, who procured the original type at Biballa in Mossamedes, where it is called, along with *C. natalensis*, "Maxoxolo." He says that it arrives from the interior and it may, therefore, be looked for in the more northern portions of South-Eastern Africa.

This bird will also be figured in the forthcoming work of Prof. Barborza du Bocage, to whom we are indebted for the loan of the original specimen, of which the following is a description. It has

not a definite eyebrow, but has a white streak extending just over the fore part of the eye; the ear-coverts are orange; the tail orange, and the head, bluish-grey.

Adult. (Type of species.)—General colour above, light yellowish-brown, shading off into orange on the rump and upper tail-coverts, the latter being bright orange; crown of head slaty-grey; the feathers in front of and over the fore part of the eye, white; lores, blackish; cheeks, ear-coverts and entire under surface of body, bright orange; the centre of the abdomen, white; under wing-coverts, pale orange; wing-coverts coloured like the back and margined externally with orange; quills, dark brown, the primaries externally washed with ashy-grey, the secondaries with yellowish-brown like the back; tail imperfect, the two feathers remaining bright orange; bill, black; feet, brown; iris, brown. Total length, 6·5 inches; culmen, 0·6; wing, 3·2; tail, 2·8; tarsus, 1·0. (*Mus. Lisb.*)

210. *COSSYPHA BARBATA.*

Bearded Chat-Thrush.

This fine species, which has more the appearance of an *Aedon* than a *Cossypha*, was met with by Senor Anchieta at Caconda in Benguela and we are indebted to our friend Professor Barboza du Bocage for the loan of the type specimen, which will be figured in his forthcoming work on the birds of South-Western Africa.

Like *C. heuglini*, the present species has a very distinct white eyebrow, but is distinguished by its white throat, in which it resembles *C. humeralis*. From the latter, however, it differs in its white wing-spot and rufous ear-coverts, besides many other minor particulars. The following is a detailed description of the type-specimen.

Adult.—Above, ashy-brown; the rump and upper tail-coverts, pale orange-rufous; forehead slightly tinged with rufous; lores and a short eyebrow as well as a ring of feathers round the eye, white, with a narrow margin of black running above the white eyebrow; feathers in front of the eye, blackish; ear-coverts, dull sandy-rufous; cheeks and throat, white, with a long moustachial streak of dull grey, extending on each side of the throat for its whole length; breast and sides of the body, pale orange, inclining to buff on the centre of the chest and shading off

into white on the lower abdomen and under tail-coverts; thighs, white; under wing-coverts also white, the outermost spotted with black; wings, above ashy-brown, inclining to grey on the coverts, the least series being streaked with white, the outermost broadly edged with the same; primaries externally margined with white, much broader near the base, which is entirely white on these quills, so as to form a speculum; tail, black, tipped with white, forming a small triangular spot on the centre feathers and gradually increasing towards the outermost, the external rectrix being white for its apical half. Total length, 7 inches; culmen, 0.65; wing, 3.2; tail, 2.8; tarsus, 1.05. (*Mus. Lisb.*)

211. COSSYPHA HEUGLINI.

Von Heuglin's Chat-Thrush.

The characters which distinguish this from all the other Chat-Thrushes of South Africa are the following, viz., a broad white eye-brow extending along the sides of the crown to the nape, accompanied by an orange-coloured throat. We have seen two examples from Angola, and, according to Prof. Barboza du Bocage, it has also been procured by Anchieta at Caconda in Benguela.

Adult.—General colour above, grey, strongly marked with olive brown on the back and scapulars and shading off into orange on the rump and upper tail-coverts, the latter being bright orange; two centre tail-feathers, dark brown, the rest bright orange, the external one dark brown on the outer web; wings, dark brown, the feathers externally marked with grey, particularly distinct on the coverts; crown of head, as well as the lores, feathers round the eye and the ear-coverts, black; over the eye a broad white stripe extending from the base of the bill to the sides of the nape; cheeks, sides of neck, and under surface of body, deep orange, paler on the abdomen; round the hind-neck a faintly indicated orange collar. Total length, 7 inches; culmen, 0.75; wing, 3.45; tail, 3.0; tarsus, 1.2.

Fig. Heugl. Orn. N. O. Afr. taf. 13.

212. *COSSYPHA HUMERALIS*. White-shouldered Chat-Thrush.

Bessonornis humeralis, Layard, B. S. Afr. p. 132 (1867).

This is apparently the rarest of the South African Chat-Thrushes, and is found only in the interior. Sir Andrew Smith met with it on the banks of the Marico river, and procured it from about lat. 26° S. to the tropics. We have received it from Kuruman, but in very limited numbers. Dr. Exton procured it at Kanye in the Matabili country, and Mr. T. E. Buckley shot a male near the Makalapse river in Bamangwato on the 25th of October, 1873. He writes:—"I observed a pair of these birds on a small stony hill, and procured the male. They were not at all shy; but from the thickness of the cover it was difficult to get far enough off to shoot them without spoiling them. They flew and hopped about the bushes in search of food, but seemed to avoid the open ground." Mr. Ayres obtained a specimen in the Transvaal, and observes as follows:—"I shot this scarce bird among the thick scrub on the Limpopo; the stomach contained insects; it was lively and restless in its actions."

Adult.—Head, mantle, and scapulars grey, with a slight tinge of olive on the back; rump and upper tail-coverts orange chestnut, deeper on the latter; tail also orange, with a broad terminal band of black, the outer feather also blackish on the outer web, and the two centre feathers entirely blackish; wing-coverts black, with a broad longitudinal white patch formed of the inner lesser and median coverts, and the outer web or the whole of a few of the inner greater coverts; quills blackish, with a narrow external border of greyish buff; over the eye a narrow white line, extending from the base of the bill to the hinder ear-coverts; lores, cheeks, and entire side of face and of neck black; chin and a patch on the sides of the upper breast also black; sides of body, vent, and under tail-coverts pale orange-buff; under wing-coverts white, the edge of the wing black; bill black; legs brownish-black; iris dark hazel. Total length, 6·5 inches; culmen, 0·6; wing, 2·95; tail, 2·9; tarsus, 1·15.

Fig. Smith, Ill. Zool. S. Afr. Birds, pl. 48.

213. COSSYPHA SIGNATA.

Brown Chat-Thrush.

Bessonornis signatus, Layard, B. S. Afr. p. 131.

This rare bird has never yet fallen under our notice personally, but specimens now in the British Museum were procured by the late Sir Andrew Smith, who, however, does not seem to have bestowed a name on the species. It was first described by Professor Sundevall from examples procured by Wahlberg in "Lower Kaffraria." This locality is not British Kaffraria as at present understood, and the bird should probably be looked for in Natal.

General colour above chocolate brown, shading off into lighter and more fulvous brown on the lower back, rump, and upper tail-coverts; lores blackish, over the eye a distinct white eyebrow, surmounted by a narrow black line drawn from the lores to above the eye; round the eye a circle of whitish feathers; ear-coverts brown, darker below the eye; cheeks and sides of neck greyish with a slight indication of a darker malar stripe; under-surface of body white, the throat circumscribed by a band across the breast which is greyish-brown like the sides of the body; under wing-coverts white with brown bases, giving a mottled appearance to the edge of the wing; upper wing-coverts greyish, the inner ones slightly edged with olive-brown, the edge of the wings slightly and the spurious quills broadly tipped with white; primary-coverts blackish; quills blackish-brown, the primaries edged with white, the secondaries with brown, the innermost resembling the back; primaries white at the base of the outer web forming a conspicuous alar speculum; two centre tail-feathers olive-brown, the others blackish, broadly tipped with white, and washed with olive-brown, especially near the base. Total length, 7·3 inches; culmen, 0·85; wing, 3·25; tail, 3·2; tarsus, 1·15.

214. CICHLADUSA ARCUATA.

Peters' Chat-Thrush.

Dr. Peters first discovered this interesting bird near Sena in the Zambesi country, and examples are contained in the British Museum collection, having been procured in the same region by Dr. Kirk, during the Livingstone expedition. It extends far up the east coast of Africa, having been met with by the late Captain Speke in Unyamesi; and it is said to have a very beautiful song. The

following description is taken from a Mosambique specimen in the British Museum:—Above fulvous brown, inclining to tawny, the least wing-coverts coloured like the back, the rest of the coverts chestnut edged with fulvous brown; quills chestnut, inclining to blackish brown for the terminal third; tail entirely chestnut; head chestnut brown, rather darker than the back; an eye-brow drawn to the hinder neck light grey; cheeks and ear-coverts light ashy-brown; throat tawny-buff, surrounded by a narrow line of black, which runs as a moustachial streak from the lower mandible down the sides of the throat, and joins on the fore-neck; rest of under-surface of body tawny-buff, much deeper on the under wing-coverts; upper breast greyish. Total length, 7·5 inches; culmen, 0·8; wing, 3·45; tail, 3·5; tarsus, 1·15.

Fig. Heuglin, Ibis, 1868, pl. ix. fig. 1.

215. CICHLADUSA RUFICAUDA.

Red-tailed Chat-Thrush.

Originally described by M. Jules Verreaux from the Gaboon, the present bird is included in this work on account of its occurrence in Benguela. A single specimen is recorded by Professor Barboza du Bocage as having been obtained by Senor Anchieta in the latter country, where it is called by the natives "Kitoni." Never having seen a specimen of this bird, we translate the following description from Dr. Hartlaub's "Birds of Western Africa."

Above pale brownish-red; the back more ashy; head and wings browner; rump and tail bright red, the shafts of the tail feathers red; primaries dusky; under wing-coverts isabelline colour; sides of the head and neck, eyebrow, breast, and sides of the abdomen ashy; middle of the abdomen, chin, and throat pale buff; under tail-coverts pale rufous; bill black; feet dusky. Total length, 7 inches; bill, 7''; wing, 3'' 3''; tail, 2½''; tarsus, 11''; middle toe, with claw, 8½''.

216. PINARORNIS PLUMOSUS, *Sharpe*.* Sooty-brown Chat-Thrush.

The British Museum contains the unique type of this curious bird, for which no name appears to have been proposed, and it is here designated as belonging to an undescribed genus and species. The single example yet known was contained in a collection from the

* πῆλῆρός, sordidus; ὄρνις, avis.

Victoria Falls, Zambesi, and was received at the Museum through Mr. Cutter.

It is very difficult to know where to place this new genus. It has the plumage of a dusky Chat, but in the form of its bill and feet it approaches *Crateropus*; from this genus, however, it differs in the long loose plumage of the rump, and in the long upper tail-coverts which remind us of *Bradypterus*; altogether it is a peculiar form which must be placed among the Thrushes, leading off from the *Crateropi* to the Chats and Warblers.

Adult.—General colour above and below sooty-brown, a few of the frontal plumes, the lores, and the throat edged with greyish white; wings and tail darker than the body, and approaching to black, the primaries with a very large spot of white on the inner webs, and the three outer tail-feathers with a large spot of white at the tip; bills and legs black. Total length, 10·2 inches; culmen, 0·95; wing, 4·2; tail, 5·5; tarsus, 1·25.

217. MYRMECOCICHLA FORMICIVORA. Southern Ant-eating Wheatear.

Le Vaillant found this Wheatear near the Sunday and Zwartkop rivers, not far from Algoa Bay, where we also observed it in abundance during a flying visit to that locality. He says that it perches on high trees, but in this he is certainly wrong, as far as our own experience goes, for we have never seen them perch even on a bush, though Mr. Andersson says that they do so. Like *S. pileata* they habitually conceal themselves in rat-holes. Le Vaillant states that he found their nests in holes or under rocks, and that the eggs were white.

We have received many specimens from the neighbourhood of Colesberg and Kuruman, and Mr. T. C. Atmore forwarded us a skin of one obtained by him at Burghendorp in May 1871. Mr. Rickard observes that it is common at Port Elizabeth, but is never met with away from ant-hills, in which he believes they roost and also breed. We found it to be a curiously local bird, and during our recent visit to the eastern frontier we would drive for the best part of a day without seeing a single specimen, and then suddenly we would come upon a spot where there were two or three families. Pass this spot as often as we would, there we always saw the birds! There is one such place between Grahamstown and Table Farm, where we knew that we could always shoot a specimen, we might

almost say on one particular ant-hill. Mr. T. E. Buckley found them common in Natal as well as in the Transvaal, sitting about on the small ant-heaps, and resembling *Saxicola monticola* in their habits. Mr. Ayres writes:—"I first met with this Chat near the Tugela river in the upper district of Natal, and found that it gradually became more plentiful over the Drakenberg, in the Free State and Transvaal Republic. These birds often rise a short distance in the air with a fluttering flight, but are mostly seen perched on the ant-heaps which abound in this country. They feed on insects." Mr. Andersson has the following note:—"I have met with this species, though only sparingly, in Damara Land, and in the parts adjacent to the north and east, but I do not recollect having seen it in Great Namaqua Land. It always occurs in pairs in open localities interspersed with bush, on which, or on ant-hills, it usually perches. It seeks its food on the ground, watching for insects from its elevated perch, and when these are observed, descending at once upon them and quickly returning to its post of observation. Its flight is straight, and it moves its short wings with extraordinary rapidity; but it does not go far at a time, and I never found any difficulty in approaching it."

Generally of a sombre-brown colour, paler on the belly and under the tail; the throat clouded with reddish, the same colour bordering the feathers of the front of the neck and chest; a prominent white patch adorns the shoulders of the male; the wing-feathers have also white webs. The female wants the white shoulders, and is of a deeper brown. Length, 7" 6"; wing, 4"; tail, 3".

Fig. Le Vaill. Ois. d'Afr. pl. 186.

218. *THAMNOBIA CINNAMOMEIVENTRIS.*

Southern White-shouldered Bush-Chat.

Saxicola rufiventer, and *S. albicapulata*, Layard, B. S. Afr. p. 106.

Dr. Burchell met with this species during his travels in South Africa. We have only seen it from the eastern districts, and our first specimens were forwarded from "Highlands," near Grahams-town, by Mrs. Barber, at whose residence we saw it in some abundance in March and April. It is a lively bird, ever on the move, and feeds on insects of various kinds, which it catches in the bush. We have also received a large series of specimens from Mr. T. C. Atmore, all procured in the neighbourhood of Eland's Post. Dr.

Exton also met with it at Kanye in the Matabili county, and describes the stomach as being filled with black ants and various species of *Heteroptera* (*Cimex*, &c.). In Natal it is rare, according to Mr. Ayres, who gives the following anecdote in a letter to Mr. Gurney:—"Passing a Dutch farmer's one day, I saw this Chat hopping about upon a large stack of faggots some 200 yards from the house. Being a scarce bird, I shot it at once, when one of the farmer's sons came running to me, exclaiming in tones of anguish, 'What have you done? You have shot the Mock-bird.' He went on to tell me that it was a great favourite of theirs; that it came into the house every day to be fed, and was particularly fond of admiring itself in the parlour looking-glass; and that the bird had been with them for years. I expressed my sorrow for having been so unfortunate as to cause them such grief for the loss of their favourite, and offered to preserve the skin and send it to them; but the young Dutchman said, 'Of what use is the skin? The bird is dead: keep it.' The specimen sent is the skin of this curious bird."

Male.—General plumage throughout glossy black; rump, belly, and vent deep rufous; shoulders white. Length, $8\frac{1}{2}$ inches; wing, $4\frac{1}{2}$; tail, 4.7. The female wants the white patch on the shoulder, and is much greyer and duller in colour.

Fig. Lafr. Mag. de Zool. 1836, pl. 56.

219. SAXICOLA INFUSCATA.

Great Fuscous Wheatear.

Sir Andrew Smith considered this to be the rarest of the Chats met with by him in South Africa, and he says that it appeared to be "principally, if not entirely, restricted to the districts between the Oliphant and Orange rivers," seldom occurring far from the seacoast. We know now, however, that it is rather a widely spread species in South Africa, but is everywhere a very wary bird. We found it abundantly at the Berg river, and have received specimens along with the nests and eggs from Mr. Jackson at Nel's Poort. Mr. Atmore met with it sparsely at Traka, and it was also obtained by his son, Mr. T. C. Atmore, at Hopetown; we have also received it from Kuruman. Mr. Ayres writes:—"I saw two specimens near the Vaal river, one of which I killed; its stomach contained a single locust, which it had swallowed nearly whole; it had all the appearance of a Flycatcher, as it sat upon the upper twigs of a low bush,

and somewhat of the Flycatcher's wavering flight when it left the bush and settled on the ground close by, apparently in search of some insect."

According to the late Mr. Andersson's notes this species is "found abundantly in Great Namaqua Land, and also occurs in a few localities in Southern Damara Land; it is found singly or in pairs in open localities interspersed with low bush. It is extremely wary and difficult to approach; perched on the top of a conspicuous bush it quickly espies the hunter, and immediately takes its departure; it does not fly far at a time, but always takes care to be beyond the range of the gun. It feeds on insects, which it catches on the wing or on the ground, but it never stays on the ground to search for them there." Mr. Monteiro shot a specimen in Benguela.

It places its well-made cup-shaped nest in the bottom of a dense bush; the eggs, three to five in number, well-marked and handsome, are light verditer blue in colour, much speckled with rather large reddish-brown spots and blotches, sometimes forming a ring at the obtuse end. Axis, 11''; diam. 8''.

General colour, rusty brown; chin and throat of a dirty white; under parts grey, more or less tinted with yellowish-brown; wing and tail-feathers with a dash of umber-brown about them; the latter and the wing-coverts are more or less edged with dirty-white; tail square; iris black. Length, 7'' 6''; wing, 4'' 9''; tail, 3'' 6''.

Fig. Smith, Ill. Zool. S. Afr. *Aves*, pl. 28.

a. *Back in the males neither black nor cinereous.*

220. SAXICOLA GALTONI.

Familiar Chat.

Saxicola sperata, Layard, B. S. Afr. p. 107.

In the arrangement of the Chats in the present work, recourse has been had to a monographic essay by Messrs. Blanford and Dresser, published in the "Proceedings" of the Zoological Society for 1874. The present species belongs to the section of the genus *Saxicola* which have the *interscapulary region similarly coloured to the wing-coverts*, according to the classification of the above-named gentlemen. It is the bird usually known to naturalists as *Saxicola familiaris* or *S. sperata*, but for the reasons stated by the authors of the above-named paper, neither of these titles can be employed.

The present species may be distinguished from the other members of the genus by its rufous upper tail-coverts and tail-feathers, which are conspicuous even in flight. We have found it during the summer months about stones in rocky places. It is abundant round the "Lion's Head," at an elevation of about 1500 feet, nesting in crevices, and the young bird is speckled exactly like a young robin. They have a habit of perching on the summit of stones and rocks, opening and shutting their wings and tails. In flight they resemble the Wheatear, and flit from stone to stone. A pair or two frequent every farm-house in the colony, and are accused of picking the grease out of the cart-wheels; hence their colonial name of "Speckvreter." They nest in old walls and banks, and under stones, laying a foundation of small stones and gravel, and lining with hair. The eggs, four in number, are undistinguishable from those of the next species. Mr. Atmore writes that at the Oliphants river one made its nest in a hair broom standing in a bedroom, and brought off her brood!

We presume that this is the species recorded by Grill as *S. sperata*, procured by Victorin at the Knysna in April. We have received it from Eland's Post from Mr. T. C. Atmore, and at Port Elizabeth Mr. Rickards says it is called the "Day-breaker," and is very common, frequenting roofs of houses in the town. Mr. T. E. Buckley procured a specimen in Natal on the 5th of June, 1873, and says that he observed it in the Matabili country, hopping about a cattle-kraal like a Robin. Mr. Andersson writes:—"This is the most common *Saxicola* with which I am acquainted both in Damara and Namaqua Land, from whence it ranges southward along the west coast as far as Table Mountain. It is very familiar in its manners, and will fearlessly approach human habitations, which it not unfrequently enters by the doors and windows. It invariably perches on low bushes, whence it watches for passing insects, which it usually seizes on the wing, though it occasionally descends to the ground for a similar purpose. Like all the birds of this family it is very restless, now flapping its wings, then raising and expanding the tail or alternately raising and depressing its whole body. It makes its nest on the ground, laying three or four eggs, which are either greenish-grey spotted with brown, or nearly white spotted with brown and grey. The iris is very dark brown, and the bill, legs, and feet are black." Senor Anchieta has also procured this species in Benguela.

221. *SAXICOLA SINUATA*.

Sickle-winged Chat.

Like the preceding species this Chat belongs to the plain-coloured group, but is distinguished from *S. galtoni* by the peculiar sickle-shaped emargination of the first long primary, and by the pale ashy brown colouring of the lower parts. The "Klappertje," as it is called by the Dutch colonists, is not uncommon at Nel's Poort and to the eastward, having been received from Colesberg and Kuruman. We found it at the first-named place, breeding in November, in holes of buildings, and occupying the place of *S. galtoni*. It makes a nest of hair, roots, and feathers, and lays three to five eggs, of a light blue, speckled with rufous. These speckles generally assume the shape of a ring at the obtuse end. Axis, 10''; diam. 7''.

In October 1868 we observed it for the first time abundantly at Groenfontein, near Cape Town, and we subsequently found it in February 1869 at Cape Point, at the extreme end of the promontory; it seems now permanently stationed in the western end of the colony. Mr. Rickard says that it is common at Port Elizabeth, but that its habits are very different from those of the preceding bird, being much more lively in its manners, and never being seen on houses. Mr. Ayres shot a specimen of this Chat on the open plains, some thirty miles from Potchefstroom. He writes:—"It was on stony ground; and I put it up twice or thrice, when it invariably settled on some small stone. The stomach contained insects."

222. *SAXICOLA LAYARDI*, *Sharpe*.

Layard's Chat.

Only a single specimen of this apparently well characterised species has fallen under our notice. It is now in the British Museum, having been formerly in the editor's collection, and is the individual mentioned by Messrs. Blanford and Dresser as being probably new to science in their paper on the genus *Saxicola*. Having carefully compared it with a large series of South African Chats, we have no hesitation as to its distinctness, and before very long we shall doubtless hear of additional specimens being found by some of our friends in South Africa.

The species is very similar to *S. sinuata*, but has not the emargination in the primary which distinguishes that bird; the rump is

rufescent, the upper tail-coverts white, as also is the base of the tail. These characters bring the species in close relationship to *S. albicans*, but the general colour of the bird is different, being brown above, underneath isabelline brown, whiter on the throat and abdomen; it is, however, to be distinguished at once by its rufous-brown ear-coverts, these being white in *S. albicans*. Total length, 5·6 inches; culmen, 0·7; wing, 3·45; tail, 2·25; tarsus, 1·15.

The typical specimen was sent by Mr. Layard some years ago labelled "South Africa," but the exact locality was not recorded.

223. SAXICOLA SCHLEGELI.

Schlegel's Chat.

This species belongs to the section of the genus *Saxicola*, in which the species are of a pale isabelline colour, and have the interscapular region uniform with the wing-coverts. The distinguishing characters of Schlegel's Chat are the white under surface, and the emargination of the first long primary, which has a distinct indentation near the tip. The centre tail-feathers are black, white on the outer webs but not at the tip, the black going right down to the base of the feathers; the upper tail-coverts are white. Total length, 6 inches; culmen, 0·65; wing, 3·75; tail, 2·75; tarsus, 1·25.

It is an inhabitant of South-western Africa, and Mr. Andersson writes as follows:—"This species is very common in Great Namaqua and Damara Land, and frequents alike broken ground, low bush, and old abandoned 'werfts'; it seems to prefer low bushes for perching on, whence it descends to the ground in search of insects, and runs with great swiftness in pursuit of its prey. It is tolerably easy of approach. Specimens are frequent in Damara Land of a smaller size, and paler colour than the ordinary type, which, however, they exactly resemble in habits and manners."

Fig. Blanford and Dresser, P. Z. S. 1874, pl. xxxix. fig. 2.

224. SAXICOLA ALBICANS.

Strickland's Chat.

Very similar to *S. schlegeli*, but distinguished at once by the base of the tail-feathers being white; the first long primary also is not emarginate at the tip; upper tail-coverts white like the base of the tail. Total length, 6 inches; wing, 3·6; tail, 2·3; tarsus, 1·25.

Like its near ally it is only known at present from South-Western

Africa, and Mr. Andersson's observations on the species are herewith transcribed:—"I have only met with this bird in Damara Land, and that at no very great distance from the sea-coast; it is not uncommon on the extensive plains bordering on Walvisch Bay, and seems to be chiefly confined to such localities. It is of a very friendly, fearless disposition, almost rivalling *Saxicola galtoni* in its familiarity with man; it will approach a person to within a very short distance, and it is no uncommon thing to see it hopping about amongst the cooking utensils that may chance to be scattered about a temporary encampment. It spends nearly all its time on the ground, along which it runs with great swiftness; but now and then it may be seen perched on a stone raised a few feet above the level of the plain. Its flight is a kind of alternate dip and rise, and never extends far at a time. The food of this species consists of small insects; its eggs are laid on the ground in a small excavation sheltered by a stone or bush.

Fig. (tail only), Blandford and Dresser, P. Z. S. 1874, p. 236, fig. 1.

225. *SAXICOLA FILEATA.*

Capped Wheatear.

The "Schaapwachter" (lit. The Shepherd), as it is called by the colonists, is one of the most favoured and favourite birds of the colony, over the whole of which it extends. He is protected and petted on account of his own natural sweet notes, and for his great powers of imitation. Perched on a white ant's nest, he pours out a flood of song, chaunting long into the darkening twilight, when other songsters are gone to rest; and the morning light scarcely suffices to enable you to see the musician, ere he again commences his mellow notes or imitations. He is a favourite with the farmer and the shepherd—the master and the man: the good-wife also casts a kindly eye on him, as he flirts his tail and wings on the mud wall of her little garden, and thumps her "young hopeful" who, unable to resist the tempting shot, is about to "shy a stone at him."

It breeds in the rat-holes, close to the houses, or out in the fields, in the month of September, and lays four white eggs tinged with a faint greenish colour, very large for the size of the bird. Axis 12''; diam. 9''. If wounded it retreats into the first hole it comes to. It runs along the ground with great rapidity, and seldom alights on bushes—scarcely ever on trees. If frightened

from one stone, it flits to another, and in alighting opens his tail, so as to show the white patch on his rump. It is usually perched on an ant-hill, in most cases sees you before you see it, and acts accordingly!

Mr. T. E. Buckley shot this species near Newcastle, in Natal, where, he says, he found a good number of these birds one day, but those he procured were all males. It has not yet been recorded from the Transvaal by Mr. Ayres, but Dr. Kirk says that it was common among the rocks of the Murchison Rapids, but was not observed in other situations. Mr. Andersson says:—"I have found this species common from Table Mountain in the south to the Okavango in the north, in the neighbourhood of which river it may be seen at all times of the year, though in Damara Land proper it only appears during the wet season, and again gradually retreats to more favoured regions as the dry season returns. In the Cape Colony it is one of the best known birds, and from its familiar habits and its being seen near cattle and sheep, the Dutch boors have given it the name of "Schaap Wachter," or Shepherd; it has also the more local name of "Nagtgaal" and "Rossignol," from a habit it is said to have of singing by night. It is a very tame bird, of a most inquisitive nature, and seems to seek the society of man. The male has a very pleasant and varied song during the breeding season, and is especially remarkable for its strange power of imitating sounds, such as the notes of other birds, the barking of a dog, the bleating of a goat, &c."

Anchieta has likewise procured the species at Humbe on the Cunene river, where it is called "Utena" by the natives, and also at Dombe in Benguela, where the native name is "Kissanbondongi."

According to the arrangement of Messrs. Blanford and Dresser this Chat belongs to the same section of *Saxicola* as the foregoing species, having the wing-coverts and interscapulary region of the same colour, but it may be distinguished by its white throat and black crown and breast.

General colour above, rufous-brown; feathers of the wings dark-brown, edged with the colour of the back; forehead white, this colour extending in a line over the eye; top of the head black; a stripe of the same colour extends from the corner of the bill down the sides of the neck, and forms a broad collar across the breast; chin, throat, and belly white, the latter tinted with rufous, which

becomes stronger on the flanks and vent; centre tail-feathers all dark-brown, the basal half of the rest white. Length, 6" 9"; tail, 2" 10".

Fig. Le Vaill. Ois. d'Afr. pl. 181.

226. *SAXICOLA BIFASCIATA.*

Buff-streaked Chat.

The range of this bird is rather restricted, and it appears to be peculiar to South Africa. Mr. Ortlepp has procured it at Colesberg, and Captain Bulger at Windvogelberg, while our friend Mrs. Barber, as noted below, says that they are plentiful in high situations all over the eastern province. Mr. T. C. Atmore forwarded us a nice series of specimens from the neighbourhood of Eland's Post and Queenstown, and we ourselves shot some near Grahamstown. Mr. Buckley writes:—"I saw several of these birds near the foot of the Drakenberg, where they were breeding. Their habits and haunts are like those of our Stonechat, as far as I had the opportunity of observing them." Mr. Ayres states that he obtained this species near the Upper Mooi river in Natal, but found them more plentiful on the Drakenberg in the Transvaal Republic, frequenting rocky hills and feeding on insects. Mr. F. A. Barratt observes:—"I procured a male on a journey from Potchefstroom to Lydenburg; it was flitting about the stones on a hill-side near Wittewater Rand. I have since seen it between Potchefstroom and the Orange Free State, always on elevations, and never on the plains."

In a letter dated "June 22nd, 1865," Mrs. Barber sends us the following account of the habits of this fine Chat:—"These birds are dwellers amongst rocks, and frequent rocky mountains and hills, old stone-kraals, &c. They build their nest under shelving rocks, near or upon the ground, and sheltered by spreading ferns or long grass; and their eggs are usually three in number. The male is fond of placing himself on some high projecting rock, and of making himself conspicuous by chirping away in a cheerful voice, either to annoy a rival or amuse his mate: he is also fond of opening and shutting his wings, 'bowing and scraping,' &c., and I have no doubt 'thinks no end of himself.' The female is a very quiet, retiring little body. These birds (the males) possess the power of mocking other birds and animals. When we were living in the district of Graaf-Reinet, I had a beautiful spotted Merecat, a tame

one: it was very fond of me, and was my companion in all my walks. These little animals have a peculiar bark, and produce a great variety of sounds with their pretty little voices: and these mocking-birds, would imitate all the sounds that my pet made very accurately. I have also heard them mocking robins and sugar-birds, but they seldom use this power. We will get you some more specimens. I was surprised to hear that they were new—very much so, for they are common all over the Eastern Province, excepting near the coast. They prefer high situations. There are always five or six of them here: they sit upon the garden wall and upon the top of our house. A few days ago there was one sitting upon the gable-end of our stable, making a terrible row: a quiet old rock-thrush that belongs to the place, feeling disgusted with his noise, went up to him, and gave him a smart peck, which sent him flying!! We never shoot birds that take up their abode with us, so we see all their odd ways.”

A nest sent by Mrs. Barber, taken from a hole in a Kraal, is a loose untidy structure of fine rootlets and hair. The eggs (four) are pale creamy-white rather profusely speckled, especially at the extreme obtuse end, with small elongated reddish-brown specks. Axis, 11''; Diam. 8''.

Male.—Top of head dark brown, mottled with black; back and neck reddish-brown, mottled with black; rump clear yellowish-brown: the same colour prevails over the whole of the lower parts, except the throat, and a little way on the chest, where is a rich black patch extending to the head, and including the eye and ear; a yellowish-brown stripe passes from the nape of the neck on the one side, over the eyes and nostrils, to the nape of the neck on the other side; tail and secondary wing-feathers black; quill-feathers brown. Length, 7''; wing, 3'' 6''; tail, 2'' 6''. Irides black.

Female.—Wants the black markings, and is altogether less brilliant, the yellows being rufous, and the tail and wings dull-brown.

The species may be told by its black wings and by having the feathers on the interscapular region intermixed black and rufescent (Cf. Blanf. and Dresser, *l. c.* p. 217).

Fig. Temm. Pl. Col. 472.

*β. Back in the males cinereous.*227. *SAXICOLA CINEREA.* White-rumped Grey Wheat-ear.

The next section of Chats, according to the arrangement of the above-named authors, contains four species inhabiting South Africa. The first three have the rump white, and of these *Saxicola cinerea* and *S. pollux* have the second primary emarginate at the tip. Besides this character, Messrs. Blanford and Dresser give the following as distinguishing the present bird:—"No black mark through the eye: throat and breast, pale cinereous; rump and outer edges of all the tail-feathers except the central pair, white."

Le Vaillant found this Wheat-ear in the province of Outeniqua, perching on bushes, always on the move from one to another, and very wary. In flying they expanded the tail, exposing the white mark; they also had the habit of opening and closing the wing, so peculiar to the Wheat-ears. A male is in the British Museum from Great Namaqua Land.

They build at the foot of bushes on the ground. The female lays four bluish-green eggs, minutely speckled with brown, the specks sometimes forming a ring at the obtuse end: axis, 11"; diam. 8". We found them abundantly at Nel's Poort, nesting in November. Mr. Atmore writes of them as follows:—"Blanco, Sept. 10th, 1864. The Rock-Chat (*S. cinerea*) is abundant in the Karroo;—and, by the way, how well this class of birds obeys the geology of the country: wherever there is karroo soil you find them. The same also with the 'Kalkoentje' (*Macronyx capensis*), which is found in every patch of grass country, but never in karroo soil; for instance, they are plentiful here, and proceeding northwards they do not occur in the fifty miles of karroo you pass over on the way to Cango; but in that narrow valley they are again plentiful."

We transcribe the following description from the essay of Messrs. Blanford and Dresser:—

Adult.—Upper parts to the rump brownish-cinereous; wings brown, the coverts and secondaries with pale edges; lower rump and upper tail-coverts white; tail-feathers dark brown, the outer webs of all except the central pair, white, the quantity increasing on the outermost feathers; lower parts pale isabellino grey; chin whitish; abdomen and under tail-coverts white; ear-coverts pale hair-brown. Culmen, 0·8; wing, 3·85; tail, 2·6; tarsus, 1·15.

Fig. Le Vaill. Ois. d'Afr. pl. 181, fig. 1.

228. SAXICOLA DILUTA.

Pale-coloured Grey Wheat-ear.

Messrs. Blanford and Dresser were apparently justified in considering this to be a distinct bird; at all events it is difficult to assign it as the young of any of the South-African Chats. So much, however, remains to be discovered concerning the plumages of these variable birds that the number of species of these grey-backed species may yet be diminished on careful observation. The describers give the following diagnosis: "upper parts to the rump pale cinereous; rump and basal portion of all the tail-feathers, except the central pair, white; shoulders white or whitish." Unlike *S. cinerea*, the second primary is not emarginate.

This Wheat-ear is, as yet, only known from Damara Land, and the typical specimens are from Hykomkap and Oosop on the Swakop River. Some mistake has occurred in the paper of Messrs. Blanford and Dresser, where they state that they have "seen three specimens marked as males in Mr. Sharpe's collection and two in the British Museum," as there are only four specimens altogether in the collections named and the only two which have the sexes marked are determined by Mr. Andersson as *females*. We may add that by the latter gentleman the species was considered to be the young of "Saxicola alpina" (his name for *S. leucomelæna*). They may yet turn out to be the immature birds of *S. anderssoni*, but we believe the young of *S. leucomelæna* to be wholly brown.

The following is the original description of the above-named authors.

Adult.—Upper parts to the rump, pale cinereous; shoulders, rump, and upper tail-coverts, white; central pair of rectrices blackish-brown; outer rectrices white with black tips, the black usually running some distance up the external pair; sides of the head and underparts very pale cinereous, becoming whitish on the abdomen; under tail-coverts white and black mixed. In some specimens the head and nape are paler grey than the back, and the interscapular feathers have dark shafts; there are also dark shafts on some of the lesser wing-coverts near the carpus. Total length, about 5·5 inches: culmen, 0·8; wing, 4·1; tail, 2·55; tarsus, 1·22.

Fig. Blanf. and Dresser, P. Z. S. 1874, pl. xxxix. fig. 1.

229. SAXICOLA CASTOR.

Hartlaub's Grey Wheat-ear.

In this species the second primary is not emarginate, and it belongs to the same group as the two foregoing, as it has the rump white, but it is entirely cinereous underneath, in which respect it rather resembles *S. pollux*.

It was procured at Colesberg by Mr. Ortlepp. Messrs. Blanford and Dresser also give Eland's Post as a locality, but on examining Mr. T. C. Atmore's specimen in the British Museum we believe it to be referable to some other species, and the authors mentioned also appear to have changed their mind, as the name has been erased, and our original determination of its being *S. monticola* is restored: it is therefore doubtless by an accident that the locality has remained standing in their paper. They describe the species as follows:—

Adult male.—Upper parts dark ashy grey; rump and upper tail-coverts white; wing and four central rectrices dusky black; outer rectrices white at the base with a black tip, which is much broader in the fourth from the outside than in the others; underparts very little paler than the back, fading a little on the abdomen; axillaries and under wing-coverts of the same colour as the breast. Culmen, 0·9; wing, 4·3; tail, 3·05; tarsus, 1·3.

Fig. Blanf. and Dresser, P. Z. S. 1874, pl. xxxviii. fig. 2.

230. SAXICOLA POLLUX.

Sickle-winged Grey Wheat-ear.

A very striking species, easily distinguishable by its emarginated second primary, as in *S. sinuata*, and by its uniform upper surface, the absence of the white rump being a remarkable characteristic. It was first procured by Mr. W. Atmore at Traka, and afterwards at Colesberg by Mr. Ortlepp. Messrs. Blanford and Dresser record specimens from Beaufort.

General colour brownish-grey; chin, flanks, belly, and sides of rump whitish; vent white; primary quills brown, secondaries the same edged with whitish; tail-feathers nearly black, the outer webs of all, except the four centre feathers, more or less white; eyelids white; bill and legs black. The female resembles the male. Length, 7'' 3'''; wing, 4''; tail, 2'' 9''.

Fig. Blanf. and Dresser, P. Z. S. 1874, pl. xxxviii. fig. 1.

*γ. Back in the males black; wing-coverts white.**

N.B.—It is with regard to the species comprised in this section of the genus that we find ourselves at issue with the authors of the valuable paper to which we have been so much indebted in the course of the preceding pages, but in stating our views it must be admitted that the changes of plumage are so little understood that it is quite possible that our conclusions will require future modification. We propose, however, the following arrangement:—

- | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|----------------------|
| a. with the tail entirely black | . | . | . | . | . | { | <i>arnotti.</i> |
| | | | | | | { | <i>shelleyi</i> |
| β. with white in the tail. | | | | | | | |
| a'. belly white | . | . | . | . | . | { | <i>monticola.</i> |
| | | | | | | { | <i>leucomelaena.</i> |
| β'. belly black | . | . | . | . | . | | <i>anderssoni.</i> |

231. SAXICOLA ARNOTTI.

Arnott's Wheat-ear.

This large and beautiful new species of Chat was sent to us from the new country called Albania, by our friend, Mr. D. Arnott, in whose honour the species has been named by Canon Tristram. Professor Barboza du Bocage has also identified as belonging to this species a Chat procured by Anchieta at Caconda in Benguela, and this identification is probably correct, as the British Museum has a specimen collected in Benguela by Mr. Monteiro. Nothing is known as yet of its habits.

General colour throughout black; wing-coverts white, as is also a stripe extending from the nostrils over each eye to the side of the head, and a few confused spots on the hinder part of the crown. Total length, 7·2 inches; wing, 3·9; tail, 3. We do not consider the typical specimen of *S. arnotti* to be in full plumage as regards its head; the male when adult has probably a pure white crown. Mr. Monteiro's bird has the crown entirely black, with a white line in front of the eye.

Fig. Tristram, Ibis, 1869, pl. vi.

* Several ornithologists having described these Chats as having white *shoulders*, it should be pointed out that the shoulder-patch is formed by the white *wing-coverts*; the scapulars, which are the *true shoulders*, are black, only a few of them externally white.

232. SAXICOLA SHELLEYI, *Sharpe*.

Shelley's Wheat-eat.

This species, which we consider to be new to science, was contained in the same collection as *Pinarornis plumosus*, viz. from the Victoria Falls. It has a totally black tail like *Saxicola arnotti*, but it differs in having the primary-coverts white, with only a narrow black tip, as well as the wing-coverts. We have already stated our belief that *S. arnotti* has in its full plumage a white cap, and our opinion is justified by the presence of a pure white crown in the present species, its near ally.

The following is a brief description of *S. shelleyi*:—Entirely black including the wings and tail; crown of head pure white; outer scapulars white at base; all the wing-coverts white, the primary and greater coverts with a narrow apical bar of black. Total length, 7·3 inches; culmen, 0·7; wing, 4·15; tail, 3·15; tarsus, 1·15. The bird described is probably the male, as accompanying it was another skin, rather browner in colour, and having the cheeks, throat, fore-neck, and sides of neck white, here and there varied with brown tips to the feathers. This may possibly be the female, but in the absence of any correct dissection it is impossible to tell.

This bird is named after our friend Mr. Edward Shelley, of Avington, one of the earliest of modern explorers in the Zambesi, and an old comrade of Livingstone's.

233. SAXICOLA MONTICOLA.

Mountain Wheat-eat.

Le Vaillant found this bird inhabiting the mountains of Namaqua Land, and never descending into the plains, except compelled by great drought. He describes them as very shy and difficult of approach, hiding themselves in holes or inaccessible precipices. We have received a few specimens from Kuruman, and from Mr. Atmore, who procured them about Traka; and we also found it ourselves at Nel's Poort. Le Vaillant's account of their habits is substantially correct. We only found them among the rocky mountain sides, breeding in the holes and crevices. Mr. H. Jackson writes to us:—"Among the eggs I now send are fourteen of *S. monticola*, all from the same pair of birds, our old friends of last year. This makes thirty-four of this sort, all or nearly all from one

pair of birds: They build in my kraal walls, and no sooner are their eggs taken than they set to work to make a new nest in a fresh place, finish it, and lay their eggs in a very short time." Eggs of this species are light bluish green, rather closely speckled with red-brown, chiefly at the obtuse end. Axis, 12"; diam. 8". Mr. Ayres observes:—"This bird I shot in the Free State of Transvaal, but I also saw one on the banks of a small stream near the Tugela in Natal. It appears to be solitary in its habits, frequenting the steep banks of rivers, and is very shy and scarce. The stomach of the one I obtained was well filled with insects." Later he writes:—"These Chats are to be found in many localities in the open country of the Transvaal, frequenting rocky situations. Their nests are generally placed in crevices within a few feet of the ground; but at some of the farmhouses they may be seen having taken possession of an unfinished Swallow's nest under the eaves, where, if not interfered with, they become exceedingly tame. Though sombre in colour, they immediately attract the sight by frequently spreading the tail, and showing its snow-white feathers. They are also frequently to be found amongst the ant-hills which are so abundant in the Transvaal." Mr. T. E. Buckley found them very common in the "High Veldt" portion of the Transvaal.

As we have been unable to distinguish the sequence of plumages in this species, we copy the full description of the male given by Messrs. Blanford and Dresser:—"Adult male. Shoulders, rump, abdomen, lower breast, upper tail-coverts, and the basal portion of all rectrices, except the central pair, white; a narrow streak from the base of the bill to above the eye grey, or mixed white and black; remainder of plumage black; quills and greater coverts brownish black, and the thigh-coverts the same, and some black is mixed with the white of the under tail-coverts. On the pair of rectrices next to the central pair the white extends about half-way from the bases; on the other rectrices only the tip is black, but this colour extends on the outermost pair some distance up the outer web. Culmen, 0·9; wing, 4·25; tail, 2·85; tarsus, 1·25.

Fig. Le Vaill. Ois. d'Afr. pl. 184, fig. 2.

234. SAXICOLA LEUCOMELÆNA.

Burchell's Wheat-ear.

Mr. Andersson writes concerning this species:—"This fin

Saxicola is abundantly met with throughout Great Namaqua Land, and also in the south of Damara Land, especially in the valley of Swakop: it is partial to localities which abound in rocks, and is found throughout the year in the dreariest and most arid spots, but never at any great distance from the hills, to which it immediately resorts on the least approach of danger. Like the rest of its family, this Wheat-car is constantly moving about, now fluttering its wings, then rapidly elevating and depressing its tail, and next all at once vibrating in every part of its body with frolic and excitement; it perches on a dry branch, a bush, a stone, or any other spot from which it can obtain a clear view of surrounding objects. It usually seeks its food upon the ground, but will also seize insects on the wing as they happen to pass within its ken and reach; if not disturbed it will return times without number, after such excursions, to the same perch." It also occurs in Benguela, where Senor Anchieta has met with it at Dombe; the same gentleman has also shot it on the Rio Coroca in Mossamedes. It likewise inhabits Natal, as Mr. T. E. Buckley shot a male specimen on the 22nd of May, 1873, during his journey through that province to the Matabili country.

When adult, this Chat is a very recognisable species, having a pure white head and white belly, but the changes of plumage and the different garbs of the young and female birds are unknown. From a study of the large series in the British Museum we believe that the young bird is brown; in this stage it is *Saxicola atmorii* of Tristram. It moults from this plumage into the full dress, but at first with a greyish head; in this stage it is *Saxicola griseiceps* of Blanford and Dresser. Our impression is that *Saxicola diluta* of the same authors is the adult female of this bird, but we are unable to say so for certain. Professor Barboza du Bocage has very kindly sent us for examination the types of his *Dromolœa albipilcata*, which is the same species as *S. leucomelœna*, but both white-headed birds are sexed by Anchieta as *females*, while the *males* have black heads with a white eye-streak. Two of these latter are also forwarded, and in this plumage they would be *S. æquatorialis* of Hartlaub, a species referred by Messrs. Blanford and Dresser to *S. monticola*. Even if the birds sent by Anchieta are really pairs, the sexes must probably be reversed, as the testimony of other observers is overwhelmingly in favour of the white-headed birds

being the *males*. Bearing in mind the difference in plumage exhibited by *S. shelleyi*, it is possible that *S. aequatorialis* is the female of *S. leucomelæna*, but this seems to us unlikely, though Anchieta's specimens were killed at the same place in the same month of the year; a larger series of birds is, however, requisite before we can finally decide on these questions.

The following is a full description of an adult male of Burchell's Wheat-ear.

Adult male.—Head and nape white, the latter very slightly washed with ashy; back and scapulars blue-black, the latter varied with white, some having the outer web only white, while others are edged with white on the inner and outer webs; feathers of the lower back black, white at the tips, where they adjoin the rump, which is pure white; upper tail-coverts also pure white, the centre ones however largely varied with black; lesser and median wing-coverts white, forming a large shoulder-patch; rest of the wing black; two centre tail-feathers black, the next two black with a white base to the inner webs; all the rest of the feathers white with irregular markings of black near the tips, not the same in shape in any two feathers, sometimes being a spot, sometimes an irregular marginal band; a narrow black line drawn from the base of the nostrils enclosing the eye, lores, sides of face, ear-coverts, and sides of neck, throat and breast, blue-black, as also the flanks and under wing-coverts; whole of the lower breast, abdomen, and under tail-coverts pure white; thighs black, the feathers narrowly tipped with greyish-white; bill and legs black; iris dark hazel. Total length, 6·4 inches; culmen, 0·8; wing, 4·3; tail, 3·1; tarsus, 1·2.

Fig. Blanford and Dresser, P. Z. S. 1874, pl. xxxvii.

235. SAXICOLA ANDERSSONI, *Sharpe*. Andersson's Wheat-ear.

This bird may be described as very similar to *S. leucomelæna*, but distinguished by the entire under surface being black. Total length, 7·6 inches; culmen, 0·85; wing, 4·6; tail, 3·3; tarsus, 1·3. The specimens before us are five in number, one from Colesberg, apparently young, with a dusky grey head, and two from Damara Land, one (a male) having been killed at "The Reeds," Swakop

river on the 8th of December, 1860, and the other, also a male, at Koy's Fountain, Great Namaqua Land, on the 18th of June, 1862. The latter is in winter plumage, and answers to the "*S. griseiceps*" stage of *S. leucomelæna*. The British Museum also possesses a pair of wholly grey birds (males) killed at Koy's Fountain on the 18th and 21st of June, 1862, and marked by Mr. Andersson as the young of the same species. Lastly, there is in the same collection a specimen with the plumage glossy black, and only a narrow white line on the head, from the beak to the fore-part of the eye instead of the white head. It bears a label, "Male. Aamhoup, June 28, 1861," and like all his other Chats, is referred by Mr. Andersson to "*S. alpina*." This bird bears the same relation to the white-headed birds of *S. anderssoni*, that *S. æquatorialis* does to *S. leucomelæna*, but whether it is only a stage of plumage, or a different species, we must leave to future observers to discover; as in the case of Senor Anchieta's black-headed birds, it is marked a *male*.

236. PRATINCOLA TORQUATA.

South African Stone-chat.

Pratincola pastor, Layard, B. S. Afr. p. 111 (1867).

The 'Bontrochie' is abundant throughout the colony, occurring, as Captain Shelley remarks, commonly from the Cape to Durban. Victorin procured it at the Knysna in April and again from July to September, and Mr. Andersson also met with it there. Mr. Rickard notes it from Port Elizabeth and East London. In Natal both Captain Shelley and Mr. Ayres have recorded it, and the latter gentleman says that it is common throughout the Transvaal, breeding in walls and banks. Mr. F. A. Barratt likewise met with it at Macamac and we have seen a specimen said to have been shot in the Zambesi district, though it is not included in Dr. Kirk's list. Mr. Andersson writes:—"This bird is common in Little Namaqua Land: but, to the best of my recollection, I have never seen it either in Great Namaqua or in Damara Land, though it is not unfrequent at Lake N'gami:" from this latter locality we have examined skins collected by Mr. Chapman. Although not included in the Damara list, it occurs farther north, as Senor Anchieta has procured it at Huilla in Mossamedes and also at Caconda in Benguela.

It inhabits open plains covered with low brushwood, generally

going in pairs, male and female. We found it breeding at the Berg River in September. The nest was like that of *Motacilla capensis* and was placed in a head of rank grass near the river-side. Eggs three, light verditer blue indistinctly clouded with faint reddish markings which coalesce and form a ring at the obtuse end: axis 9". diam. 7".

Adult male.—Head and half way down the throat black, sprinkled with yellow; lower throat and breast rufous; sides of the neck, shoulders and rump white; belly and flanks pale rufous; eyes dark hazel. Female less brilliant in colour. Length 5" 6"; wing 3"; tail, 1" 9".

Fig. Le Vaill. Ois. d'Afr. pl. 180.

237. AEDON CORYPHEA.

Coryphée Warbler.

Bradypterus coriphæus, Layard, B. S. Afr. p. 100 (1867).

This bird, which is called by the colonists 'Bosch-creeper,' and 'Katlachter' ('Slang verclicker' of some), is common throughout the colony. Victorin procured it in the Karroo in December and January, and according to Mr. Rickard it is common at Port Elizabeth. Mr. T. C. Atmore sent specimens from Hopetown. Mr. Andersson gives the following note:—"I do not remember to have seen this species in Damara Land, but I first observed it in the central part of Great Namaqua Land, and from thence southward it became more abundant. It seems partial to low bushes, and may be seen running along the ground from one bush to another with wonderful rapidity; it also usually adopts this mode of endeavouring to make its escape when pursued. The male has a very agreeable song during the breeding season; it is very brusque in its movements, and frequently utters a chirping noise, at the same time elevating and spreading its tail Peacock-fashion over its back. The food of this species consists of insects and berries." It frequents bush-covered land, and well deserves its trivial colonial name, being always found running about the lower parts of the shrubs, very rarely flying over the tops of them. It nests also at the foot of a bush, forming a cup-shaped, rather flat structure, composed of hair, wool, and bents of dry grass. The eggs are a lovely verditer, irregularly blotched with brown and usually laid in September. Axis 9"; diam. 6".

Captain Shelley also observes;—"In habits it is very lively, now flitting for a short distance along the path, then running fleetly through the stunted bush, stopping at intervals and erecting and expanding its tail, the white on the outer feathers contrasting well with the dark sombre hues of its general plumage."

General colour, cinereous, darkest on the crown of the head, and tinged with rufous on the lower part of the back, wings, and two centre tail-feathers; beneath paler, with belly, vent, and a broad stripe down the throat, white; a narrow white stripe extends over the eye; tail-feathers black, broadly tipped with white; bill and legs black, iris dark brown. Length, 6'; wing, 2" 9"; tail, 2" 6".

Fig. Le Vaill. Ois. d'Afr. pl. 120.

238. *AEDON LEUCOPHRYS.*

White-eyebrowed Warbler.

Sir Andrew Smith states that this Warbler inhabits arid districts, thinly covered with dwarf trees. Le Vaillant writes that he found it on the borders of the Gamtoos, Sunday, and Swartkop Rivers, among the mimosa bushes that fringe these streams. The male has a moderate power of song, and the female deposits four or five light-green eggs, spotted with brown, at the obtuse end, in a nest which is placed in the midst of a thick bush. We have received it from Kuruman, and Mr. T. C. Atmore found it in some abundance at Eland's Post in the Eastern Province, and he says that "it has a fine mellow note or whistle, which it utters while perching on the summit of trees or shrubs." Mr. Buckley states that it is one of the commonest Warblers in the Bamangwato district, and in the Transvaal, writes Mr. Ayres, "these birds inhabit the bush, but appear to be rather scarce. Their food consists of insects; and I noticed one feeding on the ground. In habits they appear much to resemble the Warblers." According to Mr. Andersson, "This is a pretty common species in the middle and northern parts of Damara Land, and also further to the northward, being very common near Ombongo. During the pairing and breeding season it occasionally sings most exquisitely; and it, moreover, has the power of imitating almost every other bird to be found in its vicinity. It forms its nest, in November and December, on the lower branches of small bushes, rarely more than one or two feet from the ground; the nest is composed of rough grasses, and is lined with material of the same kind, but of a softer texture. The eggs are two in number."

Senor Anchieta has forwarded it from Humbe, on the Cunene river, where, he states, it is called by the natives "*Piria*."

Brown above; posterior part of back and rump, deep reddish-orange; chin, middle of abdomen, and vent, pale cream-colour; breast light sienna yellow, streaked with umber-brown; wing feathers edged with greyish-white; eyebrows pale cream-colour; tail liver-brown, the feathers rusty at their edges, and white at the tips, most visible on the outside feathers, all but obsolete on the two centre ones. Irides hazel. Length, 6' 3"; wing, 2' 9"; tail, 3' 1".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 49.

239. AEDON PENA.

Sir Andrew Smith's Warbler.

Sir Andrew Smith, who discovered this species, does not indicate the locality where he procured it, but we have received it from Mr. Moffat at Kuruman. Mr. Ortlepp has also procured it near Colesberg, and Mr. T. C. Atmore met with it in Griqua Land in May, 1871. Mr. Buckley observes:—"Common throughout the north of the Transvaal and in the Bamangwato district, where they may be found along the banks of the sand rivers; they are very tame." We have recently received it from the neighbourhood of Potchefstroom, through the kindness of Dr. Exton of Bloemfontein, who sent us four specimens. Mr. Ayres says that in the Transvaal they are "by no means plentiful; and the two I obtained were very shy and difficult to approach. Their stomachs contained insects. This species is found amongst thorn-trees and high grass, and when in motion constantly jerks the tail, showing to advantage the broad white tips of the feathers." We extract the following note from Mr. Andersson's work: "This bird is pretty generally distributed over Damara and Great Namaqua Land and the parts adjacent. Its habits are exactly like those of the preceding species; and I know no birds which they both resemble so greatly in manner, habits, food, &c. as those of the genus *Saxicola*. The present species spends much of its time on the ground and amongst the roots of bushes; it runs with great swiftness, and raises and droops its tail in quick succession, but does not expand it; at times it stands quite vertically, with its whole body vibrating with excitement, whilst it rapidly utters a succession of harsh, jarring chirps.

"Two nests of this species, taken on the 5th and 6th of January, contained two eggs each: the nests were composed of grass, and

lined with fine, soft tendrils; they were built in thorn-bushes, and placed from twelve to eighteen inches above the ground."

In a letter received from Mr. Ortlepp, that gentleman observes, "These birds have the habit of cocking up their tails for a second or two after settling on a branch, uttering a short lively note and dancing about very much like our common *A. coryphæa*, which they resemble in general habits."

Head brown; neck rusty-grey; anterior half of back ruddy-brown; hinder part of back, rump, upper tail-coverts, and the basal two-thirds of tail, clear reddish-orange; last third of tail-feathers, liver-brown, edges rusty, four outer ones of each side broadly tipped with white; chin and throat dull white: breast, belly, and vent, pale cream-yellow. Length, 6"; wing, 2" 9"; tail, 2" 9".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 50.

a. with ten tail-feathers (Drymæca).

240. DRYMÆCA FLAVICANS.

Black-chested Grass-Warbler.

Plate VIII.

Drymoica pectoralis and *D. pallida*, Layard, B. S. Afr. p. 86.

The principal character which distinguishes this long-tailed Grass-Warbler is the yellow coloration of the under surface which exists at all ages: the tail-feathers also never have a subterminal blackish spot, which prevents the species being mistaken for *D. affinis*, or *D. maculosa*. The plate represents three of the plumages of this bird, but it has not yet been satisfactorily proved whether the black chest-band is a sign of age or is merely a seasonal plumage; it seems certain, however, that the young birds never have it, and therefore it is probably peculiar to the adults, but by the gradual way in which it seems to be assumed, we conjecture that it is worn only during a certain season of the year.

Sir Andrew Smith discovered the first specimens of this species near Latakoo. We have received it from Mr. T. C. Atmore from the neighbourhood of Hopetown, but as yet we have not seen a specimen from Natal, though Mr. Gurney recorded it as occurring in Mr. Ayres' early collections. In the Transvaal, however, it is much more numerous, and our excellent friend, Dr. Exton, has just forwarded us several specimens procured in the vicinity of Potchefstroom. Mr. Ayres writes: "This delicate little bird is common



DRYMÆCA FLAVICANS.



about the hedgerows in Potchefstroom. Ground covered with dense masses of tall weeds is generally chosen by it for its breeding place. The nest is made of fine strips of green grass very curiously curled and twisted together, attached to weeds some two or three feet from the ground; it is of oval shape, well closed in, with the exception of small opening on the upper side, and is lined with fine white down taken from grasses and plants. The eggs, which are from two to four in number, vary much in colour."

Numerous examples collected by Mr. Andersson are in the British Museum. He states that he obtained it in Damara Land and the neighbourhood of the Okavango, and we have seen specimens of his shooting from Walwisch Bay, Otjinbinque, Swakop River, Elephant Vley, and Ondonga. One example is from Great Namaqua Land, and Sir A. Smith also procured the original examples of *D. pallida*, which is not distinct from *D. flavicans*, in the same country "about 300 miles north of Cape Town."

Mr. Andersson observes: "I have found the nests of these birds (usually containing three, but sometimes four, eggs) at various dates, extending from December 20th to April 1st. The nest is very light and graceful, composed of fine grass both externally and internally, and built on a low bush a few feet from the ground."

Adult.—General colour above pale brown, a little deeper on the crown, the feathers on the forehead above the eyebrow dark brown; rump slightly more fulvous brown, the upper tail-coverts rather rufous brown; tail pale brown with dusky obsolete bars across it, very indistinct, no darker sub-terminal spots, the feathers having only rather lighter edges; wings dark brown, the coverts edged with ashy fulvous, the edge of the wing and the margins of the bastard-wing plumes whitish; quills externally edged with rufous brown, lighter towards their tips; lores and feathers over the eye dull white; cheeks and ear-coverts also dull white, the latter brownish on their hinder margins; throat white; across the breast a broad band of dark brown; rest of under surface pale yellow; thighs tawny; under wing-coverts pale tawny buff, the quills ashy brown below, edged with rufous along the inner webs; "bill jet-black: legs and toes flesh-colour: iris brownish yellow" (*Andersson*). Total length 5·7 inches, culmen 0·55, wing 2·05, tail 2·8, tarsus 0·8.

The above is a supposed male. A dissected female from Ondonga

measures as follows: Total length 4·8 inches, culmen 0·55, wing 2·05, tail 2·3, tarsus 0·85.

241. *DRYMÆCA SUBSTRIATA*. White-breasted Grass-Warbler.

After much consideration we have come to the conclusion that this species is distinct, both from *D. maculosa*, and *D. flavicans*. It resembles the latter in wanting the sub-terminal black spot to the tail-feathers, but it differs from it in being white below with rufous flanks; the breast is very narrowly streaked with black. Sir Andrew Smith met with but few of these birds, and those only on the banks of the Oliphant River, about one hundred miles north of Cape Town. They were usually found in thickets composed of high brushwood or dwarf trees, in which they were seen rapidly flitting from branch to branch, apparently in quest of insects, which constitute their food.

Mr. Atmore procured this species, with its nest and eggs, at Traka; the latter are white, with the faintest tinge of green, marked with large blotches of dark and light-brown: axis 8''' ; diam. 5½''' ; We have also received it from Mr. Ortlepp at Colesberg.

The following is a description of the typical specimen in the British Museum. Above light rufescent brown, more dusky on the forehead; least and median wing-coverts washed with grey; rest of the coverts and secondaries externally of the same rufous brown as the back, the primaries dull brown with narrow margins of paler brown; tail uniform brown; lores dull white; round the eye a distinct ring of white feathers; ear-coverts washed with light brown; sides of neck greyish; cheeks, throat, and under parts dull white, the sides of the body washed with fulvous, the lower flanks, thighs, and under tail-coverts tawny buff; the breast narrowly streaked with dark brown down the centre of each feather; under wing-coverts dull white, as also the edge of the wing; quills ashy brown below, buffy whitish along the edge of the inner web; bill dark horn colour; legs, toes, and claws pale buff-orange, the latter brown at the point. Total length 5·5 inches, culmen 0·5, wing 2·15, tail 3·1, tarsus 0·85.

Fig. Smith, Zool. S. Afr. Aves, pl. 72, fig. 1.

242. *DRYMÆCA OCULARIA*. Rufous-cared Grass-Warbler.

This is one of the most distinct species of *Drymæca*, and it may

be distinguished by its rufous-brown back, broadly streaked with black, and by its bright chestnut eyebrow and ear-coverts. Sir Andrew Smith writes :—" This bird has a rather extensive range in South Africa, being found, though sparingly, among the brushwood in the northern districts of the Cape Colony, and between those and the Tropic of Capricorn. It feeds upon insects ; and, in quest of them, it is to be seen flitting from branch to branch in the most arid and barren situations." Victorin procured it in the Karroo in January and February, and we have ourselves found it in one particular locality near Mr. Jackson's residence at Nel's Poort, Beaufort. Mr. Ortlepp says that it is plentiful on all the flats near Colesberg. We have received several specimens from Kuruman, and we observed it ourselves on the road between Grahams Town and Table Farm. Mr. T. C. Atmore has sent us specimens from Hope Town, and the following note is taken from Mr. Ayres' paper on the birds of the Transvaal :—" There is very little difference in plumage between the sexes ; but the rufous patch on the cheeks is much lighter in the female than in the male. I first met with this species amongst the low bushes on the banks of the Vaal river, and between that and the Hartz, where they were pretty plentiful, hopping briskly about amongst the thickets, with the active habits common to most birds of this genus."—The Editor possesses a pair of specimens obtained by the late Mr. Andersson on the Hountop River in Great Namaqua Land, and the same gentleman writes :—" This species is very sparingly found in Damara Land, but is more common in some parts of Great Namaqua Land. It is generally met with singly or in pairs ; and it is usual to find it amongst the most arid scenes, hopping slowly about amongst the branches of low bushes in search of insects."

In its method of flight and in its search after food it exactly resembles the common species *D. maculosa*. Its nest is also similar, and the eggs are pale blue unspotted : axis, 6''' ; diam., 5'''.

The following description is that of the type-specimen in the British Museum.

Adult Male.—Above sandy brown, very distinctly striped with black on the back, less plainly so on the head, which is rather darker brown ; wing-coverts dark brown margined with dull sandy, the quills also dark brown narrowly margined in the same manner as the coverts ; rump and upper tail-coverts exactly the same as the back, the mesial streaks rather broader on the latter ; tail deep brown,

waved with dusky cross-bars in certain lights, the centre tail-feathers edged with ashy fulvous, the outer ones with deep buff, more broadly on the external feathers; lores, eyebrows, feathers round the eye and ear-coverts bright chestnut-red; cheeks and entire throat white; across the chest a distinct collar of black; rest of under surface buffy white inclining to dull tawny buff on the sides of the body; thighs blackish; under tail-coverts dark brown, margined with ashy fulvous; on the sides of the body a few hair-like streaks of dark brown, a little broader on the flanks; under wing-coverts tawny buff; "bill black, legs and toes flesh-coloured, iris ochry-brown" (*Andersson*); iris reddish hazel (*T. C. Atmore*). Total length 5 inches; culmen, 0.5; wing, 1.9; tail, 3.05; tarsus, 0.85.

Adult Female.—Similar to the male. Total length, 5.5 inches; culmen, 0.5; wing, 2.05; tail, 3.05; tarsus, 0.85.

Fig. Smith, Ill. Zool. S. Afr. Avcs, pl. 75, fig. 1.

243. DRYMŒCA AFFINIS.

Tawny-flanked Grass-Warbler.

Drymoica affinis et *D. melanorhyncha*, Layard, B. S. Afr. pp. 89, 92.

This species has a dark subterminal spot on the tail-feathers at all ages, and is always perfectly uniform on the under surface; the abdomen is whitish without any tinge of yellow, and the flanks are fulvous brown. In the breeding plumage it has a black bill, which has caused it to be confounded by some authors with *D. melanorhyncha* of Western Africa, but this black bill is not a specific character, as it is evidently gradually assumed. The young birds, and probably those in winter plumage have the bill browner: in winter the birds have distinct rufous edgings to the wing-coverts, and are otherwise browner in appearance. Sir Andrew Smith says that it "inhabits dry flats in the interior of South Africa, and flits to and fro, in search of insects, amongst the shrubs with which they are more or less coated." We have not seen it from any locality south of Natal, where Mr. Ayres found it in 1860, building among stalks of high weeds. Mr. T. L. Ayres has forwarded several specimens to Captain Shelley from the neighbourhood of Pinetown; these were all in warm breeding plumage and were killed in February and March. In the Transvaal, writes Mr. Thomas Ayres, "this species frequents weeds, high grass, and low bush, and is generally distributed over the country." We have examined

specimens in the British Museum, collected by the late Mr. Andersson at Ovaquenyama, in May, 1867, and a young bird from Elephant Vley, shot on the 8th August, 1859. There is also a specimen of a *Drymæca* in the British Museum collected by Livingstone at Tete in the Zambesi district, which agrees with the description of Dr. Peters' *Drymæca bivittata*. The latter we think must be a synonym of *D. affinis*, to which species the above-mentioned Zambesi skin certainly belongs.

Adult in breeding plumage.—Above ashy brown; inclining rather to fulvous brown on the rump and upper tail-coverts; wings brown, the coverts edged with ashy brown, the quills margined with dull rufous; tail light ashy-brown, tipped with white, with a distinct blackish subterminal bar on all but the two long centre tail-feathers; lores and a broad eyebrow dull yellowish white; feathers in front of the eye and ear-coverts ashy-brown, the latter dull white on the lower parts, like the cheeks; under surface of body pale yellowish white, deepening into tawny buff on the sides of the body; thighs and under wing-coverts tawny; sides of the upper breast washed with greyish; bill black; legs flesh colour; iris brown. Total length, 4.9 inches; culmen, 0.55; wing, 1.9; tail, 2.4; tarsus, 0.9.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 77, fig. 1.

244. *DRYMÆCA MACULOSA.*

Cape Grass-Warbler.

Drymoica capensis, Layard, B. S. Afr. p. 92.

Like the foregoing bird this species has a subterminal spot on the tail-feathers, but it always has a distinct wash of yellow on the under parts and on the breast, and is streaked with black at all ages. It is the common species of the Cape Colony, and Mr. Andersson writes as follows:—"I have reason to think that this bird is common in some of the southern parts of Great Namaqua Land; further south, on the west coast and within the Cape Colony, I have frequently met with it; and in the neighbourhood of Cape Town it is exceedingly common, a pair or two inhabiting almost every garden.

"It is found singly or in pairs; and its whereabouts is easily discovered by the harsh querulous notes that it is in the habit of uttering almost incessantly. It builds in low bushes; and the nest is composed of moss, wool, and other soft material, which are artistically and strongly put together. This species feeds on insects, searching for them either on the ground or amongst the low bushes which

form its favourite resort; it runs with great rapidity along the ground, and steals through tangled foliage with equal celerity."

Victorin records this species from the Karroo in January, and from the Knysna in May and November. Mr. Andersson also procured it at the latter place in January and February, and we have seen a specimen of his shooting, from Kugel Fountain, Little Namaqua Land, and bearing date August 6th, 1862. We have received it also from Colesberg and Swellendam, and it extends to Port Elizabeth, where Mr. Rickard procured it in May, 1868.

Adult male.—Above dull earthy brown, the wings a little darker than the back, with indistinct rufous-brown margins to the quills, the primaries narrowly edged with whity brown; tail-feathers light brown with pale whitish tips and a subterminal bar of black; lores yellowish white, as also a distinct eyebrow; cheeks and sides of face pale yellowish with distinct triangular spots of black, obscuring the yellow of the ear-coverts which are also brown on their hinder margin; under surface of body pale yellowish, with distinct longitudinal spots of black, larger on the breast and smaller on the throat and on the sides of the body, which are washed with pale tawny brown; the abdomen unstreaked, pale yellow; thighs dull tawny, the under tail coverts also pale tawny brown with indistinct darker centres; wings light tawny buff, the lower series ashy brown at tips like the lower surface of the quills which are edged with pale rufous along the inner web; bill flesh-colour, shading into dark brown on the upper mandible and the tips of the lower one; legs flesh-colour; iris brownish yellow. Total length, 5 inches; culmen, 0·55; wing, 2·0; tail, 2·75; tarsus, 0·85.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 76, fig. 1.

245. *DRYMŒCA HYPOXANTHA*, Sharpe.

Saffron-breasted Grass-Warbler.

This new species, as we regard it, is the eastern representative of *D. maculosa*, and differs from it in the deep yellow colour of the throat and abdomen, and in the very narrow blackish streaks on the breast. We have received several specimens from Mr. T. C. Atmore killed in the neighbourhood of Eland's Post in the Eastern Province, and Captain Shelley has also examples from the neighbourhood of Pinetown in Natal. We believe that it is this species of which Mr. Ayres speaks in his early papers on the ornithology of Natal, under the name of *D. substriata*. He writes as follows:—

"I found a family of this *Drymoica* in July (midwinter here) about forty miles inland, amongst some scrubby bush; also a solitary individual some time after, in some high sedgy grass. These birds seem much to resemble *Drymoica subflava* in habits and appearance. Their food consists of small insects." Mr. Barratt procured a specimen at Macamac, and Mr. Gurney has recently presented to the British Museum two specimens obtained in the same district by Mr. Ayres on the 3rd December, 1874.

Adult male.—Above brown, nearly uniform everywhere, the head indistinctly mottled with darker brown centres, the lower back and rump slightly washed with olive; wings brown, duller than the back, with paler edgings to the feathers, the primaries narrowly margined with whity brown; tail light brown, waved across with dusky under certain lights, the feathers narrowly tipped with white, with a faint indication of a subterminal blackish bar; lores and a very distinct eyebrow, as well as a circlet of feathers round the eyes, pale yellow; a few plumes between the eye and the base of bill dusky brown, as also the upper margin of the ear-coverts; rest of the sides of the face and throat, lemon yellow, entirely unspotted; rest of under surface of body yellow, unspotted on the abdomen, but distinctly streaked with black down the chest and on the sides of the body; flanks washed with yellowish brown; thighs and under tail-coverts tawny buff; under wing-coverts also tawny buff, the edge of the wing white; quills brown below, the inner web edged with tawny rufous; bill black; legs flesh-colour; iris light brown. Total length, 5·3 inches; culmen, 0·55; wing, 2·1; tail, 2·7; tarsus, 0·9.

Adult female.—Similar to the male, but smaller. Total length, 4·7 inches; culmen, 0·5; wing, 1·95; tail, 2·2; tarsus, 0·85.

With twelve tail feathers (Oisticola).

246. CISTICOLA NATALENSIS.

Natal Fantail Warbler.

Drymoica natalensis, Layard, B. S. Afr. p. 87 (1867).

Entirely confined to Natal and the surrounding districts, but as yet not known within the limits of the Cape Colony, nor to the eastward in the Transvaal. Its large size, stout bill and tawny colouring seem to be its most distinguishing characteristics.

Sir Andrew Smith writes as follows:—"Inhabits the neighbourhood of Port Natal, and the specimen described was shot upon reeds, among which it was flitting to and fro in search of insects, which, from the ingesta found in its stomach, appeared to have been

its sole food." Mr. Thomas Ayres also observes:—"This species frequents long coarse grass in the valleys and on the hill-sides; its flight is tolerably strong, and it does not attempt to hide when disturbed, but at once takes wing." We have seen a considerable number of specimens from the neighbourhood of Pinetown collected by Mr. T. L. Ayres and now in Captain Shelley's possession. Mr. T. E. Buckley shot a male near Pietermaritzburg on the 2nd of May, 1873, and writes:—"I only observed this one specimen, which I shot among some small reeds by a small stream: it was rather shy." During his recent excursion to south-eastern Africa he also procured two examples in Suaziland on the 19th of June, 1876.

Adult male.—General colour clear tawny brown, with paler and more fulvous margins to the feathers of the back, all the upper surface broadly streaked with black down the centre of the feathers, these black streaks slightly shaded on each side with rufous; wing-coverts dark brown, externally fulvous, rather inclining to ashy buff on the median series; primaries dark brown, tipped with whitish and externally sandy rufous, the inner secondaries blackish in the centre, edged all round with broad margins of tawny buff; rump uniform ashy fulvous; upper tail-coverts tawny buff, mesially streaked with blackish; the tail-feathers dark brown with margins of clear tawny buff, the centre feathers paler at tip with a faintly-indicated subterminal bar of black: this subterminal bar very distinct and broad on all the other feathers, which are conspicuously tipped with pale tawny-buff, the outermost feathers being externally edged with the latter colour and only having the black subterminal bar on the inner web; lores dull whitish; feathers round the eye light fulvous, as also a very faint eyebrow; cheeks and sides of face yellowish buff, with a shade of brown on the ear-coverts; throat white, as also the centre of the abdomen; rest of under surface of body tawny yellow, browner on the sides of the upper breast; the under wing- and tail-coverts tawny, the edge of the wing whitish: quills ashy brown below, the inner web rufous from the base upwards; thighs deep tawny rufous; "bill yellow, the culmen black; legs light brown; iris dark hazel" (*Buckley*). Total length, 6·5 inches; culmen, 0·75; wing, 2·9; tail, 3·28; tarsus, 1·2.

The female is smaller. Total length, 5·6 inches; culmen, 0·6; wing, 2·45; tail, 2·7; tarsus, 1·05.

Fig. Smith, Ill. Zool. S. Afr. Aves, Pl. 80.

247. CISTICOLA CURVIROSTRIS.

Brown Fantail Warbler.

Drymoica curvirostris, Layard, B. S. Afr. p. 93.

This species is a little smaller than the foregoing, which it resembles in its stout bill. We have only seen it from Natal, where it is one of the most recognisable of the Grass-Warblers on account of its brown coloration and large size. Mr. Thomas Ayres writes:—“These birds frequent long grass in the more open country; their flight is comparatively strong; during the breeding season they are fond of mounting high in the air, uttering at the same time a very loud and harsh chucking note; their food appears to consist of crickets and other good-sized insects.” We have also seen several skins sent to Captain Shelley by Mr. T. L. Ayres from Durban and Pinetown.

Adult male.—General colour above brown, all the feathers margined with ashy buff, giving a strikingly grey appearance to the upper surface, the head more or less uniform brown without dark mesial streaks; the feathers of the hinder neck slightly margined with sandy colour; wing-coverts brown, the edgings to the majority clear grey, the least and some of the greater series margined with sandy; quills dark brown with indistinct light tips, the primaries edged with rufous sandy, the inner secondaries margined all round with light buff; rump and upper tail-coverts nearly uniform greyish, the latter with dark brown bases, or centres to the feathers, giving a streaked mottled appearance; tail ashy brown, tipped with white and faintly margined with pale sandy; the white tips indistinct on the two centre feathers which have a plain subterminal bar of black, as also have all the other feathers; lores yellowish white; eyebrow greyish; sides of face dull white, the ear-coverts washed with greyish brown and narrowly streaked with white down the shaft; sides of neck greyish; throat and centre of the body white; the sides dull tawny yellow, the upper breast laterally ashy brown; thighs deep tawny. Total length 6 inches, culmen 0.65, wing 2.85, tail 2.4, tarsus 1.15.

Adult female.—Similar to the male, but much smaller. Total length, 4.8 inches; culmen, 0.6; wing, 2.35; tail, 2.0; tarsus, 1.05.

248. CISTICOLA CHLORIS.

Wahlberg's Fantail Warbler.

This species is unknown to us, and we do not know whether it should be included in the genus *Cisticola* or in *Drymæca*. Professor

Sundevall (Ofv. K. Vet. Akad. Forh. Stockholm, 1850, p. 101), places it in the latter genus. Its habitat is said to be in "Kaffraria," where it was discovered by Wahlberg. The following is a translation of the original description:—

Adult male.—Belly unspotted, entirely yellow; back and head fulvous grey, narrowly spotted with blackish; bill pale, strong, the culmen strongly arched as in *D. curvirostris*; feet large, pale; quills margined with greyish-buff; tail-feathers dusky, with a broad black spot before the fulvous tip, the tips of the feathers sharpened, but soft in texture. Total length, 6 inches; wing, 2·7; tarsus, 1·15; tail, 2·5; bill from front, 0·55; height of latter, 0·2.

249. *CISTICOLA FULVIFRONS.*

Buff-fronted Fantail Warbler.

This is really a very distinct species of Fantail Warbler, and apparently one of the rarest in South Africa, as we have only seen three specimens of it, and all from Natal. The British Museum contains two of these and the third was shot by Captain Shelley, near Durban, on the 14th of April, 1874.

Adult female.—Head pale-rufous, inclining to ashy-brown on the nape; the back and scapulars ashy-brown, especially the mantle, the rest broadly black in the centre of the feathers, some of which are edged with sandy-buff; lower back, rump and upper tail-coverts ashy grey, the latter rather more dusky with slightly paler edges; wing-coverts ashy brown with black centres, the median series with rufous tips, the greater coverts tawny rufous with long black centres; quills dusky brown, externally edged with tawny rufous, paler towards the tips of the primaries, the inner secondaries edged all round with ashy; quills dark brown, edged with ashy and broadly tipped with white, before which the brown deepens into a black bar, which is apparent on all but the two centre feathers, these having only a dusky subterminal spot, and no white tips; lores and a faint eyebrow buffy-white; ear-coverts very pale fulvous brown, clearer buff on the lower parts adjoining the cheeks, which are yellowish; throat and centre of abdomen, white; breast whitish, washed with pale yellow, the flanks slightly shaded with ashy-brown; thighs tawny; under wing-coverts whitish with a pale wash of fawn-colour; bill dusky; tarsi and feet pale; iris light reddish-brown. Total length, 5 inches; culmen, 0·85; wing, 2·1; tarsus, 0·95.

The male is somewhat larger, measuring as follows:—Culmen, 0·6; wing, 2·35; tarsus, 1·0.

250. CISTICOLA TINNIENS.

Le Vaillant's Fantail Warbler.

Drymoica levaillantii, Layard, B. S. Afr. p. 90.

This is one of the most wide-spread of the Warblers in South Africa. It is common near Cape Town. Sir Andrew Smith procured it some distance north of the Orange River, and we have likewise received it from Swellendam, Colesberg, and we found it breeding about the Berg River in September.

Victorin procured it at the Knysna in May, September, and October. Lieut. H. Trevelyan has recently met with it near Kingwilliam's Town, and we have seen specimens obtained near Eland's Post, by Mr. T. C. Atmore. It is not uncommon in Natal, and Mr. Thomas Ayres observes in a letter to Mr. Gurney:—"Some of the notes of the pair sent were very loud, and exactly resembled those of *Juida phœnicoptera*, so much so, that I was astonished to hear, as I thought, one of the latter birds calling from the midst of a rushy swamp without a single tree in the vicinity." Mr. T. E. Buckley met with it on the Buffalo River, on the 7th June, 1876, and again in Suaziland on the 19th of the same month. The British Museum has recently received from Dr. Exton several specimens from the neighbourhood of Potchefstroom in the Transvaal, and it occurs as high up as Macamac, from whence Mr. Gurney lately received a skin shot in October, 1873. Respecting its breeding habits in the Transvaal, Mr. Thomas Ayres writes as follows:—"The nest of this species is attached to the upper parts of tall weeds, amongst the leaves; it is composed of very fine wool and spiders' webs mixed with dry grass, rather roughly woven together; the inside is lined lightly with the feathery down of some sort of wild flowers. It is oval in shape, with the entrance on the upper side, and has altogether a white, light, and pretty appearance. The eggs vary much in colour, some being pure white with dark pink spots, others pinkish-white with very fine small spots of rather darker pink; others, again, are pale sky-blue, blotched and spotted with pale pinkish-brown." Mr. Andersson observes:—"I found this bird by no means uncommon in the neighbourhood of the Okavango; its favourite haunts seem to be along the sedgy streams and amongst the rank vegetation of marshy localities. It flits quickly from reed to reed in quest of insects, and is a comparatively tame species."

We have examined the typical specimen of *Cisticola elegans* of Messrs. Hartlaub and Finsch, which we find to be only the female of *C. tinniens*.

The following is a description of this identical specimen kindly lent to us by the Bremen Museum.

Head and nape entirely rufous, with the exception of the centre of the crown, which is obscured by broad streaks of dull black; back black, slightly streaked with pale ashy buff, some of the feathers edged with this colour; the wing-coverts also black, broadly edged with ashy fulvous slightly inclining to rufous; quills brown, broadly margined with dull rufous, so that the external aspect of the wing is of this colour, the inner secondaries black like the back, and margined in the same way with fulvous; lower back and upper tail-coverts black, with very broad margins of sandy or rufous buff; tail-feathers brown in the centre broadly margined with dull rufous, all but the two centre feathers having a broad bar of blackish before a pale fulvescent tip, the outermost edged with pale fulvous externally; lores and a very distinct eyebrow pale rufous buff; sides of face light fulvous, with a few whitish streaks on the ear-coverts, the hinder margin of which incline to rufous like the sides of the neck; throat and under parts generally fulvescent as also the cheeks, on the latter being a few indications of dusky tips to the feathers; the chest and sides of the body darker and more ashy fulvous, the sides of the breast and flanks very broadly streaked with black, extremely pronounced on the flanks; under tail-coverts uniform ashy fulvous; thighs orange rufous; under wing-coverts pale tawny buff; "bill black, the lower mandible reddish, but black at the extremity; legs pale flesh-colour; iris brown" (*Andersson*). Total length, 5 inches; culmen, 0.45; wing, 1.95; tail, 2.15; tarsus, 0.8.

The male is a little larger, and measures: total length, 5.4 inches; wing, 2.15; tail, 2.55; tarsus, 0.85.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 73, fig. 2.

251. *CISTICOLA SUBRUFICAPILLA*. Small Grey-backed Fantail.

Drymoica subruficapilla, Layard, B. S. Afr. p. 91.

This Warbler may be distinguished by its grey back and rufous head, both distinctly streaked with black down the centre of the feathers; the sides of the body are grey.

Its range is very restricted, as it seems to be confined to the

Cape Colony, not ranging higher north than Little Namaqua Land. It is not uncommon near Cape Town, and Mr. Andersson met with it at the Kuysna. From George Mr. H. Atmore has forwarded it, and Mr. W. Atmore from Swellendam. We have ourselves seen it along the river Zonder End, and obtained it at the Berg River. Mr. Rickard possesses one shot by himself near Port Elizabeth, and another from near East London. The late Mr. Andersson also met with it in Little Namaqua Land. Mr. H. Jackson has sent its eggs from Nel's Poort: the latter are white, faintly tinged with green, and dotted with small red-brown and purple spots, chiefly in the form of a ring at the obtuse end. Axis, 7''; diam. $5\frac{1}{2}$ ''.

Sir Andrew Smith writes:—"This bird occurs in various districts of the Cape Colony, and is either found upon brushwood or among rushes or reeds. It feeds upon insects, and, like others of the genus, flits generally from branch to branch or from reed to reed in quest of its food."

The following description is taken from the type-specimen in the British Museum.

Adult.—Above ashy brown, all the feathers of the back streaked down the centre with black, the head rufous with less distinct mesial streaks of black, becoming still more obscure on the hind neck, where the rufous shades off into the ashy grey of the back; wing-coverts dark brown, margined with the same ashy grey as the back, the greater series faintly washed with rufous; quills dull brown, externally edged with rufous, the inner secondaries margined all round with ashy grey; tail rufous brown, margined with fulvous, tipped with dull white or rufous, before which is a distinct bar of black on all except the two centre feathers; lores and a narrow eye-brow dull white; round the eye a tiny ring of buff feathers; sides of face dull white, browner on the ear-coverts; entire under surface of body dirty white, the sides of the body and under tail-coverts ashy brown, the breast with a few small spots of brown; thighs tawny buff; under wing-coverts buffy white, the lower surface of the wing broadly edged with rufous along the inner web. Total length, 5 inches; culmen, 0.5; wing, 2.05; tail, 2.2; tarsus, 0.7.

We have not had under our eyes a female of this species, but it will probably be smaller than the above measurements.

Fig. Smith, Ill. Zool. S. Afr. Avcs, pl. 76, fig. 1.

252. *CISTICOLA CHINIANA*. Larger Grey-backed Fantail.
Drymoica chiniana, Layard, B. S. Afr. p. 91.

We regard this species as a large form of *C. subruficapilla*, which it represents throughout S. E. Africa, Natal, and the Transvaal into Damara Land. Sir Andrew Smith procured the first specimen near Kurrichaine, and Captain Shelley has recently received this bird from the neighbourhood of Durban, where it was procured by Mr. T. L. Ayres, and Mr. T. E. Buckley has brought back skins from Suaziland. The latter gentleman also met with it in Bamangwato in 1873, and in the Transvaal Mr. Ayres reports that it is common in many localities on the Limpopo. We have also seen specimens from Macamac. In Damara Land it cannot be rare, for Mr. Andersson's collections contained plenty of examples, shot near Otjimbingue, Elephant Vley, on the Swakop River, &c. He also procured it in Ondonga, and Senor Auchieta has likewise met with it at Humbe on the Cunene river.

The following description is from Mr. Buckley's Bamangwato specimen, which seems to be in full breeding plumage. The winter dress is more mealy.

Adult male.—Head and nape uniform rufous; back ashy brown, with dark brown centres to the feathers, the scapulars more grey; wing-coverts coloured like the back with pale fulvous margins to the feathers; quills dark brown, externally margined with rufous, becoming paler towards the tips of the feathers, especially of the primaries, the innermost secondaries edged all round with ashy fulvous; tail light brown, slightly rufescent, the two centre feathers darker brown with fulvous margins, and tipped with pale fulvous, the outer ones with white, all having a blackish subterminal bar; lores yellowish buff, as also a ring of feathers round the eye; feathers over the eye fulvescent but not forming a very distinct eyebrow; ear-coverts greyish brown with narrow whitish shaft-lines; cheeks, throat, and under parts white, the flanks somewhat washed with fulvous grey, the sides of the upper breast greyish brown; thighs tawny buff; under wing-coverts also pale tawny buff; lower surface of quills brown, the edge of the inner web pale rufous; bill brown, the lower mandible lighter; feet very light brown; iris light hazel. Total length, 5·6 inches; culmen, 0·55; wing, 2·6; tail, 2·7; tarsus, 0·9.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 79.

253. CISTICOLA RUFILATA.

Rufous Grey-backed Fantail.

We have examined the type-specimen of this bird, which was kindly shown to us by Dr. Finsch, and we are of opinion that it must for the present be kept apart from *D. chiniana*, which it resembles in general appearance, but is distinguished by its rufous and general foxy-red cast of colours, more especially on the head. Two specimens were procured by the late Mr. Andersson in Damara Land, and the following is the description of the type.

Adult male.—Above sandy brown, the dorsal feathers mesially dark brown, giving a slightly streaked appearance, these streaks shaded with rufous on each side, imparting a rufous appearance to the back; head and neck uniform light chestnut; wing-coverts light brown, washed and tipped with ashy fulvous, the median series with obsolete indications of a rufescent streak near the tip; quills brown, externally edged with pale rufous, especially near the base of the primaries, the margins to the inner secondaries paler; rump uniform sandy brown; upper tail-coverts pale rufous with lighter buff margins; tail light chestnut, all the feathers tipped with buffy white, before which is a blackish brown subterminal bar, the two centre feathers much more narrowly tipped, and the subterminal bar very indistinct; lores and a very well marked eyebrow dull white; sides of face yellowish, the upper margin of the ear-coverts inclining to chestnut; cheeks and throat dull white; rest of under surface of body yellowish ochre, darker on the sides and much lighter down the centre; thighs pale chestnut; under wing and tail-coverts yellowish ochre; inner lining of quills ashy brown, margined with rufous along the inner web; bill dark brown, the under mandible yellowish; feet yellowish. Total length, 5·7 inches; culmen, 0·55; wing, 2·3; tail, 2·7; tarsus, 0·95.

254. CISTICOLA ISODACTYLA.

Tawny Grey-backed Fantail.

Under this title we believe that we have identified correctly a little Grass-Warbler, of which we have seen several specimens obtained by the late Mr. Andersson in Damara Land. The species was originally described by Dr. Peters from South Mozambique (J. f. O. 1868, p. 132), and more recently we received from the Rev. Mr. Wakefield a specimen from Mombas, agreeing with Dr. Peters' description. From this Mombas skin Mr. Andersson's specimens are inseparable, and we therefore include *C. isodactyla* as a bird of

South Africa. It is very closely allied to *C. subruficapilla*, but has the head uniform pale tawny rufous, and the flanks are not grey as in the last-named bird. Mr. Andersson's examples were obtained by him at Otjimbingue and near 'Onani's Mouth' on the Swakop River, as well as in Ondonga. We also identify a specimen procured by Dr. Kirk at Tete in the Zambesi district as belonging to the present species. The following description is that of a female bird (sex ascertained by Mr. Andersson by dissection), but we have not yet come across an authentic male.

Adult female.—General colour above fulvous brown, almost tawny, with indistinct mesial streaks of darker brown on the back and scapulars, the upper tail-coverts and rump uniform; crown uniform tawny rufous, shading off into the brown of the back; outer scapulars and least wing-coverts shaded with grey, the centres of the feathers dark brown, the greater series and primary-coverts dark brown, broadly edged with fulvous; quills dark brown, externally margined with rufous, the inner secondaries edged all round with fulvous; tail rufous brown, pale fulvous at the tip, with a sub-terminal bar of black, very distinct on all excepting the two centre feathers, where it is only obscurely indicated; lores and a faint line above the eye, yellowish white; round the eye a circlet of buff; cheeks and sides of face yellowish white, the ear-coverts marked with brown, especially on the hinder margin; under surface of body pale tawny yellow, deeper on the flanks, the sides of the upper breast washed with ashy brown; the throat and centre of the belly whitish; thighs bright tawny; under wing-coverts pale tawny, the lower series ashy-brown at tip, the lower surface of the quills brown, margined with rufous along the inner web; bill (in skin) horn brown, the lower mandible yellowish; feet deep yellow in skin. Total length, 4·7 inches; culmen, 0·55; wing, 2·1; tail, 2·15; tarsus, 0·85.

255. *CISTICOLA LAIS*.

Rufous-flanked Fantail Warbler.

This little species is very closely allied to *C. subruficapilla*, but is apparently specifically distinct from the last named bird: from which it differs in not having the grey back, so that the rufous head never appears in strong contrast. Its principal difference, however, consists in the tawny flanks, these being greyish-brown in *C. subruficapilla*. We have seen several specimens from Natal, all of them being similarly coloured; it is probably confined to this part

of South Africa, and is apparently not rare in the neighbourhood of Pinetown, whence Captain Shelley has received several specimens from Mr. T. L. Ayres. He also met with it himself in Natal, this being the species to which he alludes in the 'Ibis' (1875, p. 71) as *D. subruficapilla*, when he writes:—"Very common about Durban and Pinetown, usually in family parties, where I have frequently watched them threading their way along the edge of the bushes, constantly uttering a short note."

The following description is taken from the type-specimen kindly lent by Dr. Finsch.

Adult.—Above fulvous brown, very broadly streaked with black, the margins to the dorsal feathers rather rufescent; head and hinder neck more rufous than the back, the blackish stripes much less distinct and indeed almost obsolete on the nape and hinder neck; rump uniform fulvous brown, the upper tail-coverts also with very faint mesial streaks of blackish; wing-coverts ashy fulvous with dark brown centres, the greater series more shaded with rufous externally; quills dark brown, broadly edged with rufous externally so as to give a rufous aspect to the wings, the margins of the secondaries paler and more fulvescent; tail rufescent brown, lighter rufous on the margins: the two centre feathers without any subterminal black mark and irregularly waved across with dusky bars under certain lights, all the other feathers with a broad black subterminal bar, the tips being fulvescent, this pale ending being more distinct on the outer plumes and forming a margin to the last rectrix; lores and feathers round the eye yellowish buff forming a tolerably distinct eyebrow; sides of face also fulvous, the ear-coverts rather browner with obsolete dusky tips to the feathers; cheeks fulvous; chin and centre of the body white, the throat and sides of the body tawny fulvous, clearer on the thighs, the flanks slightly shaded with brown; under wing- and tail-coverts tawny buff; bill brown, yellowish at the base of the under mandible; legs yellowish. Total length, 5 inches; culmen, 0·45; wing, 2·1; tail, 2·35; tarsus, 0·75.

256. CISTICOLA ABERRANS.

Smith's Fantail Warbler.

Drymoica aberrans, and *D. ruficapilla*, Layard, B. S. Afr. pp. 88, 90.

This Warbler is easily recognized by its uniform upper surface, the head being rufous, the back dark grey. It was first called

by Sir Andrew Smith, *Drymoica ruficapilla*, but as this name had already been applied by Mr. Fraser, the late Prince Bonaparte proposed to call the bird *Drymoica smithii* after its discoverer. We find, however, from an examination of the types that *C. smithii* is only the female of *C. aberrans*, and consequently this name must stand. Most of the specimens which we have seen have been from Natal, where Captain Shelley records it as "not uncommon near Durban." Mr. T. L. Ayres has likewise sent several specimens from Pinetown, and his father, Mr. Thomas Ayres, writes as follows:—"These warblers are generally found amongst the high grass, which forms a dense cover on the edges of the woods. When disturbed, they flit and hop about the twigs and boughs of the adjacent bushes, uttering at the same time a weeping note, which much resembles the distant bleating of a goat; they seem to be particularly fond of the eggs of moths and small insects. Their flight is but weak." It also occurs in the Transvaal, and we are indebted to Dr. Exton for a specimen procured near Potchefstroom, in July, 1876. In this part of the country, Mr. Thomas Ayres states that the species inhabits low scrub. Mr. Andersson says that according to his experience it is not an inhabitant of either Great Namaqua or Damara Land. He first became acquainted with it on penetrating to the Okavango, but even there he does not remember to have seen much of it. All the specimens which have fallen under our notice from Mr. Andersson's collections were obtained at Elephant Vley, in September and October, 1859.

We give a detailed description of the typical specimen in the British Museum.

Adult in breeding plumage.—Above nearly uniform brown, slightly washed with dull ochraceous and having obsolete darker centres to the feathers; rump and upper tail-coverts uniform dull ochraceous brown; least wing-coverts coloured like the back, the rest dark brown, externally margined with dull sandy rufous, paler towards the tips of the greater series; quills dark brown, externally edged with sandy rufous, lighter and more fulvous on the secondaries; tail nearly uniform brown, with a few indications of wavy bars in certain lights, the feathers rather paler at tips but without subterminal bars; head uniform chestnut; lores and a distinct eyebrow yellowish white; ear coverts browner than the rest of the side face, the shaft-lines whitish; checks, throat, and under parts generally yellowish or yellowish white, deeper on the abdomen, the sides of

the body browner; thighs chestnut; under tail-coverts fulvous; under wing-coverts tawny-buff; upper mandible light orange brown, shaded with deep reddish brown; lower mandible straw yellow; feet pale reddish yellow. Total length, 5·5 inches; culmen, 0·55; wing, 1·95; tail, 2·85; tarsus, 0·9.

The female is smaller, measuring only 1·75 inch in the wing, and 0·75 in the tarsus. Winter birds are much more mealy in colour.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 73, fig. 1, and pl. 78.

257. *CISTICOLA SUBCINNAMOMEA*. Cinnamon-breasted Fantail.

Drymoica subcinnamomea, Layard, B. S. Afr. p. 88 (1867).

This peculiar little Warbler is so different in its colouration that some authors have considered it to be an *Aedon*. Sir Andrew Smith only procured one specimen of this bird, which was killed on the top of one of the mountains of the Kamiesberg, in Little Namaqualand. "For some time before it was shot, it was beheld flitting from bush to bush, occasionally perching on their summits, at other times hopping rapidly to and fro among their branches, as if engaged in quest of insects, which were found to constitute its food." Mr. Ortlepp has also procured it near Colesberg.

Upper surface of head, neck, back, and shoulders, between oil-green and orange-brown; forehead tinted cinnamon-red; wing-feathers, light reddish-brown, with a tinge of green; the primaries edged narrowly towards their base with cinnamon-red; rump ruddy; tail rather long, and slightly rounded, deep brownish-red; chin and neck inferiorly liver-brown, variegated with narrow white transverse bars; breast and fore part of belly cinnamon-red; belly and vent coloured as the back. Length, 5'' 8'''; wing, 1'' 11'''; tail, 2'' 8'''.

Fig. Smith, Ill. Zool. S. Afr. pl. 111, fig. 1.

258. *CISTICOLA FASCIOLATA*. Barred-breasted Fantail.

Drymoica fasciolata, Layard, B. S. Afr. p. 86.

Sir Andrew Smith first obtained this very distinct species on open flat plains to the north-east of Latakoo. He says that it "inhabits districts covered thinly with small underwood, and in such places is found moving from bush to bush in search of its food, which it appears to take partly from the top of the bushes and partly from the branches, among which it passes rapidly."

Mr. T. E. Buckley obtained a specimen at Geoqui in Bamangwato, on the 16th October, 1873, and Mr. Ayres has procured it in the Transvaal. He observes:—"These birds feed upon small insects. They inhabit low bush and scrub; when disturbed they invariably fly and settle close to or on the stems of the bushes, and then work their way up. They appear to be solitary in their habits. In the living bird the speckled wings are more conspicuous than the barred breast."

Mr. Andersson writes as follows:—"This species is common in the neighbourhood of Objimbinque; and I have found a few individuals between that place and Rehoboth; it greatly reminds me of our Swedish Gårdsmygg (the common Wren of England) in its habits, which are somewhat secluded. It frequents dense bush and occasionally trees, searching diligently amongst the branches for insects; it carries its tail erect when moving about. When disturbed it flies but a short distance at a time, and is easily distinguished by the bright brown on the rump."

Adult.—Above warm brown, rather rufescent, the rump and upper tail-coverts rather lighter and more tawny rufous; wings brown, the coverts edged with fulvous brown and all tipped with white or fulvous white; quills brown, externally edged with rufous brown, the innermost secondaries margined with whitish at the tip; tail brown, the feathers edged with rufous brown and all tipped with fulvous, before which the colour darkens, but does not form a sub-terminal band; lores and sides of face greyish white waved with transverse bars of blackish-brown, the ear-coverts washed with brown with whitish shaft-stripes; under surface of body dull white, the sides bright fulvous, deeper and more tawny on the thighs and under tail-coverts; the throat very slightly, but the chest and sides of the body distinctly crossed with zig-zag or V-shaped bars of dark brown; under wing-coverts light buff, the lower surface of the quills ashy brown, edged with pale rufous along the inner web; "upper mandible dark liver-brown, the lower edge and the under mandible dark bluish or purple; legs pale flesh colour, toes the same, but a trifle darker; iris yellowish brown." (*Andersson*.) Total length, 4.8 inches; culmen, 0.6; wing, 2.45; tail, 2.3; tarsus, 0.9.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 111, fig. 2.

259. CISTICOLA PROCERA. Zambesi Fantail Warbler.

Dr. Peters obtained at Tete in the Zambesi a specimen of a Warbler which he describes under this name, (J. f. O. 1868, p. 132). Drs. Finsch and Hartlaub in the "Vögel Ost.-Afrikas" (p. 233), consider it to be a good species, and have given the following description of the type. "Obscure dull brown, by no means conspicuously varied with darker colour; head slightly rufescent; an obscure subterminal dark spot on the tail feathers; underneath dull whitish, the under wing-covers uniform; quills pale dusky brown; bill and feet pale. Total length, 5 inches; bill, 5"; wing, 2"; tail, 1" 5''; tarsus, 10''.

260. CISTICOLA OBSCURA. Dusky Fantail Warbler.

We have been unable to identify this species, which was described by Professor Sundevall in 1850 (Oefv. K. Vet. Akad. Forh. Stockh. 1850, p. 103). It was obtained by Wahlberg in "Kaffraria," and the following is a translation of the original description:—

Male. Back obscure grey, faintly spotted with dusky, the head slightly rufescent; the forehead brighter; the occiput obsoletely spotted with dusky; the hind neck dusky brown; belly unspotted, dull whitish, greyish on the sides; quills externally edged with dull dusky rufous; tail feathers above greyish rather pointed at the tip, which is whitish with a black subterminal spot; bill notched and rather pointed. Total length, 5½ inches; wing, 2·5; tarsus, 1·0; tail, 2·4; bill from front, 0·55; its height, 0·2.

261. CISTICOLA CURSITANS. Common Fantail Warbler.

Drymoica terrestris, and *D. ayresii*, Layard, B. S. Afr., pp. 91, 94.

We agree with Drs. Finsch and Hartlaub that the "Kloppertjie" of Southern Africa is not specifically separable from the Fantail of Europe and India, and *C. ayresii* we believe will turn out to be the young bird in its first richly coloured plumage. Mr. W. Atmore says that it is a grass-loving species, and is found abundantly in the George District. He states that it "constructs a nest on the ground, arched and domed, and lays from six to ten white eggs covered with pink spots mostly at the obtuse end."*

* The previous account given in the first edition is erroneous, owing to a mistake in the numbering of a manuscript list kept by Mr. Atmore and the author.

Writing from Windvogelberg in September, 1873, Major Bulger sends us the following note :—"There is a very tiny bird abundant on the Flats all around us here, which we call the 'little grass-bird.' It is *Drymoica terrestris*—the smallest feathered creature I have seen in the country, and something like a diminutive lark in appearance. When started it always rises with a whirr, and flies away emitting a snapping noise, and, occasionally, an alarm-note; and, whilst on the ground, amongst the grass, where it is commonly met with, I fancy it not unfrequently makes the same snapping noise, for often, whilst I have been walking on the Flats, I have heard this sound, and presently, have flushed the 'little grass bird.' It has seemed to us that this *Drymoica* possesses the power of ventriloquism, for I have remarked on many occasions that, although we have heard the peculiar sound produced by this bird around us in every direction, we have never succeeded in finding more than one or two, at the most, of these little creatures."

Lieut. H. Trevelyan has sent us a specimen from King William's Town, and from Eland's Post in the Eastern Province we have received several specimens collected by Mr. T. C. Atmore. In Natal it is by no means uncommon, to judge from the numerous specimens which have been sent from Pinetown and Durban, by Mr. T. L. Ayres; and Mr. Thomas Ayres gives the following account of the species in that Colony :—

"These birds are common in the open country, frequenting much shorter grass than that frequented by *Drymaea curvirostris*. Their nest is very beautifully constructed, amongst the fine stalks of grass, which are drawn together towards the top, a sort of purse or bag being made of the finest and whitest down and spider's webs and attached at the sides to the grass which surrounds it, the opening being on the top. On any intruder approaching the nest, the birds generally mount overhead with a flitting eccentric flight, watching with anxiety the fate of their domicile. Their flight is tolerably strong; and when they have been disturbed once or twice, it is sometimes a difficult matter to get within shot of them."

Mr. T. E. Buckley says that he found it "extremely common throughout Natal and the Transvaal, being among the long dead grass in the open veldt." We are indebted to Dr. Exton and to Mr. Thomas Ayres for some beautiful specimens procured near Potchefstroom, and the latter gentleman writes :—"These little

birds live among the long grass, and appear to move most in the evening, about sunset, lying quiet in the heat of the day; they are generally to be seen three or four together."

The following admirable account of the species is extracted verbatim from Mr. Andersson's well known work on the "Birds of Damara Land." "This species came under my notice in Great Namaqua Land in about 24° or 25° S. lat.; I have also met with it abundantly in southern Damara Land, and have obtained it in Ondonga. Specimens from Damara Land are of a lighter tint than those from Ondonga, but I have no doubt they are identical. It is common at some large waters on the Omaruru River, but is most difficult to shoot; it can generally only be shot on the wing as it rises; and when shot it invariably falls in the reeds, where its diminutive size easily eludes the eye. It is, however, found in many other situations besides reedy localities, but chiefly among tall, coarse grasses growing about small periodical watercourses. When disturbed, it rises almost perpendicularly, descending nearly as abruptly, and either burying itself at once in the rank vegetation or first perching on a grass-stalk and gradually creeping out of view, and also out of reach; for it is difficult to flush it again.

"The food of this little bird consists of small insects. Its eggs, which are four or, rarely, five in number, are sometimes white, or more frequently white freely sprinkled with minute brown spots; but occasionally they are tinged with green, whilst others are of a reddish colour. The nests also vary in form, material, and construction; some are airy and fragile, like the home of a spider, whilst others are pretty compact and more or less pasted on the outside with decomposed grasses; and it is a remarkable fact that the eggs in the spider-like nests are always whitish, spotted with brown, whilst those in the more complete nests are of a greenish tint but with the same spotting. The nests which are sometimes globular, are suspended to the stalks of long grasses about a foot above the ground. I have found them with eggs from the 18th of February to the 31st of March."

Top of head and interscapulars, umber-brown, variegated with yellowish-brown; back of neck, back, and shoulders, clear yellowish-brown, with umber-brown streaks; rump umber-brown; chin and throat whitish; breast, belly, and vent, sienna-yellow; tail moderately long, and slightly graduated; two middle-feathers broccoli-

brown, broadly margined and tipped with wood-brown; the other feathers brownish-red, broadly tipped with white, with a large umber-brown blotch just before the white, seen, as in all the species, most plainly on the under side; irids light-brown. Length, 4'' 3''; wing, 1'' 11''; tail, 1'' 11''.

Fig. Smith, Ill. Zool. S. Afr. *Aves.*, pl. 74, fig. 2; Gurney, Ibis, 1863, pl. viii, fig. 2.

262. CISTICOLA CHERINA.

Brown Fantail Warbler.

Drymoica cherina, Layard, B. S. Afr. p. 89 (1869).

We feel considerable compunction in retaining this species in the list of South African birds, for we find from an examination of the type-specimen, that it is identical with the Fantail Warbler of Madagascar, and the name of *C. cherina* will take precedence over the later published name of *C. madagascariensis* by which the species is generally known. Notwithstanding the account of the habits given by the late Sir Andrew Smith, we still think that some mistake has arisen, as in the case of *Glareola ocularis*, which was equally stated to occur in South Africa, but is now known to be a native of Madagascar. At the same time we notice that Grill records its occurrence at the Knysna in September from Victorin's collection, and, if no mistake has occurred in this identification, the species may be common to South Africa and Madagascar: but we can only say that out of dozens of these Warblers sent to us by our correspondents we have never seen a skin approaching *C. cherina* in colour, whereas all the Madagascar examples agree exactly. We commend the subject therefore to the study of our friends in South Africa, and meanwhile we add a careful description of the typical specimen in the British Museum.

Adult (type of species).—General colour above brown, with darker centres to the feathers, giving a slight appearance of streaks to the head, much more distinct on the back where the centres are black; rump (damaged) apparently uniform fulvous brown, the upper tail-coverts with narrow blackish streaks; wing-coverts dark brown with ashy fulvous margins, especially distinct on the greater series; quills dark brown also, the primaries margined with lighter brown, the secondaries with ashy fulvous exactly like the wing-coverts; tail dark brown, with obsolete dusky bars under certain lights, the four centre feathers tipped with lighter brown, with an obsolete sub-

terminal bar of blackish, all the other tail-feathers tipped with white, before which is a very distinct subterminal bar of black, the outermost feather edged with whitish; lores and an almost imperceptible eyebrow buffy white, the ear-coverts browner; cheeks and throat dull white as also the centre of the body, the sides of which are clear brown, darker on the thighs; under wing-coverts fulvous. Total length, 4.1 inches; culmen, 0.55; wing, 1.9; tail, 1.7; tarsus, 0.8.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 77, fig. 2.

263. HEMIPTERYX TECTRIX.

Pinc-pinc Grass-Warbler.

Drymoica tectrix, Layard, B. S. Afr. p. 85.

This little species, which is called "Ting-ting" by the Dutch colonists ("Kloppertjie," of some), is very similar to *Cisticola terrestris*, but is distinguished by its very short tail. It is abundant throughout the western end of the colony, and we have received it from Mr. Cairncross at Swellendam. Near Cape Town it is very common, frequenting open plains covered with low scrub, or marshy places in which reeds grow. It climbs about these in a very clever manner, apparently sliding up and down; when pursued, it drops to the tangled herbage at the foot of some bush, and cannot be induced to quit its hiding-place. It often hovers in the air at a moderate height over the bushes, uttering its ringing, metallic cry of "pinc-pinc-pinc," jerking about with rapid strokes of the wing, suddenly dropping into the bushes, and then remaining mute. Le Vaillant attributes to this little bird a nest which is very common about the country, and is well known under the name of the "nest of the Kapokvogel," but he is quite in error, the fabricator of this nest, the true "Kapokvogel" (or cotton-bird), being the little *Ægithalus minutus*. The nest of *D. tectrix* is a domed structure, generally supported between stems of grasses, sometimes placed on the ground. The eggs, 4—5, are white, sometimes light blue, spotted with minute reddish spots. Axis, 7''' ; diam. 6''.

Upper parts of head and neck, interscapulars, back, and shoulders umber-brown, variegated with white and clear yellowish-brown; sides of head and neck dirty yellowish-brown, with small umber blotches; wing-feathers brownish-red, edged with pale wood-brown; chin and throat greyish white, indistinctly mottled with light umber-brown; breast and belly pale sienna-yellow, mottled with umber-brown spots; flanks and vent pale yellowish-brown, also spotted.

tail very short, and slightly graduated, two centre-feathers brownish-red, the rest umber-brown, all edged with wood-brown, and the three outermost broadly tipped with white. Length, 4"; wing, 1" 10½"; tail, 1" 1".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 74, fig. 1.

264. *HEMIPTERYX IMMACULATA.* Bulger's Grass-Warbler.

This second species of "Pinc-pinc" was discovered by Major Bulger, near Windvogelberg, and was described by Dr. Hartlaub, in the "Proceedings of the Zoological Society for 1866" (p. 22). It is very like *H. tectrix*, but differs in having the under parts unspotted. It has been subsequently described and figured under the name of *Hemipteryx oligura* by Dr. von Heuglin. (*Ibis* (2) v. p. 79, pl. iii.)

Above, rufous-olivaceous, variegated with fuscous; back of head, back and rump, more rufous. Below, spotless, fulvous; throat and middle of abdomen whitish; tail feathers brownish-black, with a white terminal spot. Inner margin of webs pale. Under wing-coverts Isabella colour, feet and bill pale. Length 3" 10"; wing, 1' 9"; tail, 9".

265. *SPHENEACUS AFRICANUS.* Pointed-tailed Grass-Warbler.

Drymoica africana, Layard, B. S. Afr. p. 95 (1867).

This curious warbler is distributed throughout the whole colony, preferring open country covered with low scrub or grass. Captain Shelley obtained it at the Paarl in Cape Colony, and both Andersson and Victorin shot it at the Knysna. Mr. Rickard procured it at Port Elizabeth, and one specimen also at East London. Captain Shelley shot it at Pinetown in Natal, and Mr. Ayres gives the following note on its habits as observed by himself in the last named colony:—"This is also not a very common warbler; it frequents much the same cover as the preceding species, but has perhaps a rather greater partiality to bushy underwood on the edges of the dense bush; its flight is very weak, and it is difficult to drive it from its hiding-places; its food consists of insects."

Mr. T. E. Buckley has recently procured a male specimen during his trip to Suaziland: it was killed on the 16th of June, 1876. Captain Shelley says that "it frequents the high grass and is difficult to drive out of the thick covert it resorts to; when on the wing it flies low with a straight and even flight." The wings in this species

are very small and weak, hardly enabling the bird to fly fifty yards. If flushed more than once, it betakes itself to a clump of grass, or bush, and will suffer itself to be taken with the hand rather than rise again; for this reason it has acquired the name of "*Idle Jack*" and "*Lazy Dick*."

Mrs. Barber sends nest and eggs of this curious bird. The former, usually constructed in the bottom of a bush, is a beautiful structure, lined with feathers and hair. The eggs white, more or less clouded (at the obtuse end chiefly) with very faint "indian-ink" spots or blotches. Axis, 11"; diam. 7".

Upper parts rufous, deepest on the head and rump, inclining to grey on the fore part of the back, and everywhere marked with very dark-brown, broad streaks down the centre of the feathers: these are nearly obsolete on the head, but extend along the centre of the tail-feathers: under parts, uniform light Isabella-coloured, everywhere mottled with dark black-brown streaks, most evident on the flanks; "beak grey, inclining to black towards the culmen; legs grey; iris hazel" (*Shelley*). Length 8" 9"; wings, 3"; tail, 4".

Fig. Le Vaill. Ois. d'Afr. pl. 112, fig. 2.

266. APALIS THORACICA.

Bar-throated Warbler.

Drymoica thoracica, Layard, B. S. Afr. p. 93.

This warbler is generally distributed all over the colony. We procured specimens in considerable numbers at Plettenberg's Bay (on the southern side of the colony), in the wooded ravines and deserted gardens in which the brushwood had sprung up. They hunted incessantly after insects, gliding about among the branches, peering up at the under sides of the leaves or thick branches, and darting up at the small insects which sought concealment in such situations.

Swellendam has furnished us with several specimens; it is also abundant at Nel's Poort, and all along the rivers in that part of the Karroo; and we likewise saw a pair which evidently were nesting in the rank herbage and scrub which line the crater of the minute volcano from which issue the hot springs of Caledon.

Captain Shelley says that he met with several specimens creeping about the stunted bushes while on the way to Ceres. Victorin procured it at the Knysna from April to September, and Mr. Rickard has noted it from Port Elizabeth. Mr. Thomas Ayres gives

the following note on the species in Natal:—"These birds are generally seen in the thick bush, creeping about the stems and boughs of trees and shrubs in search of small insects on which they live; they are generally solitary, or in pairs, and very silent; their flight is weak. They build a very delicate nest; it is hung to a few fine twigs, in rather a horizontal position; the outer layer is composed of mosses, lichens, cobwebs, and very fine pieces of grass, lined with thistledown; the nest is deep and open at the top, and is somewhat the shape of those built by some of the Sun-birds; the eggs are elliptical in form, bluish-white, spotted pretty equally with brownish red, some of the spots being fainter than others." Our friend Mr. T. A. Barratt writes:—"I have never seen this species elsewhere than at Macamac and Pilgrim's Rest Gold-fields."

Le Vaillant found this bird in abundance after crossing the "River of Elephants" as far as the tropics; also on the bank of the Orange River, and in Kafirland. He states that they always went in couples, male and female, breeding in November and December. The nest is placed among grass or low bushes; the eggs are six in number, and of a reddish white. The male has an agreeable song.

Mr. L. C. Layard discovered the nest at Grootevadersbosch; he says it is domed and of the same shape as those of the *Drymæce*. The eggs are white, spotted with various sized dark brownish-red spots chiefly at the obtuse end, and somewhat in the form of a ring. Axis, $7\frac{1}{2}$ ''; diam., 6'''.

General colour above ashy-grey, tinted with olive-green, except on the tail; chin, throat, and under parts whitish, tinted with rufous-brown, deepest on the vent; a black collar extends across the chest, and a black mark from the bill to the eye; tail graduated, the outermost feather nearly all white, the second white at the tip, the third at the tip only; two tufts of black hair-like feathers, from the basal half of the back of the head; eye light-yellow; tarsus flesh-coloured; claws brown; bill black. Length, $5''\ 3'''$; wing, $2''$; tail, $2''\ 4'''$.

Fig. Le Vaill. Ois. d'Afr. pl. 123.

267. *MELOCICHLA PYRRHOPS*.

Congo Warbler.

Senor Anchieta has procured an example of this West African bird at Caconda in Benguela. It is recorded by Professor Barboza

du Bocage as *Melocichla mentalis*, but I believe that it will be the Congo species, *M. pyrrhops* of Cabanis (J. f. O. 1875, p. 236), which runs southward into Benguela. The Congo bird differs from the true *M. mentalis* of the Gold Coast in being greyish-white from the chin to the vent, whereas in the latter bird the breast is tawny like the flanks.

The following description is taken from an adult female bird shot by M. Louis Petit at Chinchonxo in the Congo district on the 8th of April, 1876.

General colour above ashy brown, the rump gradually inclining to rufous brown; forehead rufous, shading off into ashy brown on the hinder crown: lores dull white; round the eye a ring of whitish feathers, and above the eye a very narrow line of white stiffened plumes, forming with a streak of buff above the ear-coverts a faintly-defined eyebrow; ear-coverts dull rufous with whitish shaft-lines; cheeks white as also the throat; a narrow moustachial line of black; rest of the under surface of body ashy white, with a slight tawny tinge on the sides of the neck; the sides of the body light tawny buff deepening on the lower flanks, thighs, and under tail-coverts; under wing-coverts ashy white, the lower ones washed with pale tawny buff; wings above dark brown, the least wing-coverts washed with ashy brown like the back, the greater coverts and quills externally edged with rufous; upper tail-coverts deep rufous; tail dark brown, obscurely waved under certain lights, the feathers externally washed with rufous, the outer feathers tipped with ashy fulvous; bill black in skin, the edge of the upper mandible whitish, the lower mandible yellowish white, eyes dark brown; "iris yellow with an outer ring of brown" (*Petit*). Total length, 7·8 inches; culmen, 0·7; wing, 3·05; tail, 3·35; tarsus, 1·15.

268. CATRISCUS APICALIS.

Fan-tailed Reed-Warbler.

This species although found in North Eastern Africa, is, as far as we yet know, confined to the Colony of Natal in the southern part of the Continent. Captain Shelley writes as follows:—"I saw several specimens of this bird in the sedge at Durban and Pinetown, where, owing to their creeping habits, and the thick vegetation they frequent, I was only able to shoot two. It is a very striking little bird as it flits out from amongst the thick rushes with a jerky flight, its heavy dark tail rather inclining downwards." He has also

received several specimens from the neighbourhood of Pinetown, where they were procured by Mr. T. L. Ayres. Mr. Thomas Ayres observes that in Natal "these Warblers, which are not so common as some other reed-birds, are found amongst the rank grass and rushes that grow in swampy places. When they have been once flushed, it is a difficult matter to put them up a second time, as they creep away with great swiftness amongst the stems of grass. Their notes are rather loud and somewhat harsh; their flight is weak, being seldom sustained for more than fifty yards. Their food appears to consist entirely of small insects."

Adult.—Above light tawny brown, rather darker on the head and inclining to ashy brown on the sides of the neck; wings brown, the least wing-coverts uniform with the back, the rest of the coverts and the quills externally margined with the same tawny brown as the back, becoming paler towards the tips of the primaries; upper tail-coverts very long and broad, resembling the tail in texture, and of a deep brown colour like the middle tail-feathers, the remainder of the latter blackish, obscurely waved with dusky under certain lights, and tipped with dull whitish; lores and a faint eyebrow, ashy grey; sides of face light brown with paler shaft-streaks to the ear-coverts; throat and cheeks white, washed with yellowish on the hinder margin of the latter; rest of under surface of body white in the centre, the breast and sides as well as the flanks light tawny buff; thighs, vent, and under tail-coverts light brown, the latter rather darker; under wing-coverts whitish, washed with buff; lower surface of quills pale ashy brown, with an almost imperceptible lighter edging along the inner web; upper mandible black, the lower one grey; legs flesh-colour; iris brown. Total length, 5·8 inches; culmen, 0·55; wing, 2·4; tail, 3·35; tarsus, 0·8.

Obs. Mr. Ayres (Ibis, 1863, p. 323) gives the soft parts as follows:—"Iris light hazel; upper mandible of bill very dark ashy brown; under mandible light ash-colour; nostrils large and oval; tarsi and feet palish brown."

Fig. Heuglin, Orn. N. O. Afr. taf. ix.

269. PHLEXIS VICTORINI.

Victorin's Reed-Warbler.

Bradypterus layardi and *B. victorini*, Layard, B. S. Afr. pp. 100, 101.

The identity of *P. layardi* and *P. victorini* we consider to be

beyond doubt. We have examined in the British Museum a specimen obtained by Mr. Andersson at the Knysna, and correctly identified by the late Mr. George Gray as *P. victorini*. This individual perfectly agrees with other specimens of the true *P. layardi*, obtained by Mr. Atmore and his son, Mr. H. Atmore, near George in the Knysna district. On comparing these specimens also with Sundevall's original description, there can be no doubt as to their perfect identity. After the late Sir Andrew Smith's death, there was discovered a little box among his effects, containing some bird-skins, some of which were marked by him as having been obtained during the old expedition into Central Africa. The birds contained in this box were handed over by his executors to the British Museum, and it is evident that the contents were skins of birds which he had been unable to identify, and which had been laid aside and forgotten. Among them was a specimen of *P. victorini*, along with several other birds which were not made known to science for twenty or thirty years after they had been discovered by him.

We think that the present species may very fairly be kept generically distinct from the other *Bradypteri*. The extreme development of the loose feathers on the lower back and rump, and the very short wings seem to separate it. Victorin obtained his original specimens at the Knysna in September and October, and the late Mr. Andersson also met with it in the same locality. Mr. W. Atmore writes to us:—"The habits of *P. layardi* are exactly like those of *Sphenæacus africanus*, but it is even more difficult to raise from its covert. The one now sent I got at Forest Hall, Plettenberg's Bay. I was looking for a surveying station, and she flew out of some dense scrub. In the scrub was a cup-shaped nest like that of *S. africanus*, not quite finished. I hunted in vain for the male, and never passed the spot without a search, as well as looking into every similar place, but this was all I saw. When raised, their flight is only a feeble flutter, like that of *S. africanus* or *Porzana pygmaea*."

Adult male.—Above rufescent brown; the head rather more ashy brown than the back; wings dark brown, the feathers edged with rufous brown like the back; tail rufous brown and consisting of twelve feathers; lores slightly tinged with rufous; feathers round the eye, and ear coverts dull greyish; cheeks and under surface of body rufous, paler on the abdomen; the sides of the body rufous-

brown; under wing-coverts dull greyish-brown, like the quill lining. Total length, 5·8 inches; culmen, 0·55; wing, 2·15; tail, 3·4; tarsus, 0·9.

Fig. Hartlaub, Ibis 1866, pl. vi.

270. BRADYPTERUS BRACHYPTERUS. Stripe-throated Reed-Warbler.

Bradypterus platyurus and *B. sylvaticus*, Layard, B. S. Afr.

This species is the 'Pavaneur' of Le Vaillant, and is distinguished by the very distinct blackish streaks on the throat, the latter being white, and by the light fulvous edgings to the wing-coverts, these being especially distinct on the primary-coverts.

Le Vaillant states that he discovered this bird in the marshes which occur near Plettenberg Bay and throughout the whole of Outeniqualand. It is common in the vleys about Worcester and Swellendam, and is also found near Wynberg, Cape Town, &c. We obtained it ourselves at the Berg River, and we have received it from Mr. Moffat at Kuruman. Dr. Exton has lately sent us a pair from the neighbourhood of Potchefstroom, and, according to Mr. Thomas Ayres, it is common amongst the high grass and rushes of the swamps in the Transvaal.

Adult male.—General colour dark rufous brown, the rufous slightly more pronounced on the rump and upper tail-coverts; wings blackish-brown, the coverts conspicuously lighter edged with fulvous brown, especially distinct on the primary coverts and the outermost of the greater series; tail blackish-brown, all the feathers externally washed with rufous brown, the outer ones having conspicuous lighter brown tips, the centre feathers more rufescent, all the rectrices obscurely waved under certain lights; lores dull whitish with a dusky spot in front of the eye; round the eye a ring of whitish feathers; ear-coverts greyish-brown with whitish shaft-streaks; cheeks buffy-white mottled with brown; sides of neck paler brown than the back; throat and centre of the body white; the sides of the body rufescent brown, inclining to dull tawny on the thighs and under tail-coverts; lower throat with a few tiny longitudinal streaks of dusky brown; upper breast slightly washed with brown; under wing-coverts whitish, the outermost mottled with brown bases to the feathers; the inner lining of the quills ashy-brown, with paler margins near the base of the inner webs; "bill dark slate colour; feet and legs pale; iris dusky hazel." (MS.)

ticket on specimen). Total length, 5·7 inches; culmen, 0·55; wing, 2·25; tail, 2·6; tarsus, 0·85.

Adult female.—Similar to the male. Total length, 5·5 inches; culmen, 0·6; wing, 2·2; tail, 2·55; tarsus, 0·85.

Fig. Le Vaillant, Ois. d'Afr. pl. 122.

271. BRADYPTERUS GRACILIROSTRIS. White-breasted Reed-Warbler.
Calamodyta gracilirostris, Layard, B. S. Afr. p. 98.

Mr. L. C. Layard procured several specimens of this shy and retiring bird in rushes on the banks of the "Diep River," near the Observatory, Cape Town. He informs us that he was attracted to them by their babblings, which he at once detected as new to him: their stomachs contained the remains of minute Coleoptera and other insects. When staying with Mr. Kotze at the Berg River we found the eggs of this species. they were dirty white, spotted or blotched, chiefly at the obtuse end, with light brown and purple blotches: axis, 9''' ; diam. 6½'''. The nest was similar in form and position to that of *Acrocephalus baticatus*. At the Berg river it was called 'River Ting-ting.' In Natal, Mr. Ayres says that "these birds are less plentiful than most of the Warblers, but are generally dispersed throughout the colony. They are always found amongst the reeds and rushes which border the streams, rivers, and lagoons. Their notes are loud, clear, and pleasant. They fly with greater ease and swiftness than most of the Drymæcas. Their food consists of small insects." We have also seen specimens from the neighbourhood of Potchefstroom, for which we were indebted to the kindness of Dr. H. Exton. The late Mr. Chapman obtained a single specimen near Lake N'gami, and two specimens, procured in Damara Land by Mr. Andersson, are in the British Museum: they were obtained at Omanbondé.*

The distinguishing characters of this species are its large size, long and acrocephalus-like bill and white under surface: there are

* Mr. Gurney inserts in the "Birds of Damara Land" *Acrocephalus arundinaceus*, the Great Sedge-Warbler of Europe (p. 99). Mr. Andersson's MSS. contained a note on a "Reed-Warbler" procured by him near Omanbondé, which he compared to the British species, but found it larger. I believe he intended the Reed-Wren (*A. streperus*) for the specimens from Omanbondé now in the British Museum (of which two were recently discovered in an old collection of Mr. Andersson's) are *Bradypterus gracilirostris*, which is smaller than *A. arundinaceus*.

no streaks on the breast, and the under tail-coverts are very pale fulvous, quite different to the dark brown under tail-coverts of the other South African *Bradypteri*.

Adult male.—Crown of head and back dull brown, shading gradually off into fulvous brown on the lower back, rump, and upper tail-coverts, which are much lighter than the rest of the back; wings dark brown, all the feathers edged with fulvous brown; tail dark brown, the tips pale fulvous brown, all the feathers obscurely waved under certain lights; lores conspicuously whitish, a dusky spot in front of the eye, and round the latter a ring of whitish feathers; above the eye a slight indication of a whitish streak; ear-coverts light brown; cheeks, and under surface of body white; the sides of the upper breast brown; the flanks, thighs and under tail-coverts fulvous brown, the two latter much paler; under wing-coverts whitish, especially the edge of the wing which forms a conspicuous spot; under surface of quills ashy brown, with light fulvous margins along the inner webs of the quills; bill horn brown (in skin); "legs and feet slate colour; iris hazel" (MS. note on specimen). Total length, 6.2 inches; culmen, 0.8; wing, 3.05; tail, 3.0; tarsus, 1.15.

272. *BRADYPTERUS SYLVATICUS*.

Knysna Reed-Warbler.

Up to the time of writing we have been unable satisfactorily to determine the above species, which was described by Prof. Sundevall from a specimen obtained by Victorin at the Knysna. As will be seen from the description which we transcribe below, it possesses several peculiarities, such as the absence of spots on the throat and the light edgings to the under tail-coverts. It cannot be *B. brachypterus*, because this always has distinct throat-stripes and, moreover, so good a describer as Prof. Sundevall would not have overlooked the peculiar light-edged wing-coverts. It cannot be *B. gracilirostris*, which has no streaks or spots on the throat, on account of the discrepancy in size, and the differences of colouration are altogether too apparent. It is, therefore, closely allied to *B. barratti*: but in this species the strongly developed throat-stripes are one of the most distinguishing characters, so that altogether it is difficult to refer any of the specimens examined by us to the true *B. sylvaticus*. In the British Museum are two skins obtained by the late Sir Andrew Smith, and these agree tolerably well in size, but

the brown edgings to the gular feathers cause a distinctly spotted appearance, and it can hardly be said of them, "maculæ nullæ gutturis." Then again Captain Shelley has lent us a skin from Durban which has the throat uniform, and the edgings very distinctly indicated on the under tail-coverts. This may be a young *B. barratti*, and it remains to be proved whether *B. sylvaticus* is the young bird of the last-named species, in which case Sundevall's name will have precedence. No mention is made in the description of the narrow white shaft-lines on the ear-coverts, which are seen in *B. barratti*, and it is probable that an examination of the type will be necessary before the question can be solved.

Adult male.—Above entirely obscure dusky brown with an obsolete shade of rufous; underneath paler, the throat and the middle of the belly dull white; the sides of the body and of the head a little paler than the back; the feathers of the vent dusky with a paler tip; wings and tail uniform with the back; bill dusky, underneath pale; feet pale; no spots on the throat. Total length, about 5·5 inches; wing, 2·4; tail, 2·3; tarsus, 0·8 (*Sundevall*).

273. ACROCEPHALUS FULVOLATERALIS, *Sharpe*.

Tawny-sided Reed-Warbler.

For many years the editor had in his collection the skin of a large Reed-Warbler from Natal, which he has shown to Dr. Finsch and other authorities on African birds, though at present without being able to obtain any clue to its identification. It is a true *Acrocephalus* with small attenuated first primary, but it differs from *A. stentorius* in its thicker and shorter bill, and much larger size. From *A. arundinaceus* and *A. orientalis* it equally differs in the want of any olive shade of colour on the upper surface, and by having such very distinct orange tawny flanks. Whether it will ultimately prove to be a described species time alone will show, but at present it is interesting to record such a large *Acrocephalus* as inhabiting South Africa. Our friend Dr. Finsch suggests that it may be *Calamoherpe caffra* of Lichstenstein (*Nomencl.* p. 29), a species of which no description is extant. Our type is in the British Museum.

Adult.—General colour above fulvous brown, a little darker on the head and inclining to rather clearer fulvous on the rump and upper tail-coverts; wings dark brown, the feathers margined with fulvous brown like the back, the quills externally edged with ashy brown,

apparently the remains of worn plumage; tail imperfect; the two feathers remaining narrowly margined with buffy white on the outer web; lores whitish buff extending backwards to a streak over the eye, and forming a rather narrow eyebrow; round the eye a ring of whitish buff feathers; plumes in front of the eye dusky; ear coverts brown like the head; throat white, slightly washed on the lower part with tawny buff; breast and sides of the body orange tawny, paler on the thighs and under tail-coverts; centre of abdomen white; under wing-coverts dull orange tawny; lower surface of quills ashy brown, edged with pale tawny buff along the inner webs; bill very stout, dark horn-brown in skin, yellow at base of lower mandible; feet fleshy brown in skin. Total length, 6.9 inches; culmen, 0.75; wing, 3.65; tail, 2.8; tarsus, 1.1.

274. *ACROCEPHALUS BATICATUS*. South-African Reed-Warbler.

This Reed Warbler is extremely similar in coloration to the Reed Wren of Europe, but it is always more rufescent, and from this circumstance it received the name of *rufescens* from Keyserling and Blasius. We have no doubt, however, that it is Le Vaillant's "Isabelle," and it therefore must be called *Acrocephalus baticatus* Vieill. It may also be distinguished from its European ally by the proportions of the quills; the second primary being about equal to the seventh or eighth, and the third and fourth about equal. In *A. streperus*, the second primary is about equal to the fourth, and the third is longest of all. It is very common about the reed beds along the banks of rivers in the Karroo, and about Nel's Poort. We have received it from Mr. Atmore from Swellendam, and have found it ourselves at Zoetendal's Vley, Graham's Town, and other places. It is a noisy bird, continually uttering a stridulous cry of 'cur-cur-crak-crak.' It forms a nest between reeds and rushes, of wool and straw, in the shape of a cone. The eggs, usually three, are white, spotted throughout, but chiefly at the obtuse end with various sized brown and light purple, irregular dots and blotches. Axis, 8"; diam. 6". Some eggs are more covered than others, and Le Vaillant's statement that the eggs are spotless, may perhaps be occasionally correct. Mr. H. Jackson writes us that he has found the nest in December. We took it in September. Mr. Ortlepp notices it at Colesberg, breeding in gardens in rose hedges, and along the river banks in reeds.

The following account of the species in the Transvaal is given by Mr. Thomas Ayres:—"The nest of this species is a very extraordinary structure for so small a bird; it is a mass of seven or eight inches in depth, and four or five in diameter, with a small neat cup-shaped cavity at the top, an inch and a quarter across; it is composed principally of white feathers intermixed and bound together with pieces of cotton, wool, and grass; the tips of many of the feathers are allowed to stick out fancifully, which gives the nest an odd appearance as if expressly ornamented; the inside of the cup is very neatly lined with fine grass and horsehair. All nests are not as large as the one described; but all partake more or less of the same character. They are built generally amongst the fig-tree hedges common in the town of Potchefstroom. When insects are scarce the birds feed readily on the ripe figs, here very abundant in the autumn months. The eggs are generally two or three in number. It seems to me that the birds add to their old nest each season, which will account for the structure being so extremely large." Mr. Andersson says that he has obtained this bird on a few occasions in Damara Land.

Adult.—General colour, above fulvous brown, more dusky on the head and inclining to clearer fulvous on the rump and upper tail-coverts: quills dark brown, all the feathers edged with the same fulvous-brown as the back: tail brown with lighter-brown edges; lores rufous buff, as also a few feathers over the eye, not, however, forming an eyebrow: round the eye a ring of buffy white feathers: ear-coverts fulvous-brown with slightly indicated lighter shaft-streaks: cheeks and under surface of body buffy white, the throat and centre of the abdomen purer white: sides of the body clear fulvous brown, deeper and more rufous on the sides of the breast and flanks: thighs dull fulvous brown: under tail-coverts buffy whitish: under wing-coverts light tawny buff. Total length, 5·2 inches; culmen, 0·55; wigg, 2·35; tail, 2·15; tarsus, 0·95.

Fig. Le Vaill. Ois. d'Afr. pl. 121, fig. 2.

275. ACROCEPHALUS PALUSTRIS.

Marsh-Warbler.

Captain Shelley discovered this specimen in Natal during his expedition to Southern Africa. He writes (*Ibis*, 1875, p. 72):—"I shot the only specimen I saw in the thick bush some 500 yards from the marshy ground near Durban, on the 30th of March. I com-

pared it with a specimen in Mr. Dresser's collection, with which it entirely agrees. This is no doubt the species mentioned by Mr. Gurney (*Ibis*, 1865, p. 266) as '*C. arundinacea* (Gm.)?'" The notes given by Mr. T. Ayres on the last-named specimen are transcribed below, and we agree with Captain Shelley that the species there spoken of is *A. palustris*. Mr. Ayres observes:—"These birds frequent the sedgy pools and streams inland; they appear to be tolerably numerous; their habits are active, their notes loud and not unmusical. The specimen sent I shot in December: I did not notice any last winter (July) when I was shooting in the same locality, but still I think they must have been somewhere in the neighbourhood."

Whether *A. palustris* is a species distinct from *A. streperus* is a question not yet determined by ornithologists. As regards the occurrence of a second species of Reed Wren in South Africa it does not much matter, as the proportions of the quills are the same in both European species, and the birds should be looked for during the summer months in South Africa.

The following description is taken from Captain Shelley's specimen above mentioned.

General colour above uniform olivaceous brown: wing-coverts uniform with the back: quills dark brown, externally edged with olivaceous brown, the edges to the secondaries rather more fulvescent, all the primaries with a narrow whitish tip, confined in most cases to a slight terminal edging, which is almost obsolete in the secondaries: tail-feathers dark brown, slightly fulvescent at tip and washed on both webs with olivaceous brown: lores pale buff, extending backwards and forming a faint eyebrow: round the eye a ring of pale fulvous plumes: in front of the eye a dusky spot: ear-coverts brown, with indistinct light shaft-streaks: cheeks and under surface of body light tawny buff, paler on the centre of the abdomen: throat white: sides of the body somewhat shaded with brown: under wing-coverts white, some of the outermost shaded with pale tawny buff, as is also the edge of the wing: "beak flesh-colour, shading into brown on the culmen: legs flesh-colour with a slight livid shade: iris hazel" (*G. E. Shelley*). Total length, 5·5 inches; culmen, 0·55; wing, 2·75; tail, 2·3; tarsus, 0·85.

Fig. Gould, B. Gt. Br. part xxi.

276. ACROCEPHALUS SCHÆNOBANUS. European Sedge-Warbler.

The Common Sedge Warbler of Europe has only as yet been met with in Damara Land as far as regards the limits of the present work. Mr. Andersson thus records the circumstances of its capture:—"I obtained two specimens on December 22nd, 1866, at Otjimbique in the bed of the river, amongst some 'cotton-plants,' on which, and on the ground, they were hopping about in search of insects: they were new to me." We have seen two specimens from the Congo district, obtained by M. Louis Petit, so that the line of migration probably lies along the west coast. The following description is from one of Mr. Andersson's specimens.

General colour above fulvous brown, streaked with dusky brown on the back, and with black on the head: rump tawny buff, the upper tail-coverts brown with dusky centres: wings dark brown, all the feathers edged with fulvous brown, the primaries with somewhat ashy brown: tail-feathers dark brown with lighter fulvous brown edgings, the outer feathers lighter: lores and a distinct eye-brow yellowish buff: in front of the eye a dusky spot: ear-coverts brown washed with fulvous: cheeks and under surface of body yellowish buff inclining to tawny on the flanks and thighs, and to brown on the sides of the upper breast: throat and centre of abdomen buffy white: under wing-coverts ashy whitish washed with yellow on the edge of the wing: "upper mandible dark horn-colour, the lower brownish, but both yellowish at the edge: gape bright orange yellow: legs and toes livid brown: iris dark brown" (*Andersson*). Total length, 4·5 inches; culmen, 0·55; wing, 2·5; tail, 1·75; tarsus, 0·85.

Fig. Gould, B. Eur., pl. 110.

277. CAMAROPTERA OLIVACEA. Grey-backed Bush-Warbler.
Calamodyta olivacea, Layard, B. S. Afr., p. 98.

We have only seen this species ourselves from the neighbourhood of Graham's Town, but it has also been found in Natal by Mr. T. Ayres, and the latter gentleman gives the following account of it in that colony:—"The Caffres call this bird "Imboos Ischlaty" (signifying "bush goat"), from its curious notes when it sees an object of suspicion or dislike, which much resemble the bleating of a kid at a distance, although the tiny bird may be within a few feet of the

listener, hopping and creeping about the dense underwood, and peering through the crevices at its supposed enemy; the tail is then carried erect, like that of the English Wren, and the bird is in almost constant motion; it has also a loud and oft repeated "chucking" note, which it uses as a call to its mate during the breeding months. Its food consists entirely of small insects."

Mr. Andersson writes:—"This species is pretty common in the neighbourhood of the Okavango River, and is also not uncommon in Damara Land proper; but I did not meet with it in Great Namaqua Land. It is a very tame bird, and hunts slowly and with great care, examining alike, in quest of insects, both thickets and the largest trees; it generally carries its wings slightly drooping when thus engaged, and its tail raised at an angle of 45°." Senor Anchicta has met with it at Biballa in Mossamedes as well as at Humbe on the River Cunene.

The following description is taken from a Latakoo specimen obtained by the late Sir Andrew Smith:—

Adult.—Above ashy brown or greyish; wing-coverts olive yellowish, the quills brown, externally washed with the same olive-yellow as the coverts; upper tail-coverts slightly washed with olive: tail ashy brown, with obscure dusky vermiculations under certain lights, the outer feathers slightly tipped with whitish: lores dusky white: feathers above the eye fulvous, scarcely forming an eyebrow: round the eye a ring of fulvous feathers: ear-coverts ashy brown with indistinct whitish shaft-lines: cheeks and under surface of body very pale tawny buff, whiter on the chin and centre of the abdomen: thighs tawny yellow: under wing-coverts and axillaries buffy white, washed with yellow, the edge of the wing bright yellow, "bill livid horn colour: legs, and toes brownish flesh colour, eyelids fleshy; iris light brown" (*Andersson*). Total length, 4·8 inches; culmen, 0·55; wing, 2·25; tail, 1·9; tarsus, 0·9.

278. CAMAROPTERA BRACHYURA. Green-backed Bush-Warbler.
Drymoica brachyura, Layard, B. S. Afr. p. 95.

Le Vaillant first described this bird as the 'Olivert' from Outeniqualand, and Victorin obtained it in the Karroo. Mr. W. Atmore has sent us specimens from Blanco, near George. Mr. Ortlepp has met with it near Colesberg, where he says the species is called 'Kers-oojie' and 'Glass-eye' by the colonists. He says that they

are common about Colesberg, inhabiting large plains covered with tall shrubs, in which they construct their nests. About the latter they are very solicitous, often suffering themselves to be knocked over with a stick when the nest is approached. Mr. T. C. Atmore has sent us specimens from the vicinity of Grahamstown, and Mr. T. L. Ayres has forwarded to Captain Shelley sundry examples shot near Pinetown in Natal. We are indebted to Mr. Ortlepp for the nest and eggs of the present species. The former is a small cup of wool and wild cotton lined with a few grass stems, placed in a bush. The eggs, three in number, are pure white, minutely spotted over the whole of the obtuse end with red dots. Axis, 7'' ; diam. $5\frac{1}{2}$ ''.

The following description is taken from one of Sir Andrew Smith's skins in the British Museum. The species may be distinguished from *C. olivacea* by its green back, wings and tail, and by the entirely white under-surface.

Adult.—General colour dull olive-green, the forehead with somewhat of a greyish shade: wing-coverts green like the back, but a little brighter and more yellow in tone; quills brown, externally washed with green like the back, brighter on the outer edge of the primaries: tail dull olive-green, with nearly obsolete remains of lighter tips: lores greyish white, as also a slightly indicated eyebrow: round the eye a ring of buffy white feathers: in front of the eye a dusky spot: ear-coverts ashy brown with faint whitish shaft-lines: cheeks and entire under surface of body dull white, the sides of the body washed with ashy grey: thighs dull tawny yellow: under wing-coverts and axillaries pale yellow, as also the outer edge of the wing, the greater series of coverts whitish: "bill black, legs flesh-colour; iris rich brown" (*T. L. Ayres*). Total length, 4.2 inches; culmen, 0.55; wing, 2.05; tail, 1.7; tarsus, 0.8.

Fig. Le Vaill. Ois. d'Afr. iii. pl. 125.

279. HYPOLAIS ICTERINA.

Icterine Warbler.

Sylvia obscura, Layard, B. S. Afr. p. 102.

Like the Willow Warbler, this European species appears to make South Africa its winter home. Sir A. Smith, who described it under the name of *Sylvia obscura*, obtained a single specimen near Latakoo. Mr. Andersson, who is at present the only other naturalist who has met with the species in South Africa, writes as follows:—"I observed this Warbler sparingly in the neighbourhood of the

Okavango and in Damara Land: it is migratory and amongst the earlier arrivals. It sings deliciously, and is found in small flocks hopping about industriously among the branches of the smaller trees, preferring such as have a thick tangled foliage, which it slowly examines for insects and larvæ.

Adult Male.—General colour above dull olivaceous rather greyer on the rump and upper tail-coverts: wings brown, the quills and coverts with lighter greyish edgings, apparently the remains of worn plumage: tail brown with paler edgings to the feathers: head clearer olivaceous and slightly more yellow than the back: lores and an indistinct superciliary line pale yellow: round the eye a ring of yellow feathers: ear-coverts olivaceous with narrow shaft-lines of yellowish white: cheeks and entire under surface of body pale yellow including the thighs and under tail-coverts: under wing-coverts and axillaries very pale yellow: inner lining of quills ashy brown, with whitish edgings along the inner web from the base upwards: "upper mandible brownish, with yellowish tips and edges, the under mandible yellow tinged with flesh colour: ring round the eyes light yellow: gape melon-yellow: legs and toes slate-coloured: iris brown." (*Andersson*). Total length, 5·4 inches; wing, 3·0; tail, 2·2; tarsus, 0·85.

Fig. Dresser, B. Eur. part xxviii.

280. *PHYLLOSCOPUS TROCHILUS*. European Willow Warbler.
Sylvia trochilus, Layard, B. S. Afr. p. 102.

The European 'Willow Wren' visits South Africa during its absence from Europe and it seems to be very generally distributed. Mr. L. C. Layard shot several specimens along the banks of the Liesbeck River near Cape Town, and we have found it in the reeds bordering the Berg River and in the neighbouring vleys. We have also received it from Nel's Poort near Beaufort and the late Mr. Andersson procured a specimen at the Knysna. Mr. T. C. Atmore found it not very uncommonly at Eland's Post and in the vicinity of Grahamstown, while Mr. Ortlepp procured it during a journey near the Sunday's River. Mr. T. Ayres has forwarded a single specimen from Natal to Mr. Gurney, and in Damara Land Mr. Andersson met with it, as well as in Ondonga. He writes:—"I have observed this species in the neighbourhood of the Okavango. It is rather lively in its habits, hopping incessantly among the foliage, and even suspending itself head downwards from the buds

and flowerets of the trees, almost every part of which it explores in search of the small insects which constitute its food."

The following is a description of a South African specimen in the British Museum :

Adult.—General colour above olivaceous brown, more strongly washed with olivaceous on the lower back and rump and slightly on the head; wings brown, the coverts and the quills externally washed with olive greenish; tail ashy brown, the feathers edged with olive-green; lores and a distinct eyebrow yellowish white; in front of the eye a spot of dusky brown; ear-coverts dull brown, slightly washed with yellow; cheeks and under-surface of body whitish; the chest distinctly washed with yellow, as also are the under tail-coverts; thighs greenish yellow; sides of body brown, washed and streaked with yellow; under wing-coverts bright yellow, as also the edge of the wing; "bill brownish, lighter beneath and tinged with yellow; legs and toes yellowish brown, but a narrow band at the back of the legs and the soles of the feet are orange-yellow; iris very dark-brown, almost black" (*Andersson*). Total length, 4·8 inches; culmen, 0·4; wing, 2·5; tail, 2·2; tarsus, 0·8.

Fig. Gould, B. Eur. pl. 131, fig 1.

281. EREMOMELA FLAVIVENTRIS. Yellow-bellied Bush Warbler.

Drymoica brachyura, Layard, B. S. Afr. p. 95 (*partim*).

This species was discovered by Dr. Burchell. Wahlg obtained it in "Upper Caffraria," both in the plains and in the woods, and this locality is probably intended to indicate the Transvaal Republic, where Mr. T. Ayres has met with it. He says that in appearance and habits it resembles *Zosterops virens*. Mr. Andersson procured specimens at Walfisch Bay and at Otjimbingue, and he observes:—"This little bird is sparingly met with from the Okavango River on the north to the Orange River on the south, but, on account of its diminutive size and secluded habits, is probably often overlooked. It is found in small families amongst dwarf vegetation, where it diligently searches for small insects and their larvæ. It is very tame, and is often found in company with other small birds."

The following description is from a specimen obtained by Mr. Andersson in Damara Land:—

Adult female.—General colour above light ash-colour, the rump lighter and slightly olivaceous; wings dark brown, the feathers

washed externally with ashy, inclining to whity-brown on the outer greater coverts and the primaries; tail dark brown, externally edged with dull olivaceous; lores dull white, extending over the eye and forming a narrow eyebrow; round the eye a narrow circlet of white feathers; ear-coverts ash-coloured, with very narrow shaft-lines of white; in front of the eye a dusky spot; feathers below the eye white; cheeks and under surface of body as far as the abdomen white; the sides of the upper breast light ash-colour; abdomen, flanks and under tail-coverts light yellow; thighs ash-colour; under wing-coverts ashy whitish; "bill dark horn-colour, yellow at the angle of the mouth, and livid flesh-colour on the basal part of the lower mandible; iris dark brown" (*Andersson*). Total length, 3·5 inches; culmen, 0·4; wing, 2·1; tail, 1·5; tarsus, 0·65.

282. EREMOMELA USTICOLLIS. Brown-throated Bush-Warbler.

This little-known species was obtained by the late Professor Wahlberg in Upper Caffraria (25° S. lat.), according to Sundevall, who described it (*Oefv. K. Vet. Akad. Forh. Stockh. 1850, p. 103*). Since that time Mr. T. Ayres has met with it in the Transvaal, and he observes:—"This species much resembles a *Zosterops* in its habits. It sings sweetly, but not loudly; and when in a tree only a few feet overhead, its voice sounds as if it came from a distance. Its food consists of insects, for which it may generally be found searching actively amongst the upper branches and leaves of trees and bushes."

Mr. Andersson obtained several specimens near Otjimbingwe, his first having been shot on the 7th July, 1866, "whilst hopping amongst the branches of a lofty tree."

Adult female.—General colour above light grey; the upper tail-coverts faintly tinged with olivaceous; wing-coverts greyish, like the back, the bastard wing and primary-coverts blackish brown; quills dark brown, externally edged with grey, the secondaries with greyish white; tail-feathers ashy-brown washed with grey on the margins of the feathers which are all narrowly tipped with white; lores whitish, as also a narrow streak running above the eye; round the eye a circlet of buff plumes; cheeks white on the anterior part, dull chestnut on the hinder part: ear-coverts tawny buff, greyish on the upper margin; throat buffy white; rest of under surface rich buff, with a distinct spot of chestnut on the fore-neck, across which it almost forms a transverse bar; under wing-coverts light fulvous; lower

surface of quills ashy brown, edged along the inner web with whitish ; "upper mandible brown, the lower brownish flesh-colour ; legs yellowish flesh-colour ; iris lemon-colour" (*Andersson*). Total length, 4.2 inches ; culmen, 0.45 ; wing, 2.05 ; tail, 1.6 ; tarsus, 0.8.

283. EREMOMELA SCOTOPS.

Dusky-faced Bush-Warbler.

The present species is unknown to us. It was described from Wahlberg's collections by Professor Sundevall (*Oef. K. Vet. Akad. Forh. Stockh.* 1850, p. 103), from Upper Caffraria (25°), and the following is a translation of the original description.

Above grey, the head slightly greenish : underneath pale yellow, the throat brighter : lores dusky. There is no pale superciliary streak above the eye, whence the face appears dusky ; throat nearly white ; bill entirely black ; feet dusky ; wings and tail dull ashy brown, narrowly margined with whitish (not with yellow) ; first primary equal to half the third ; second equal to the seventh. Wing, 2.35 ; tarsus, 0.7.

284. DRYODROMAS FLAVIDA.

Black-breasted Bush-Warbler.

Professor Sundevall has separated this little bird as the type of a distinct genus, *Chlorodyta*, but, until the necessary revision of these difficult Warblers has been undertaken by some competent zoologist, we prefer to keep it as a *Dryodromas*, in which genus it has been placed by Drs. Finsch and Hartlaub. We have received it from Mr. A. F. Orllepp from Sunday's River, and Mr. T. C. Atmore also procured a specimen at Eland's Post.

The present species was originally discovered by Mr. Andersson. He writes as follows :—"It is only in the neighbourhood of the Okavango that I have found this pretty little species at all numerous, and I never saw it either in Damara or in Great Namaqua Land. I generally found it in small flocks, probably consisting of entire families. It resorts to the denser parts of the forests, and lives entirely on small insects." He also met with it at Ondonga.

Adult male.—Above yellowish green, rather brighter yellow on the rump ; crown of head bluish grey shaded with yellow towards the nape ; sides of face bluish grey like the head ; cheeks bright yellow as also the under surface of the body ; chin and centre of the body silky white ; chest with a conspicuous spot of black ;

under tail-coverts and thighs yellow; under wing-coverts pale yellow, the lower series silky white; upper wing-coverts yellowish green like the wings; quills blackish, externally edged with yellowish green, the inner webs white towards their base; tail-feathers dull olive-green, edged and slightly tipped with yellow, the outer feather entirely yellow; "bill almost black; tarsus flesh-coloured; iris yellowish brown." (*Andersson*.) Total length, 4.4 inches; culmen, 0.5; wing, 1.95; tail, 2.0; tarsus, 0.8.

Adult female.—Similar to the male, but wants the black spot on the breast, which is entirely yellow. Total length, 4.6 inches; culmen, 0.5; wing, 1.9; tail, 2.15; tarsus, 0.85.

285. *DRYODROMAS ALBIGULARIS*. White-throated Bush-Warbler.

Described by Drs. Finsch and Hartlaub (*Vög. Ostaf.* p. 240) from a specimen obtained by Mr. T. Ayres in Natal, and now in the Bremen Museum. We have seen one specimen of this species, from Namaqualand, in the British Museum, a full description of which is given below: it is from Sir A. Smith's collection. The species was also found by Mr. W. Atmore at Traka. He says they inhabit the short Karroo bush in little flocks of three or four individuals, and are as affectionate as "love-birds" If one is shot the others make a doleful lamentation. Their habits and nest resemble those of the White-eye (*Zosterops*), and the eggs procured on the 20th of August are pale blue, spotted at the obtuse end with small dark dry blood-coloured spots. Axis, 6''' ; diam. $4\frac{1}{2}$ ''.

Adult.—General colour above olive-brown, rather more dingy on the head, the rump and upper tail-coverts dull olive-yellow; wings brown, the wing-coverts edged with the same olive-yellowish as the back, the quills also edged with the same colour but rather brighter; tail brown, all the feathers distinctly edged with olive-yellow; lores and feathers over the eye dull grey; ear-coverts ashy-brown; cheeks and under surface of body dull white, the sides of the body light ashy brown, the upper breast laterally ashy grey; thighs ashy brown; under tail-coverts yellow; under wing-coverts light ashy. Total length, 4.1 inches; culmen, 0.4; wing, 2.0; tail, 2.05; tarsus, 0.75.

286. *DRYODROMAS DAMARENSIS*. (*Wall.*,) Damara Bush-Warbler.

Very like *E. flaviventris* but distinguished by its yellowish back, grey head, and especially by having the yellow on the lower parts

confined to the under tail-coverts. Mr. Andersson writes as follows:—"I only observed this diminutive species in one locality, a place called Oosoop, on the lower course of the Swakop River; and even there it was very scarce, so that, though very tame, I have hunted for it whole days unsuccessfully. It is found in small families of from two to six individuals amongst the widely scattered dwarf vegetation; it hops slowly and systematically amongst the branches, searching diligently for small insects, which constitute its sole food, and uttering all the while a low but distinct chirp."

Adult male.—Head and neck above grey, the back light olive yellow, becoming brighter yellow on the upper tail-coverts: wings brown, the wing-coverts externally olive yellow, like the back, the quills ashy brown, the outer webs washed with yellow and narrowly tipped with whitish: tail-feathers olive brown externally washed with olive yellow, all the feathers tipped narrowly with yellowish white, the external one light yellowish brown on the outer web, the penultimate one with a streak of the same colour near the tip; lores whitish, extending backwards over the eye, but scarcely forming an eyebrow: round the eye an indistinct circlet of dusky whitish plumes: ear-coverts ashy grey: cheeks and entire under surface of body white; the under tail-coverts yellow; under wing-coverts white: "upper mandible and tip of lower bluish black, remainder of lower mandible bluish brown; legs liver brown; iris bright yellow" (*Andersson*). Total length, 4.0 inches; culmen, 0.4; wing, 1.95; tail, 1.95; tarsus, 0.65.

287. DRYODROMAS FULVICAPILLUS. Tawny-headed Bush-Warbler.

Drymoica fulvicapilla, Layard, B. S. Afr. p. 94.

Calamodyta natalensis, id. t.c. p. 98.

Le Vaillant first described this bird as the "Rousse-tête," and according to him it inhabits the district of Cambeboo, Caffreland, and Namaqua Land. Victorin procured it at the Knysna in May, and also in September and October; we have likewise seen specimens obtained by Mr. Andersson in the same locality. Mr. Atmore has forwarded specimens from George, and Mr. Cairncross has met with it near Swellendam. In Natal it seems by no means rare, and we have seen many specimens from thence. Mr. Thomas Ayres writes from that colony: "These birds are plentiful, frequenting rough weeds and grass; their flight is tolerably strong; their food consists

of minute insects, eggs of moths, etc. During the summer months they may frequently be seen perched on the top of a low tree or bush, when they utter a monotonous weeping note for a length of time."

Adult male.—Above brown, faintly darker in the centre of the feathers, the upper tail-coverts somewhat washed with fulvous; scapulars slightly shaded with ashy, the lesser and median wing-coverts clearly edged with ashy grey, the greater coverts and the quills brown washed with reddish brown, the margins of the quills rufescent, inclining to whitish; tail-feathers brown waved with dusky cross lines, and margined with yellowish brown, without any dark subterminal bars to the feathers; head and nape uniform rufous; lores buff extending backwards over the eye and forming a faint eyebrow; sides of face grey shaded with fulvous on the upper and hinder margin of the ear-coverts; entire under-surface of body ashy grey, whitish on the chin and malar line; centre of abdomen and vent also whitish, the under tail-coverts very pale yellowish; under wing-coverts buffy whitish slightly washed with fulvous near the edge of the wing, the lower series ashy brown like the lower surface of the quills, which are edged with light rufous along the inner web; upper mandible brown, the lower flesh-colour; legs flesh-colour; iris light brown. Total length, 4.3 inches; culmen, 0.45; wings, 1.9; tail, 1.85; tarsus, 0.75.

Adult female.—Similar to the male, but rather smaller, and not so brightly coloured. Total length, 3.5 inches; culmen, 0.4; wing, 1.7; tail, 1.5; tarsus, 0.75.

Fig. Hartlaub, Ibis 1863, pl. viii, fig. 1.

288. PINDALUS RUFICAPILLUS. Yellow-browed Bush-Warbler.
Muscicapa ruficapillus, Layard, B. S. Afr. p. 149.

We have received this rare species from Mr. Cairncross at Swellendam, and from Mr. Atmore at Traka. The late Mr. Andersson also procured it at the Knysna. It was originally described from specimens procured by Wahlberg in "Lower Caffraria," and the editor's collection contained one example shot by the last-named traveller in Natal: this is now in the national collection. Here Mr. Ayres also obtained it, and he observes concerning it:—"Rare in this locality; frequents the bush and thick creepers. When in search of food is exceedingly active, flitting and hopping from twig to twig

with the greatest celerity, and catching the small beetles, gnats and flies, of which its food consists." Mr. Barratt met with it at Macamac, and between this place and Pilgrim's Rest gold-fields.

Adult male.—Head tawny rufous, becoming paler on the nape and hind neck; back yellowish green, slightly shaded with rufous on the mantle; rump dull grey; upper tail-coverts yellowish green: tail feathers brown, all edged with yellowish green: wing-coverts green like the back; the quills dark brown externally edged with yellowish green, lighter on the primaries, the inner secondaries much more broadly washed with the same green as the back: lores and a very distinct eye-brow bright yellow: in front of the eye a dusky spot, and round the latter a circlet of bright yellow feathers: sides of face also bright yellow, the ear-coverts slightly washed with rufous: throat and chest bright yellow, fading off gradually towards the abdomen, which is white: sides of body dull grey washed with yellow: thighs and under tail-coverts bright yellow: under wing-coverts yellow, the lower series white washed with yellow: "upper mandible dusky, lower chrome yellow: tarsi and feet pale dusky brown: iris dusky." (*Ayres*). Total length, 4 inches; culmen, 0.5; wing, 2.1; tail, 1.75; tarsus, 0.8.

289. SYLVIETTA RUFESCENS.

Short-tailed Bush-Warbler.

Dicaeum rufescens, Layard, B. S. Afr. p. 84.

This is the "Stomp-stertje" of the Dutch colonists, and the "Crombec" of Le Vaillant, who found the species about the banks of the Orange river in Great Namaqua Land among the mimosa trees, amid the branches of which it hops in search of insects. We have received specimens from Graaff-Reinet, Colesberg, Hope Town, and Swellendam; and we ourselves found it at the Berg River. Victorin procured it in the Karroo in January. It is not common in Natal according to Mr. Ayres, but Mr. T. E. Buckley obtained a specimen at Palatzi in Bamangwato on the 20th October, 1873, and again in the Transvaal on the 1st July in the same year. Mr. T. Ayres has also met with it in the latter locality. A single specimen from Tete in the Zambesi was brought home by the Livingstone Expedition. Mr. Andersson writes:—"I have found this species widely distributed in all parts which I have traversed, from the Okavango to Table Mountain, but nowhere very common. It frequents dwarf vegetation, which it examines carefully as it hops and glides quickly onwards." Anchieta has procured it in Benguela, and also at

Biballa in Mossamedes ; at the latter place it is called "Kikuan-diata."

Mr. W. Atmore informs us that it is not uncommon near Swellendam, "creeping about the decaying fences like our English Hedge-sparrow." Its actions in the trees and bushes reminded us of the European Wren : its flight is in short jerks and undulating. The eggs are white, spotted and blotched with brown and faint purple, chiefly in the form of a ring at the obtuse end ; axis 9''' ; diam. 6'''.

Adult.—General colour above ashy grey, the wing-coverts uniform with the back : quills dark brown, externally edged with the same ashy grey as the back, the innermost secondaries entirely of the latter colour : tail ashy grey, slightly tipped with dull fulvous : lores and a tolerably distinct eyebrow light tawny buff : in front of the eye a dusky spot : ear-coverts tawny buff with narrow white shaft-lines : cheeks and rest of under surface tawny buff, paler on the throat and inclining to creamy buff on the centre of the abdomen : thighs deep tawny as also the under tail-coverts : under wing-coverts tawny buff : "irides yellowish brown ; upper mandible dusky, the under mandible a purplish flesh colour, as also are the legs and toes" (*Andersson*). Total length, 3.5 inches ; culmen, 0.6 ; wing, 2.45 ; tail, 1.0 ; tarsus, 0.75.

Fig. Le Vaill. Ois. d'Afr. pl. 135.

290. SYLVIA SALICARIA.

Garden Warbler.

The Garden Warbler of Europe appears to make its way, during its absence from that continent, to South-western Africa, for it has been obtained by Senor Anchieta at Biballa and Huilla in Mossamedes. Mr. Andersson also procured it twice in Damara Land, and among the birds discovered after Sir Andrew Smith's death at his house was a skin of a Garden Warbler, bearing the usual ticket attached by him to birds obtained during the "Expedition." The following is a description of the last-named specimen.

General colour above ashy brown, including the wings and tail : lores and a ring of feathers round the eye buffy white : ear-coverts brown : cheeks and under surface of body dull whitish, the breast, sides of body and thighs brown : under wing-coverts and axillaries light orange buff. Total length, 6 inches ; culmen, 0.5 ; wings, 3.1 ; tail, 2.35 ; tarsus, 0.8.

Fig. Dresser, B. Eur. part liii.

Fam. NECTARINIIDÆ.

291. PROMEROPS CAPER.

Cape Long-tailed Sun-bird.

This is one of the South African Birds which is entirely confined to the Cape Colony, throughout the whole of which it appears to be distributed; it is abundant near Cape Town, and Captain Shelley found it literally swarming on the *Protea* bushes at Mossel Bay. Victorin records it from the Knysna district, but it becomes gradually rarer as the eastern frontier of the colony is approached. Mr. Rickard has procured it at Port Elizabeth, where it breeds, but does not stay all the year; it is common when the red *Protea* is in flower. This honey-eater differs considerably in all its habits from the sun-birds with which it is associated. It is generally found in small parties, the members of which, though acting much in concert, still maintain their individuality. They follow one another to favourite bushes, chase each other, or feed amicably side by side, and if one is alarmed and flies off, the rest generally follow; yet they cannot be called gregarious in the strict sense of the word. They are fond of perching on the summit of high bushes, particularly *Proteacea*, from the flowers of which they extract their food, consisting of insects, and the limpid, saccharine juice which these plants supply plentifully, and which will often run in a copious stream from the bill of a fresh-killed specimen.

Le Vaillant's account of the nesting habits is erroneous; Mr. L. C. Layard procured a nest, which he assured us belonged to this bird, cup-shaped, about three inches in diameter *within*, composed of rootlets, grasses, and the spicular leaves of firs, mingled with the silky, dark-orange seeds of the *Protea*. The single egg contained in it instantly reminded us of that of the Bunting of England, being a pale dirty cream-colour, irregularly though sparingly marked with wavy tracery and hair-streaks, now and then inclining to blotches of a dark purple-brown, or a pale indistinct purple: axis, 11"; diam., 8½". Subsequent discoveries of nests and eggs confirm the truth of the above observations. We found that they bred in the months of May, June, and July. Mr. W. Atmore informs us that he has found many nests, always cup-shaped, and placed in the fork of a mimosa. A very good account of the habits of the present bird from his own personal observations will be found in Captain Shelley's "Monograph of the Sun-birds."

Above, cinereous-brown, the shafts of the feathers darkest; greyish on the forehead, and rufous on the sides of the neck; chin whitish, with a brown moustache; under parts mottled rufous, grey, and white; rump greenish; vent a fine yellow. Length, 19·5"; wing, 4"; tail of male often extending 14". The female has generally a shorter tail, but Captain Shelley says that the length of this organ depends upon the age of the individual and on the season more than on the sex. He gives the measurements of a hen bird as follows:— Total length, 15·7 inches; culmen, 1·25; wing, 3·8; tail, 11; tarsus, 0·95.

Fig. Shelley, Monogr. *Cinnyridæ*, part 1.

292. *PROMEROPS GURNEYI.* Gurney's Long-tailed Sun-bird.

This species, described by the late Mr. Jules Verreaux (P. Z. S., 1871, p. 135) represents the foregoing in Natal, and the eastern part of the Transvaal, and differs from it in having the crown and breast chestnut. Mr. T. Ayres, who discovered it in Natal, states that in habits it much resembles *Nectarinia natalensis*, its food being also the same, viz., nectar and small insects, especially spiders. "It is very rare in this locality, and besides is more shy than most other species; I believe it is only to be found during the winter months." Mr. T. A. Barratt procured several specimens between Pretoria and Lydenburg, and states that he found them exclusively on the "Zuikerbosch," or sugar bush. Mr. T. Ayres likewise remarks that in the Lydenburg district the species is tolerably common, feeding on the nectar of the flowers of a scrubby tree, common on the sides and summits of the mountains.

Fig. Verreaux, P. Z. S., 1871, pl. viii.

293. *NECTARINIA FAMOSA.* Malachite Sun-bird.

Common throughout the colony, this Sun-bird abounds on the Cape Flats during the flowering of the *Protea*, from which it extracts the saccharine juice by means of its long brush-tipped tongue. Captain Shelley observed them near Cape Town, and we have found them plentiful up the ravines of Table Mountain, extending even to the top. Mr. Andersson states that it is "extremely abundant in Little Namaqua Land, and also occurs, though but rarely, in the southernmost part of Great Namaqua Land." Victorin records it as found by him in the Karroo in

December, and at the Knysna from April to December. Here also Andersson obtained many specimens and Captain Shelley also found it in the neighbourhood of Mossel Bay. Farther to the eastward the latter gentleman obtained it at Port Elizabeth and Mr. Rickard at East London. Mr. T. C. Atmore sent us specimens from the vicinity of Grahamstown, but in Natal it is apparently rarer, and Captain Shelley believes it to be migratory there, as he did not observe it during February and March. Mr. Ayres states that it is found more in the inland part of the colony, and in the Transvaal; here, according to the same naturalist, it is exceedingly scarce, a few only being found in the hills and open country adjacent to Potchefstroom. Mr. T. E. Buckley procured some beautiful male specimens during his trip from Natal to the Matabili country, on the Drakensberg mountains. He writes as follows:—"Only seen in this one place, but most likely only a summer visitant. About here I found several pairs living amongst the thick patches of bush along the small streams that run down the side of the Drakensberg. They were restless but not at all shy." He has also recently met with it both in Natal and Suaziland. Mr. F. A. Barratt obtained several in the Macamac district near the Lydenburg Goldfields. In the latter district Mr. T. Ayres says that it is commoner than *C. chalybea* frequenting the same localities, but is more especially to be found about the sugar bushes with *Prome-rops gurneyi*. Approaching the Zambesi it appears to diminish in numbers. Dr. Kirk says that he only saw it once, during the rainy season, in a thick clump of trees near the river Shiré.

An excellent account of the habits of this fine species is given by Captain Shelley in his "Monograph of the *Cinnyridæ*," which leaves us little to add. It is very partial to the blossoms of the aloe, among which it finds an abundance of its insect food. It has a shrill, not unpleasing, but short song, and when pursuing a rival utters a piercing scream. It is very combative, and if two males meet about the same bush, a fight is sure to ensue, to the great detriment of their beautiful tail-feathers. The males lose their beauty in the winter season; and the young birds are just like the females. It builds a domed nest of cobweb, lichens, dry leaves, and odds and ends of all kinds, usually suspended on the outside of a bush or from the branch of a tree. The eggs, two* in number, are

* Two seems the normal number of eggs laid by all the Cape *Nectarinia*, and some observers affirm the produce of these is always a male and female bird.

of a dull greyish-brown colour, minutely mottled all over. Axis, 10'' ; diam. 6'''.

In Natal, writes Mr. Ayres, they frequent "the open country, feeding upon the nectar of the various kinds of aloes abounding in some localities and also on that of some species of lilies which are numerous in many of the valleys. When disturbed, they generally fly right away, unless their attention is attracted by some flower or by others of their own species." Mr. Andersson observes :—"It is usually found permanently established where it has once taken up its abode. Its food consists of insects and the saccharine juices of flowers, in search of which it flits incessantly from one flowering tree to another, now settling and now hovering, but glittering all the while in the sunshine like some brilliant insect or precious gem. The male in addition to the beauty of its plumage possesses a very pleasant warble."

General colour, shining malachite green ; wings and tail blackish ; pectoral tufts brilliant yellow ; two centre tail-feathers prolonged three inches beyond the rest. Total length, 9'' ; wing, 3'' ; tail, 5'' 5'''.

Female.—Above dull brown tinged with green, below greenish yellow, brightest on the belly and vent, mottled with brown on the throat and chest, under tail coverts whitish. Length, 6'' ; tail, 2'' 3'''.

The young male resembles the adult female.

Fig. Shelley, Monogr. *Cinnyridæ*, part 1.

294. ANTHROBAPHES VIOLACEA.

South African Wedge-tailed Sun-bird.

Nectarinia violacea, Layard, B. S. Afr. p. 78.

Captain Shelley writes as follows :—"The South African Wedge-tailed Sun-bird forms, I consider, the connecting link between the African genus *Nectarinia* and the Oriental *Æthopyga* : to the former it is allied in the shape and length of its bill, and in not possessing the loose downy feathers on the middle of the back, which are so characteristic of the genus *Æthopyga*, while to the latter it shows its affinities in the form of the tail. This last character, together with the metallic colouring of the least series of wing-coverts, and the orange yellow breast distinguish it from all the other members of the family."

This sun-bird appears to affect wild, uncultivated country and mountains, more than the other species, *C. chalybæus*, *C. afer*, or *N.*

famosa: indeed, we never observed it near habitations. It is plentiful on the top and about the sides of Table Mountain. At the Knysna, we found it in abundance among the uncultivated hill-sides, away from the timber. We saw a pair building a pendant, domed nest, with a projecting portico over the entrance, at Cape Delgado, on the East Coast of Africa. The nest was hung at the extreme end of a drooping branch of a *Casuarina*, close to the sea beach; not far off was the nest of *C. gutturalis*.

Mr. Andersson gives the following note:—"I have found this species pretty abundant in Little Namaqua Land; but to the best of my knowledge it is not an inhabitant of Great Namaqua or Damara Land, though Mr. Layard informs me that Mr. Chapman brought specimens from the Lake country. It is found singly and in pairs, often also in flocks, frequenting the slopes of hills and mountains, whence it descends to the lower grounds, but only during the flowering season of the garden plants and trees, amongst which it is especially fond of the sweet scented orange-blossom. With the exception of such excursions, it is not migratory. The male bird has a brisk, pleasant song. With regard to its supposed occurrence near Lake N'gami as stated above, we agree with Captain Shelley as to the identification of the species being in this case incorrect.

Adult male.—Head, neck, throat and shoulders shining green; breast shining violet; back, wings, and tail olive green; belly and vent deep orange and yellow; side-tufts yellow; centre feather of tail prolonged about $1\frac{1}{4}$ inch beyond the rest, and darker. Total length, $6\frac{1}{2}$ " ; wing, $2\frac{1}{4}$ " ; tail, $3'' 2'''$. Captain Shelley states that during the rainy season the male loses its bright colours, and assumes a plumage almost identical with that of the female.

Adult female.—Above dull brownish-green, the rump tinged with greenish-yellow; below tinged with yellow, especially on the belly and vent. Total length, 5 inches; culmen, 0.85; wing, 2; tail, 2; tarsus, 0.65.

Fig. Shelley, Monogr. *Cinnyridæ*, part iii.

295. CINNYRIS VERREAUXI.

Mouse-coloured Sun-bird.

According to Captain Shelley, our first authority on the sun-birds, this very local South African form "may be readily distinguished by the peculiar colouring of its plumage, the upper parts being of an olive-shaded ashy-brown, with only the ends of the

feathers glossed with metallic green." Below it is pale ashy-brown in colour, with the pectoral tufts bright scarlet. Sir Andrew Smith, who first named the species, writes:—"Only a very few specimens of this bird have yet been found in South Africa, and none, as far as I know, within the limits of Cape Colony: Kafirland, and the country eastward of it, towards Port Natal, furnished the specimens we possess. Like the other species of the group, it feeds upon small insects; and these it collects partly from the branches and leaves of brushwood and dwarf trees, and partly from flowers; but as far as my experience goes, I should be inclined to consider them as giving a preference to insects. In those I examined I found the bulk of the contents of the stomach to be insects, though at the same time each contained more or less of the saccharine juice." Captain Shelley met with the species near Durban, and Mr. T. L. Ayres has forwarded several specimens to him from Pinetown. A nest obtained by the latter gentleman was suspended from the outer twigs of a bush, and was composed of dried grass, and lined with feathers and horse-hair, being very similar in structure to that of *Anthodieta collaris*. Mr. T. Ayres notices that in Natal he has only seen these birds in the coast bush, and not so plentifully as most other species of Nectariniæ. Captain Shelley also states that in its habit of frequenting the low thick bush it differed from *C. olivaceus*, which he only met with in the large scattered trees in the more open country. Captain Harford, when staying at Pinetown, never met with the species, but he tells us that along the coast and on the Umgeni they were very plentiful, especially about the time when peach-trees were in blossom. We must add that Lord Tweeddale's collection contains a specimen said to have been procured in the Zambesi.

Above brownish; head, upper, and lateral parts of neck, back, and shoulders, dark bluish-green, with a strong metallic lustre; wings and tail black-brown; under parts yellowish-grey; tufts under the wings brilliant scarlet. Total length, 5·2 inches; culmen, 0·9; wing, 2·45; tail, 2; tarsus, 0·7.

Fig. Shelley, Monogr. *Cinnyridæ*, part ii.

296. *CINNYRIS OLIVACEUS*. South-African Olive Sun-bird.
Nectarinia olivacea, Layard, B. S. Afr. p. 78.

Of this species Sir Andrew Smith observes:—"In the same country in which we found *C. verreauxi*, we discovered another

species of the genus *Cinnyris*, which appears to us undescribed." It was subsequently described and figured by him (Ill. Zool. S. Afr., Aves, pl. 57) as *C. olivaceus*. All the specimens which we have seen have been from the colony of Natal, whence Captain Harford sent us examples: according to his observations it breeds there in November, the eggs being light brown, so profusely mottled with purplish brown as almost to conceal the ground-colour. Captain Shelley found them rare at Durban, but at Pinetown in February and March they were far more common, being usually seen in pairs among the tall trees which grow by the sides of the water-courses; they appeared to him to prefer the higher branches to the low, tangled brushwood. Mr. Ayres also writes:—"These birds are common on the coast and for some distance inland; they are particularly fond of shady banana groves, taking the nectar from the long drooping flowers of the plant, and chasing one another about with great pertinacity. The plumage of the female is not so bright as that of the male."

The plain olive colouring of this bird is its most distinguishing character; both sexes have a yellow pectoral tuft. The colour of this species, above, is intermediate between grass and olive-green, the head being strongly tinged with blue; below it is light yellowish-green, with an orange tint on the throat, and on each axilla there is a small tuft of brilliant yellow feathers. Length, from the base of the bill to the point of the tail, 5"; bill, 1" 3".

Fig. Shelley, Monogr. *Cinnyridæ*, part 2.

297. CINNYRIS GUTTURALIS.

Scarlet-chested Sun-bird.

Nectarinia natalensis, Layard, B. S. Afr. p. 80.

This fine species is not an inhabitant of the Cape Colony, and it does not appear to descend further than Natal. Here it breeds, according to Captain Harford, who has sent us specimens. Mr. T. Ayres has also found it breeding in that colony, and he states that it "hangs its nest on the outer twigs of trees, at no great height from the earth and frequently over water." Captain Shelley has received several examples from Pinetown and Durban, sent to him by Mr. T. L. Ayres, who informs him that in this district it is migratory, only arriving there in the cold season, and is never very plentiful. Mr. T. E. Buckley writes:—"I only met with this bird in the Matabili country about the Imguisi and Samouqui rivers, and

even there they were not very abundant." He has also procured it in Suaziland. Dr. Kirk, however, found it common in the Zambesi Valley and it extends along the coast as far as Mombas; we ourselves met with it plentifully at Zanzibar and at Cape Delgado.

Mr. Andersson gives the following note:—"This species occurs at Lake N'gami, and is pretty abundant in the neighbourhood of the Okavango. In Damara Land proper it is not common; but in June, 1866, I obtained several specimens at Otjimbingue, where they seemed chiefly to seek their food amongst the "tobacco" trees now growing so abundantly in the bed and on the banks of the Swankop. Can the increase of this tree of late years have brought more of these birds? I hardly remember to have seen them at Otjimbingue previously." It is probable that the cause mentioned by Mr. Andersson has attracted this species and extended its range to the southward, but it is pretty plentiful in the countries more to the north; thus Anchieta has met with it at Humbe on the Cunene River, where it is called "Kanzolo," and is found breeding: he noticed that it sung very sweetly. In Mossamedes he also procured it in several places, at Gambos, Maconjo, on the Rio Chimba, and at Capangombe; in the latter places it is called by the natives "Mariapindo." Mr. Sala procured it at Katenbella in Benguela and Mr. Monteiro both in Benguela and Angola.

We killed a specimen at Cape Delgado, clinging to, and apparently building, a nest similar in shape, and hung in like manner to those of the *N. fumosa*. With our rifle we also shot down the nest from the elevated pendant branch of a *Casuarina* tree. It was composed chiefly of cobweb and bits of lichen, and had the usual covered porch; it was incomplete, and contained no eggs.

Coronal patch (confined to the forehead and crown) is of a rich bluish-green; gular patch, of a golden-green, confined to the chin and throat, and is bordered on each side with a narrow maxillary stripe of the same colour as the crown. Upper parts, cheeks, and sides of the neck, very deep, soft, and velvety umber brown, paler on the wings and tail, the bend of the wing having a violet patch. On the under parts, the fore part of the neck and breast are of a brilliant scarlet, appearing in different lights waved with violet, from the structure of the feathers being the same as those of *N. senegalensis*; the simple apical tips only being scarlet and producing all the brilliant effect. The remaining under parts are very deep

blackish-brown, appearing in some lights almost black. Length, almost 6".

Fig. Shelley, Monogr. *Cinnyridæ*, part i.

298. CINNYRIS AFER. Greater Double-collared Sun-bird.
Nectarinia afra, Layard, B. S. Afr. p. 76.

This bird never visits the neighbourhood of Cape Town. It replaces *C. chalybæus* in the forest districts, but about Swellendam it is mingled with it, and keeps to the wooded river banks. At the Knysna it is abundant, and has the same habits as the latter, being only perhaps rather more shy. Mr. W. Atmore found several nests in the long Kloof, George district, in October; he says "that they were well woven with the fibre of *Asclepias*, grass-bents, snake-skins, and all sorts of odd things, and then filled up with feathers. My boys have taken three or four nests each with but two eggs, and I believe that to be the orthodox number." The eggs sent were similar in colour (clouded grey-brown) and size to those of the western species *C. chalybæus*. Le Vaillant's account of the breeding is quite wrong; the nests are not placed in the fork of a tree as he states, but are the usual domed and pendant structures, and the eggs are like those of *C. chalybæus*. Mr. Rickard has obtained the present species at Port Elizabeth and at East London, and Mr. T. C. Atmore at Eland's Post in the eastern district.

Captain Shelley writes:—"During my short stay in the neighbourhood of Durban from February to April, I did not meet with this species, it being, as I was informed, migratory, but occasionally resorting there during the breeding season in July and August; from Pinetown some twelve miles distant I have received several specimens collected by Mr. T. L. Ayres. Mr. T. E. Buckley found it rare in Suaziland. An example from Algoa Bay as well as another from the Zambesi are in the collection of the British Museum, and were formerly in that of the editor; the latter was said to have been collected by the late Dr. Meller. Mr. T. Ayres noticed the species in the Lydenburg district. Mr. Andersson writes as follows:—"This is another species brought by Mr. Chapman from the Lake-country, as I have been assured by Mr. Layard; it never came under my personal observation, except in the south-eastern districts of the Cape Colony. It frequents forests, but may occasionally be observed in the more open parts during

the flowering-season." The non-appearance of this bird in Damara Land is curious, as Professor Barboza de Bocage records a specimen from Biballa in Benguela where it was obtained by Senor Anchieta, who states that its native name is "*Kanjoi*."

Head, back, and breast metallic-green, blue, and bronze-shot; rump blue; wings and tail brown; below the green of the breast is a narrow blue collar, succeeded by a broad red one, which extends nearly all over the stomach; vent brown; bright yellow tufts on each side. Length, $5\frac{1}{2}$ " ; wing, $2\frac{3}{4}$ " nearly; tail, $2''\ 3''$; bill, $1\frac{1}{4}$ " curved.

Fig. Shelley, Monogr. *Cinnyridæ*, part ii.

299. CINNYRIS CHALYBEUS. Lesser Double-collared Sun-bird.
Nectarinia chalybea, Layard, B. S. Afr. p. 75.

This species is very similar to *C. afer*, but is smaller, and has the scarlet breast band less extended and rather darker in colour. This is a very common species about Cape Town, and as far as Swellendam: there it becomes mixed with the greater double-collared species, *C. afer*, which partially ousts it in the George and Knysna districts, and throughout the Eastern Province, and supplies its place.

It is one of the boldest and most familiar of our sun-birds, frequenting the flower-gardens in the midst of Cape Town, and even venturing into open windows to visit potted plants.

Nests, reported to be of this species, have been brought to us—pendant, domed, and porticoed structures, like those of others of the family that we have seen. Eggs, two, minutely mottled grey-brown: axis, 8" ; diam. $5\frac{1}{2}$ ". We can confirm the statements of our correspondents, having ourselves taken nests of this species containing eggs and young birds. They breed in September. The nests are not, however, always pendant, being sometimes supported by twigs interwoven with their structure. They are usually composed of cobweb, stuck over with bits of dead leaves, or chips of thin bark, always placed on the *outside* of a bush, never *among* the branches. We have, however, seen one placed on the side of a bush close to a rock, so that the bird had to fly round the bush to get at it. In appearance they exactly resemble the masses made and collected by one of our commonest spiders; and we have more than once seen an inhabited spider's-web forming part and parcel of the nest. Whether the nest was built in the web, or whether the

spider found it a convenient place and selected it herself, or was brought with a bit of web by the birds, and then took up her abode and enlarged it, we cannot tell; but there the incongruous allies lived, and each brought up her own brood, or would have done so, had not we harried them both.

Captain Shelley writes that it is the "commonest and most generally distributed of the sun-birds in South Africa; yet it is in a manner local, being in certain spots replaced by *C. afer*, from which it also differs somewhat in its habits, preferring the open country where the low scattered bushes and tufts of grass afford a shelter more congenial to its tastes than the woodland districts." Mr. Andersson says that he does not recollect having observed this species north of the Orange river, but he not unfrequently found it in Little Namaqua Land. Captain Shelley states that during his visit to South Africa he found this sun-bird very common at Ceres in the Cape Colony, at Cape Town and at Mossel Bay. Andersson and Victorin have both procured it at the Knysna, and Mr. Rickard records it from Port Elizabeth and East London, while Mr. T. C. Atmore has sent us specimens from Eland's Post. Mr. Ayres states that "in Natal these sun-birds appear to be most plentiful in July and August, resembling *C. afer* in habits and appearance. In the Lydenburg district of the Transvaal the same gentleman says it is plentiful in the spring and early autumn, when they congregate on the blossoming trees and shrubs; they are also found in winter, but not commonly." We also believe that we have rightly identified this species as occurring in Mr. Chapman's collections from Lake N'gami.

Head, back, breast, and throat, all shining, metallic green; rump blue; wings and tail brown. To the green of the breast succeeds a narrow blue collar, followed by a red one, about half an inch broad, not extending below the yellow side-tufts. Length, $4\frac{1}{2}$ ''; wing, 2''; tail, 1'' 10''; bill, 1'', curved.

Fig. Shelley, Monogr. *Cinnyridæ*, pt. ii.

300. CINNYRIS AMETHYSTINUS.

Amethyst Sun-bird.

Nectarinia amethystina, Layard, B. S. Afr. p. 79.

An abundant species in the Eastern province, but never seen near Cape Town, and not very uncommon in the forest districts of the colony; we have also received it from the neighbourhood of

Swellendam, through Mr. Cairncross, who informs us that the specimens sent by him were procured in the mimosa trees which line the banks of the rivers flowing through that district. We saw it at the Knysna, and its habits appeared similar to those of the common *C. chalybæus*. Victorin also obtained it in the latter locality from April to November, and we have seen numerous specimens obtained there by Mr. Andersson. Mr. Rickard informs us that it is not very common at Port Elizabeth, where it frequents the aloes when in flower: at East London, however, he says that it is very abundant on the Tecoma (Cape Honeysuckle). Mr. T. Atmore has procured it near Eland's Post and Grahams Town, and in Natal it is by no means rare. We have received from Captain Harford the nest and eggs taken by him in that colony in November. Mr. T. E. Buckley informs us that it was plentiful in Suaziland during his recent journey in that country, but it does not cross the Limpopo into the Matabili country. Mr. Barratt writes:—"I shot one or two near Rustenberg, and observed it more than once during my journey through the bush between that place and Potchefstroom; I also saw a few in the bush near Pretoria, and I have killed it in British Kaffraria, near East London, in company with *C. chalybæus*; it is, however, much more shy in its habits than the latter bird. Professor Barboza du Bocage has recorded it from Caconda in Benguela, where it was procured by Senor Anchieta.

Mr. Atmore writes: "Oudtshoorn, 24th January, 1863. I enclose you a couple of eggs of the black sugar-bird. The nest is a curious structure, hanging on the branch of an apple-tree, very rough outside, composed of short bits of stick, grass, and spider's-web—arched, as are the nests of all the tribe. The number of eggs appears to be two, as we did not take these till they were incubated; before they were blown they were of a soft, creamy-yellow colour. I have not seen this species west of the Gouritz River: on the other side they are plentiful, especially when the 'wilde dagga' is in flower."

The eggs sent by Mr. Atmore are of a beautiful creamy grey, with indistinct, confused blotches, spots, and streaks, chiefly at the obtuse end; axis, 9"; diam., 6". Others sent by Captain Harford were spotted here and there as if fly-blown and then smudged.

Top of head and forehead, shining green; throat and rump cupreus; shoulders the same, but with a tinge of blue; all the

other parts deep, rich, velvety purple-brown. Length, 6"; wing, 3"; tail, 1 10".

Fig. Shelley, *Monogr. Cinnyridæ*, part I.

301. CINNYRIS KIRKII. Eastern Amethyst Sun-bird.

Captain Shelley writes:—"I have founded this new species of Sun-bird upon an adult male specimen in the British Museum, collected by Dr. Kirk in the Zambesi district: it is the East African representative of *C. amethystinus*, from which bird it may readily be distinguished by its having no metallic colours on the upper tail-coverts, while it is also smaller." Dr. Kirk obtained a young male at Shupanga, and he observes (*Ibis*, 1864, p. 20):—"Native name 'Sungwe.' The Sun-birds are abundant in open ground covered with low, flower-bearing bushes, such as *Poivreas*, *Dalbergias*, *Acacias*, &c.; and they frequent especially such plants as the *Leonitis*, searching inside the corolla for insects, and probably sucking the saccharine juices. Before the rains they lose the fine plumage, and become of a dull mixed colour. December is the breeding-season; nests have been observed among the grass, attached to its stalks, and in the bushes. The young birds may be kept for some time upon honey or sugar and water, which they lick up greedily from a straw or the corolla of a plant; but the absence of insect food probably causes them to die." This species ranges up the east coast as high as Mombas, where Mr. Wakefield procured it.

302. CINNYRIS FUSCUS. White-vented Sun-bird.

Nectarinia fusca, Layard, *B. S. Afr.* p. 79.

The accounts of the distribution of this bird are very imperfect, and much more information is wanted on the subject. We have received it from Mr. Ortlepp at Colesberg, and Mr. T. C. Atmore procured it near Hopetown, and we have examined specimens procured in Little Namaqua Land by Mr. Andersson, who writes further concerning it:—"This is the commonest Sun-bird in Damara and Great Namaqua Land, where it is really abundant, especially towards the sea-coast. The scantier and more dreary the vegetation the more common is this bird; and though unattractive in dress, it helps to enliven the monotonous solitudes which it frequents, by its activity and pleasant subdued warbling chirp. The male assumes a somewhat more attractive garb during the

breeding-season than at other times of the year, when it resembles the female, whose colouring is of the most sombre description. Le Vaillant tells us that this bird nests in the hollows of trees; but this differs from my experience, as I have always found its nest suspended from the branch of some low acacia. The nest is chiefly composed of soft grasses and the fine inner bark of trees, and is lined with a quantity of feathers. I found the young just fledged on April 3rd." We agree with Mr. Andersson that Le Vaillant's account of the nidification is incorrect, nor do we believe that any sun-birds build their nests in the holes of trees. Mr. Ortlepp found the species incubating near Colesberg in the usual domed nest suspended from a tree: it was composed of wool and fibres, lined with feathers and goat's hair. The eggs were of the abnormal number of *three*, white, spotted with intensely dark purplish brown and pale purple spots, chiefly forming a close-set ring near the obtuse end. Axis $6\frac{1}{2}$ ''; diam. $4\frac{1}{2}$ ''.

Top of head, back of neck, and wing-coverts, brown shot with dull violet; throat, changing violet and olive-green; wings and tail brown-black, slightly shaded with violet; chest, belly and under tail-coverts white, more or less clouded; axillary tufts brilliant scarlet and orange; inside of wing black; eyes, bill, and feet, brown. Length, 5''; wing, 2'' 4''; tail, 1'' 9'''. Female: uniform greyish-brown on the upper parts; below dirty white.

Fig. Shelley, Monogr. *Cinnyridæ*, part iii.

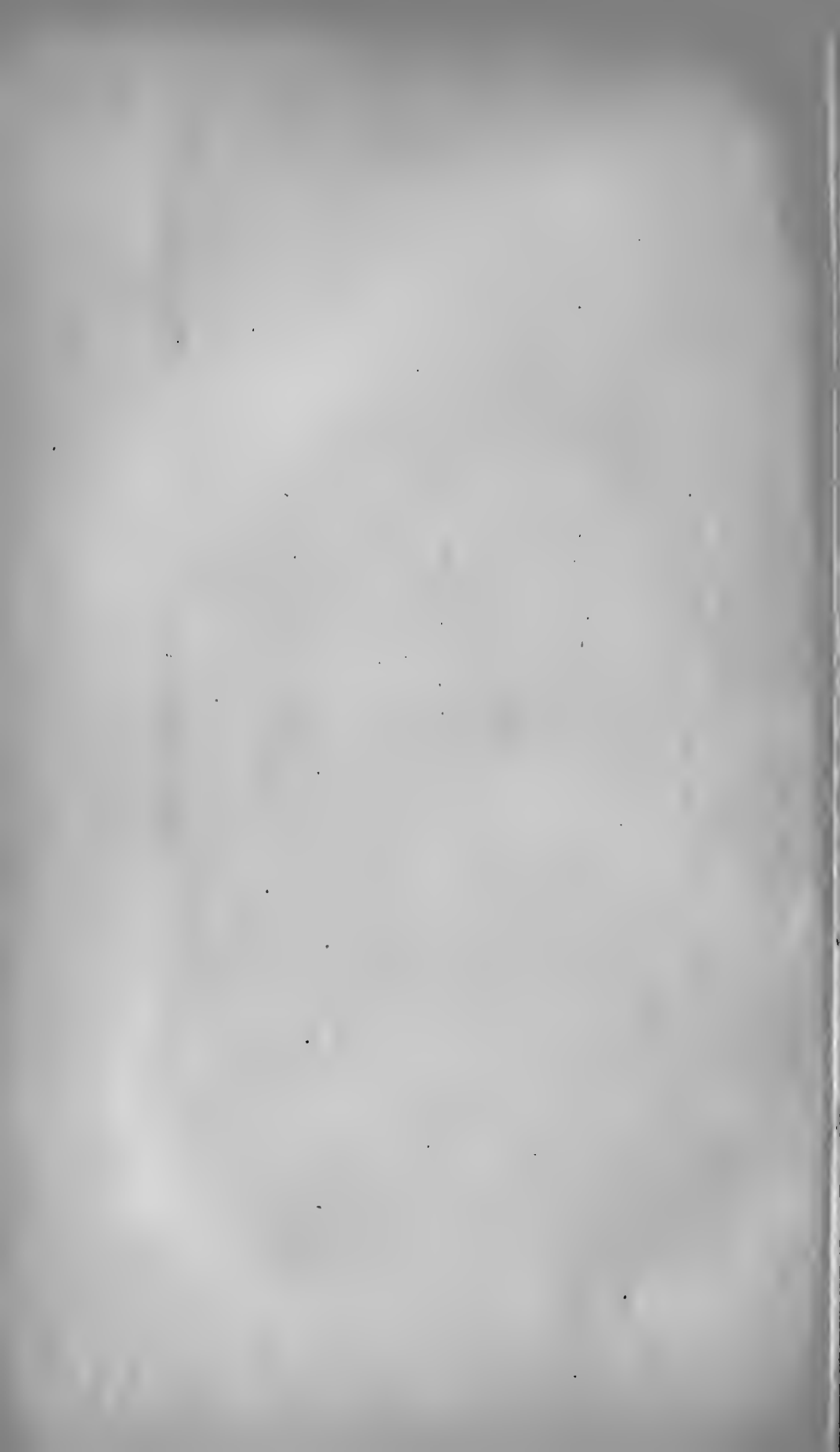
303. CINNYRIS TALATALA.* South African White-breasted Sun-bird.
(Plate VII.)

This is a species not known from the Cape Colony, and was first discovered by Sir Andrew Smith, who met with it during his Expedition, in the country between the Orange River and Kurri-chaine. Mr. T. Ayres has met with it in Natal, and Captain Harford kindly forwarded us specimens from that colony with the accompanying note:—"This species always goes in pairs: and I have hardly ever seen many together. They keep company very often with the 'White-eyes' (*Zosterops*), and utter a note similar to theirs." Two eggs, sent by the above-named gentleman from Natal, resembled those of *N. famosa*, but were paler and less densely speckled:

* *Nectarinia talatala* on plate.



NECTARINIA TALATALA.



axis, 9''' ; diam. 6''' , and rather truncated in shape. Mr. T. E. Buckley found them common in the Bamangwato district, where they were generally seen in pairs. The same gentleman obtained them in Suaziland. A specimen, said to have been obtained in the Zambesi by the late Dr. Meller and formerly in the Editor's collection, is now in the British Museum. Mr. Andersson gives the following note on the species, and it will be noticed that the colour of the eggs, as stated by him, differs from that recorded above:—

“I only met with this exquisite little species in my journeyings to the Okavango, in the neighbourhood of which river it was very abundant during the rainy season, being a migratory species, and arriving a little before the commencement of the rains. I also found it very common, though exceedingly shy, on the edge of the bush in Ondonga, where I obtained its nest on February 19th ; the nest was very large and strongly built, and resembled in form and material that of *C. fuscus* ; it contained five, small, oblong, and pure white eggs. Another nest, taken on March 27th, also contained five eggs. This sun-bird is exceedingly lively in its habits, and at the approach of the pairing-season it becomes inspired with the most lovely and exquisite melodies, being a concentration of the softest trilling and melodious notes. I always found it either singly or in pairs.”

General colour above glossy green, tinged with blue in certain lights, especially on the forehead and tail-coverts ; neck and throat beneath blue, tinged with green, changing into deep purple on the breast, where it forms a bar succeeded by another of very dark brown ; the rest of the under parts white, faintly tinged with yellow ; axillary tufts bright pale yellow ; wing-feathers brown ; tail-feathers black, edged with iridescent green. Length, 4" 4''' ; wing, 2" 2''' ; tail, 1" 6''' ; bill, 9''' , considerably curved.

The female resembles the male, but is all plain brown, tinted white below.

Fig. Shelley, Monogr. *Cinnyridæ*, part II.

304. CINNYRIS MARIQUENSIS. Southern Bifasciated Sun-bird.
Nectarina bifasciata, Layard, B. S. Afr. p. 77.

If we are correct in separating these Bifasciated Sun-birds into different races, the most southern of them must be called by Smith's name of *mariquensis*, as that of *bifasciata* is referable to the bird in-

habiting Western Africa. Captain Shelley remarks that this is a bird of the interior and never appears near the coast. Sir Andrew Smith procured it at Kurrichaine, and during his recent journey from Natal to Matabili Land Mr. T. E. Buckley shot several specimens in Bamangwato towards the end of October, 1873, and he also met with it on the Tatti River in the early part of the same month. He says that it was "quite the commonest sun-bird from north of Pretoria into the Matabili country. They were generally to be seen in pairs, or perhaps two cocks chasing a hen. Like all dark-coloured sun-birds the beautiful plumage of the male is only to be seen on a near approach. Mr. Ayres writes:—"This lovely little bird I first shot at some distance from the river Limpopo during July. I found several feeding among some aloes, but they were very shy and difficult to obtain. Flowers being at that season exceedingly scarce, they frequently hunted for small insects amongst the dry seed-tops of the high grass, hovering round the stem as a humming-bird would do, and thus remaining stationary, but darting away immediately on my approach, so that I found it difficult to get within forty or fifty yards of them." A specimen from the Zambesi is in the British Museum. Mr. Andersson observes:—"This species is very common in Ondonga and is not uncommon in Damara Land; it is also found at Lake N'gami. It is usually seen in pairs and frequents the banks of periodical streams. I never saw it far away from such localities."

We follow Captain Shelley in the nomenclature of the South African sun-birds and the following diagnosis of the present bird is taken from his monograph. "Above metallic green, with a coppery lustre; the head and the neck all round uniform with the back; across the lower throat a collar of metallic steel blue, and below that another broad pectoral collar of red; the feathers of the latter being slightly margined with steel blue; rest of under surface of body, wings, and tail black. Total length, 5.1 inches; culmen, 0.15; wing, 2.7; tail, 2.1; tarsus, 0.7."

Fig. Shelley, Monogr. *Cinnyridæ*, part I.

305. ANTHODIETA COLLARIS. Natal Collared Sun-bird.
Nectarina collaris, Layard, B. S. Afr. p. 77.

Entirely a bird of the Eastern districts, not approaching nearer than the province of Uitenhage, whence we have received specimens.

Le Vaillant states that he procured it near the Gamtoos River, and although Mr. Atmore, who knows this locality thoroughly, informs us that he has never come across it, it is probable that the above-named river forms the western boundary of its range. The reported abundance of the species, of which Le Vaillant speaks, may well be doubted after Mr. Atmore's evidence. Mrs. Barber forwarded specimens to us from the "New Year's River," and Dr. Edwin Atherstone from the mouth of the Kleinemont River (eight miles distant from the Kowie), where he shot three individuals: it has also been found near Grahamstown, and Mr. Rickard records it from Port Elizabeth. Captain Shelley says that in Natal it is very plentiful about Durban and Pinetown, and Mr. Ayres also has a note on the species in Natal, as follows:—"These little birds are, I think, rather more insectivorous than the other Natal species, as I notice that they climb about the creepers and thick foliage a good deal, hunting under the leaves and into buds for small insects; but they take nectar from flowers in an equal degree. They build a penduline nest, generally in some thick bush, hanging it from the leaves and outermost twigs. They are very fond of building in orange-trees and others of equally dense foliage. They are decidedly scarce, though found throughout Natal. Small insects appear to form their principal diet." The following diagnosis is adapted from Captain Shelley's work:—

General colour above metallic golden green, the least wing-coverts uniform with the back, the greater wing-coverts and secondaries brown edged with metallic green, the primaries brown edged with olive-yellow: tail black, edged with metallic green: throat and fore neck metallic golden green, with a narrow pectoral collar of violet: rest of under-surface yellow: pectoral tufts bright yellow: bill and feet blackish: iris brown. Total length, 3·8 inches; culmen, 0·5; wing, 2·1; tail, 1·5; tarsus, 0·67.

Adult females and young males resemble the old male, but have the entire under-surface yellow.

Fig. Shelley, Monogr. *Cinnyridæ*, part I.

306. ANTHODIÆTA ZAMBESIANA.

Zambesi Collared Sun-bird.

This species, which has been to our mind rightly separated by Captain Shelley, is the representative of *A. collaris* in Eastern Africa. The type-specimen, now in the British Museum, was dis-

covered by Dr. Kirk during the Livingstone expedition to the Zambesi, and examples are in the same collection from Mombas in Eastern Africa. Dr. Kirk says that it was found near Shupanga and Lena, but was not very common: its nest was seen suspended to grass-stalks.

It may be briefly described as being similar to *A. collaris*, but of a bright golden copper-colour, the secondaries being merely glossed with golden copper, slightly shaded with green. Total length, 4 inches; culmen, 0·5; wing, 2·0; tail, 1·5; tarsus, 0·6.

The female differs exactly in the same way as does that of *A. collaris*.

307. CINNYRIS BIFASCIATUS.

Western bifasciated Sun-bird.

Nothing is more curious than the way in which representative races of Sun-birds are distributed in Africa. This we have seen in the case of *C. afer* and *C. chalybeus*, and here we have another case in the double-collared species. Captain Shelley has shown that there are four forms of these in Africa, one, *C. mariquensis*, confined to South Africa, a second, *C. bifasciatus* being West African, while *C. microrhynchus* and *C. osiris* are inhabitants of Eastern and North-Eastern Africa respectively.

The true *C. bifasciatus* (Shaw) is, according to Captain Shelley, the bird usually called by naturalists *C. jardiinii*, which latter name becomes a synonym; and as it extends from Gaboon to Benguela, it must claim insertion in the present work on the strength of the latter occurrence, but it cannot be regarded as a very distinct species from *C. mariquensis*, being only a slightly smaller race. Senor Anchieta procured three specimens in 1866 in the province of Benguela, where, he says, it is called by the natives "Kanjongo." He has also procured it at Dombe in the same province.

Fam. PARIDÆ.

308. ZOSTEROPS CAPENSIS.

Cape White-eye.

The "White-eye" is common throughout the whole of the colony, roaming about in small families of from five to twenty in number. During the fruit season they do great damage to the apricots, peaches, plums, &c.; they also destroy the buds to get at the insects

that lurk therein. While on the wing, or feeding, they utter incessantly a stridulous chirp, which is generally the first thing that reveals their presence. We never saw them on the ground, but they sometimes creep about low bushes. They place their nests, which they conceal with great care, in a fork caused by the union of several small twigs. It is composed of moss and fibres, covered with cobweb and lichens, and lined with hair, and is shaped like a cup, about 3 inches across by $2\frac{1}{2}$ deep. The eggs, five in number, are of a beautiful, spotless blue, rather sharp at the ends: axis, 8''; diam., 6''.

Victorin obtained the present species in the Karroo and also at the Knysna: here also Mr. Andersson shot numerous examples. Mr. Rickard notes its occurrence both at Port Elizabeth and East London. Mr. Gurney has also recorded it from Natal, but the species intended was probably *Z. pallida* or *Z. atmorii* (*vide infra*).

The following account is given by Mr. Andersson:—"I have only once or twice observed this species in the southernmost parts of Great Namaqua Land, along the periodical watercourses bordered by mimosas; but from thence southwards it becomes more numerous, and at the Cape and in many parts of the colony it is abundant: a pair or two may be seen any day in most of the gardens in the immediate environs of the Cape. It is met with in small families, probably the entire broods of the season. It feeds on small insects and larvæ, for which it searches diligently amongst low bushes and trees. It is quite tame; and it is not very difficult to approach it near enough to distinguish the colour of its eye, beak, &c. It forms its nest on the extremity of some branch of a low tree; the nest is very prettily shaped, and is composed of loose tendrils interlaced, covered with moss outside, and lined internally with hair, &c. The eggs are four or five in number, and are said to be incubated by both parents."

Adult.—General colour above olive-green, rather brighter and more yellow on the rump and upper tail-coverts; wing-coverts coloured like the back, the quills brown, externally edged with olive-green, the inner secondaries washed with the latter colour; tail brown, externally washed with olive-green; forehead slightly tinged with brown; in front of the eye a black spot, above which is a small loreal spot of yellow; round the eye a ring of silvery-white plumes; sides of face and ear-coverts dark green, the anterior part of the

cheeks and the upper throat bright yellow, paling on the lower throat; rest of under surface of body light brown, the sides of the breast greyish, becoming a little more fulvous brown on the lower flanks; under wing-coverts and axillaries ashy whitish, slightly washed with yellow: thighs greyish, inclining to bright yellow at the tarsal joint; under tail-coverts bright yellow, about equal in intensity to the throat; "bill bluish black, lighter on the under mandible; legs and feet lead-colour, with sometimes a tinge of brown; iris yellowish brown" (*Andersson*). Total length, 4.5 inches; culmen, 0.45; wing, 2.15; tail, 1.85; tarsus, 0.65.

Fig. Le Vaill. Ois. d'Afr. pl. 132.

309. *ZOSTEROPS PALLIDA*.

Sundevall's White-eye.

Zosterops pallida & *Z. lateralis*, Layard, B. S. Afr., p. 117.

This species is more generally known under Sundevall's name of *lateralis*, which was changed by Dr. Hartlaub (*J. f. O.* 1865, p. 9) to *Z. sundevalli*, as there existed already a *Z. lateralis*. We believe at the same time that it is without doubt the *Z. pallida* of Swainson which was described from a specimen of Dr. Burchell's. We have received the species from Mr. Ortlepp at Colesberg, and Mr. Thomas Ayres has met with it in the Transvaal, where, he says, "it is occasionally seen in small companies, actively hopping and climbing about the hedges and trees during the winter months." The present species may be distinguished from *Z. capensis* by its yellow forehead, bright yellow throat, and by its isabelline-brown flanks.

Adult male.—General colour above olive-green, decidedly clearer and more yellow on the upper tail-coverts; forehead and lores bright yellow; in front of the eye a black spot, extending in a line under the eye; round the eye a ring of silvery white feathers; sides of face and ear-coverts olive-green; cheeks and entire throat bright yellow, ending abruptly on the fore-neck: centre of the body whitish, slightly washed with tawny: sides of upper breast greyish brown, the flanks pale isabelline brown: under tail-coverts bright yellow: under wing-coverts dull white washed with yellow on the edge of the wing: upper wing-coverts green like the back: quills dark brown, the primaries externally margined with yellowish green, the secondaries with olive-green: tail-feathers brown with olive-green edgings. Total length, 4.7 inches; culmen, 0.5; wing, 2.35; tail, 1.9; tarsus, 0.7.

310. ZOSTEROPS SENEGALENSIS.

Yellow White-eye.

The following account of this species in South Western Africa is taken from Mr. Andersson's work on the Birds of Damara Land:—"I never met with this exquisite little bird in either Great Namaqua or Damara Land; and it was only as I approached the Okavango that I became aware of its existence. In the thornless forests bordering upon this stream it is not uncommon, but it migrates northwards during the dry season. It is found in small flocks, and diligently explores in search of insects the branches of the smaller trees, and especially the buds and flowers, suspending itself in a variety of positions while it is thus employed." Senor Anchieta has obtained it at Biballa in Mossamedes.

This species cannot be mistaken for any of the other South African White-eyes as its general yellow colour renders it very distinct.

Adult.—General colour bright olive-yellow, rather more intense on the rump and upper tail-coverts: wings pale brown, all the feathers edged with yellow, a little greener in tint than the back, the innermost secondaries washed with yellow all over: tail light ashy brown with narrow margins of olive-yellow: forehead and lores brighter yellow than the crown of the head: in front of the eye a dusky blackish spot: round the eye a ring of white feathers: sides of face bright yellow, slightly more green on the ear-coverts: entire under surface of body bright yellow, slightly washed with greenish on the sides of the upper breast: under wing-coverts and axillaries whitish washed with bright yellow, the edge of the wing bright yellow: under surface of quills greyish brown, with an edging of ashy-buff along the inner web. Total length, 3·6 inches; culmen, 0·4; wing, 2·1; tail, 1·35; tarsus, 0·6.

311. ZOSTEROPS VIRENS.

Green White-eye.

Described originally by Sundevall from a specimen obtained by Prof. Wahlberg in "Upper Caffraria." Mr. Thomas Ayres has procured it in Natal, where he says they are plentiful in the spring of the year. Captain Shelley has also received a number of specimens from Mr. T. L. Ayres at Pinetown, and Mr. F. A. Barratt shot specimens at Macamac. Mr. Thomas Ayres in his account of birds from the Lydenburg district also writes:—"This species is

exceedingly plentiful, both in the forest of the Kloofs and amongst the jungle on the slopes. It builds a neat open cup-shaped nest in some low scrub: the eggs are white, and, as far as I can remember, without spots." The same gentleman has given the following note on the species as observed by him in Natal:—"These birds are gregarious, and very plentiful in the spring of the year (September and October). They do considerable damage to soft fruits, such as the loquat and mulberry; but also do much good in clearing the trees of insects, climbing and hunting amongst the buds and leaves in search of them. They almost constantly utter a loud, monotonous, weeping note, which somewhat resembles that of the *Nectarinia*, and especially of *Cinnyris amethystinus*."

The present species is distinguished by its yellow belly and thighs and general green colour.

Adult male.—General colour above grass-green, rather more yellow on the rump and upper tail-coverts: wing-coverts coloured like the back, the quills blackish, externally grass-green like the back, the primaries rather more brightly edged: tail-feathers blackish, externally margined with grass-green: lores and a narrow frontal line bright yellow: in front of the eye a black spot extending a little below it: round the eye a ring of silvery white feathers: sides of face green like the crown, excepting the fore part of the cheeks which are bright yellow like the under surface of the body: thighs and under tail-coverts bright yellow: sides of breast and sides of body yellowish green: axillaries bright yellow: under wing-coverts white washed with yellow: quills blackish below, ashy whitish along the inner web: "bill ash-colour, black at tip: tarsi and feet ash-colour: iris light tawny." (*Ayres*). Total length, 4·8 inches; culmen, 0·45; wing, 2·4; tail, 1·95; tarsus, 0·75.

Adult female. Similar to the male but rather duller in colour, particularly as regards the yellow of the breast. Total length, 4·4 inches; culmen, 0·45; wing, 2·35; tail, 1·8; tarsus, 0·7.

313. *ZOSTEROPS ATMORII*, Sharpe. Eastern Cape White-eye.

The British Museum contains a specimen of a *Zosterops* from Grahamstown, collected by Mr. T. C. Atmore, and formerly in the editor's collection. It seems to be a distinct species from *Z. capensis*, from which it is distinguished by its clearer coloration and

bright yellow forehead. Total length, 4·6 inches; culmen, 0·45; wing, 2·3; tail, 1·9; tarsus, 0·7.

314. ANTHOSCOPIUS CAROLI. Andersson's Penduline Titmouse.

This little Titmouse was described by the editor from specimens obtained at Ovaquenyama by the late Mr. Andersson, after whom it is named (Ibis, 1871, p. 415). Although very similar in size to *Æ. capensis*, it is distinguished at once by the under surface, which is white as far as the breast and light tawny for the remainder, whereas in *Æ. capensis* the throat is white and the rest of the underparts yellow: there are other differences between the species also which a comparison of the descriptions will show.

Adult male. General colour above light grey, slightly olivaceous, inclining gradually to tawny buff on the rump and upper tail-coverts: wing-coverts brown with light grey edgings to the feathers, whiter on the greater series: quills dark brown, narrowly edged with grey, the margins being broader and rather whiter on the secondaries; tail-feathers dark brown, margined with grey: forehead whitish, the feathers mottled with grey tips: sides of face dull white, the ear-coverts rather inclining to buff: throat and breast white, the rest of the lower parts light tawny, including the thighs and under tail-coverts: under wing-coverts whitish as also the inner webs of the quills. Total length, 3 inches; culmen, 0·35; wing, 2·05; tail, 1·2; tarsus, 0·6.

Adult female. Similar to the male. Total length, 3 inches; wing, 2·1; tail, 1·25; tarsus, 0·55.

315. ANTHOSCOPIUS CAPENSIS. Cape Penduline Titmouse.

Paroides capensis, Layard, B. S. Afr., p. 114.

This is the "Cappoc-Vogel" of the Colonists, *lit.* "Cotton bird," so named from its peculiarly constructed nest. Le Vaillant found it in small flocks on the western side of the colony, in the neighbourhood of the "Elephants' River," and we have received it from various parts of the colony, east as well as west. It is enumerated in Mr. Rickard's list of the birds of Port Elizabeth, and has been obtained by Mr. Ayres in the Transvaal, on the borders of the Limpopo. Mr. Andersson writes:—"This diminutive species is sparingly found from the Okavango River to the neighbourhood of Cape Town, following the line of the coast and occurring in small

flocks amongst brushwood, low trees, or flowers; in such situations it hunts with great assiduity for minute insects, in which occupation it strongly reminded me of some of the Titmice, which it much resembles in its mode of climbing and feeding. It utters a low and almost inaudible chirp or whistle. I once found in Ondonga, on March 27th, a nest of this species containing one young bird and one egg, the latter being of so extraordinary a size that, had I not shot the old bird at the nest, and had not the identity of the egg been corroborated by the young bird, I should not have believed that it belonged to this species. The nest had been rudely displaced from its original site and was hanging down several inches, very much the worse for its misfortune; I only wonder the birds stuck so bravely to it. The rim of the nest was composed of very fine twigs of small slender bushes, interlaced with decomposed silky grasses; the rest of the nest was chiefly of the latter material, but lined within with fine tendrils. When I first observed the nest there was no bird present; but after waiting awhile one appeared and was on the point of entering the nest, when it perceived me and moved slowly out of view. Not feeling quite certain of its identity, I waited for nearly another hour to get a second sight of it, when both parent birds came and settled quite close to the nest, and I killed the male.

It is common about Nel's Poort, and is the fabricator of the nest figured by Le Vaillant, plate 131, which is there erroneously attributed to "Le Pinc Pinc," which is clearly the *Hemipteryx tetrica*, called by the Dutch colonists "Tinc-Tinc."

The nests fabricated by these minute birds are wonderful structures, more like balls of felted cloth than the habitation of a bird. They vary in size from five to eight inches in length, and three to five inches in diameter. Some that we have torn to pieces appeared as if felted in layers, coat upon coat. Each nest is furnished with a tubular entrance, underneath which is a pocket, the use of which is doubtful. Some say the male bird sits therein during the night; others attribute it to the cunning of the birds to deceive snakes, as it draws the tubular neck of the real entrance into the body of the nest, and closes it so tight that the snakes mistake the pocket for the orifice, and vainly try to penetrate the nest thereby. We have conversed with several individuals who had been deceived by this proceeding, and did not find out their error until the parent bird effected her

escape through the real opening, of her own accord. They lay from six to ten eggs, pure white: axis, 7''; diam. 5''; and the whole brood keeps together for some time after being fully fledged.

Mr. Atmore writes:—"I took one in the nest, tied up the mouth, and thought I had my little prisoner safe, nest and eggs, in my cart-box; but on passing a fine *Gladiolus*, which I could not leave behind, I opened the box to get something to dig the bulb out with, when out flew the bird! She had bored a hole through the side, and when the lid opened, 'skedaddled.'"

Adult. General colour above ashy grey, slightly shaded with olivaceous, the rump and upper tail-coverts olive-yellow: wings brown with lighter edgings of ashy brown to all the feathers, very distinct on the coverts: tail feathers brown undulated with dusky under certain lights, edged with pale greyish: forehead black, the feathers tipped with white producing a spotted appearance: nasal bristles light ashy: round the eye a circlet of white feathers, as also a slight eyebrow: sides of face dull white, the ear-coverts shaded with ashy brown: throat whitish, the rest of the under surface of body yellow; the under wing-coverts dull white, shaded with ashy; bill blackish: iris brownish yellow." (*Andersson.*) Total length, 4.4 inches; culmen, 0.4; wing, 1.95; tail, 1.45; tarsus, 0.6.

Fig. Le Vaill. Ois. d'Afr. pl. 134.

316 PARUS AFER.

South African Titmouse.

Parus cinereus and *P. cinerascens*. Layard, B. S. Afr. pp. 112, 113.

After carefully comparing a good series of specimens we have come to the conclusion that the species called in the first edition *P. cinereus* is only the young bird of *P. cinerascens*, or as it should be called *P. afer*. We never ourselves met with it near Cape Town, but a specimen was sent home by Mr. Butler from that vicinity. The nearest point that we obtained it was at Beaufort West, where it was first killed by Mr. Jackson's son. We frequently saw the species on our journey from Nel's Poort to the Swartberg, creeping about the sides of dry water-courses, clinging to the perpendicular banks and apparently searching for spiders. During our visit to Mr. Jackson at Nel's Poort we obtained several nests in the crevices of an old brick tank or bath, which was constantly used by the members of the household. The entrances to these nests were very small and tortuous, leading to the back of the brickwork, which we had to

remove before we could secure the eggs. The nests were large masses of dried bents of grass and feathers. At the Berg River we found them breeding in September both at Mr. Kotze's and Mr. Melck's in holes of trees. The eggs were pure white with red specks, principally at the obtuse end. We have unfortunately omitted to record their measurements, but if our memory serves us rightly, they were much more round than oval and broad for their length. The nests were composed of hair, wool and feathers. Mr. Atmore says that they are common near Swellendam in mimosa thickets, nesting there in hollow trees: he mentions his having seen twelve eggs in one nest, "which certainly required all the fur of a hare to make it." Mr. Ortlepp sends it from Colesberg, where he says it is called "Slangwyte" by the Dutch colonists. We have also received it from Colesberg and from Kuruman. Our friend Dr. Exton has kindly given us a specimen procured on the Modder River near Bloemfontein, and Mr. T. C. Atmore shot it near Hopetown. During his journey to the Matabili country Mr. T. E. Buckley met with the species in Bamangwato and again in Matabili-land. In the Transvaal, writes Mr. Ayres, "these birds are sparsely scattered along the rivers, frequenting scrub and low bush, feeding upon insects, and creeping about the roots and low branches in search of their food: their flight is not prolonged, and their notes are harsh." Mr. Andersson states that this Titmouse is "found sparingly in all the regions between the Okavango towards the north, Lake N'gami towards the east, and the Orange River towards the south, and it also occurs in some parts of the Cape Colony."

Adult male.—General colour above grey, the least wing-coverts uniform with the back: wing-coverts black, all broadly edged with white, the margins to the primary-coverts much narrower: quills dark brown, externally narrowly margined with ashy whitish, broader on the secondaries, which are also blacker: upper tail-coverts and tail-feathers black, the latter with narrow apical tips of white, the outermost white for the whole of the outer web: crown of head glossy black including the lores and sides of the crown, forming a cap: on the nape a distinct nuchal patch of white: a band drawn from the base of the bill below the eye and occupying the ear-coverts, pure white: under surface of body grey, the cheeks, entire throat, and foreneck glossy black, extending down the middle of the breast, this black throat bordered by an indication of ashy

whitish, extending from the white ear-coverts down to the breast, the centre of the abdomen, thighs and under tail-coverts ashy whitish: under wing-coverts whitish, the quills below brown with whitish edgings along the inner web: "bill black: feet lead-colour: iris dark hazel" (*Buckley*). Total length, 5·5 inches; culmen, 0·5; wing, 3·15; tail, 2·4; tarsus, 0·5.

Young.—Ashy brown where the adult is blue-grey, the wings and tail brown, the white edgings only slightly developed: crown of head brownish black: sides of face and sides of neck dull whitish, the sides of the body light ashy brown, paler in the centre of the abdomen: throat and chest dull black.

Fig. Le Vail. Ois. d'Afr. pls. 138, 139, fig. 2.

317. PARUS NIGER. Southern Black-and-White Titmouse.

Parus leucopterus, Layard, B. S. Afr. p. 113 (nec Swains.).

Le Vaillant found this species in the eastern districts of the colony. We have received it from Beaufort, Kuruman, and met with it ourselves near Grahamstown. Mr. Rickard has procured it on one occasion near East London and Mr. T. C. Atmore records it as not very uncommon in the neighbourhood of Eland's Post. Captain Shelley procured specimens both at Durban and Pinetown in Natal, and Mr. Thomas Ayres writes:—"I have discovered a nest of these birds containing one egg and four callow young. The old bird had evidently taken possession of a deserted Woodpecker's nest. The hole was in a perpendicular and decayed bough of a large tree, about twenty feet from the ground; it was about a foot in depth, and there was a very little fine grass at the bottom, on which the egg and young birds were placed. I was obliged to cut and break the front of the bough to get at the contents of the nest; and the old birds showed their dislike to my proceedings by their chattering cries and uneasy manner. On leaving the nest I repaired the hole as well as I could, and left the little ones safe inside; but passing the place in about a week, I again climbed the tree and found the nest cold and deserted." Mr. T. E. Buckley, during his journey into the Matabili country, shot a male bird in Bamangwato on the 18th of October, 1873. Mr. Andersson observes:—"This Tit is to be met with, though more sparingly than *P. afer*, in Damara Land and in the neighbourhood of the Okavango River and of Lake N'gami: it is, however, more frequent in the last two districts than

in Damara Land proper, and in Great Namaqua Land I have never observed it. It is generally found in pairs, searching amongst the larger trees for insects and their larvæ: it also feeds on seeds." Senor Anchieta has obtained it at Capangombe and Biballa in Mosamedes: its native names being 'Kacelekete' and 'Kirirumba.' He also met with it at Humbe on the Cunene River, where it is called by the natives 'Conjungo-bala.'

The present bird is closely allied to *P. leucopterus* of Western and North-eastern Africa, but differs in having the outer web of the external tail-feather white.

Adult male.—Above and below glossy blue-black, rather duller on the abdomen and under tail-coverts, the latter being margined with white: wing-coverts white, forming a distinct shoulder-patch, the bases to the feathers being black, the greater coverts glossy black with broad white edgings and tips, the primary-coverts less narrowly edged with white: quills black, externally edged with white, the edging being continued to the tip of the secondaries: tail black, with narrow tips of white, the outermost feather white on the outer web: under wing-coverts white as also are the inner webs of the quills: "bill black: feet lead-coloured: iris dark hazel." (*T. E. Buckley*). Total length, 5·8 inches; culmen, 0·45; wing, 8·15; tail, 2·75; tarsus, 0·8.

Adult female.—Differs from the male in being less glossy-black, especially on the under surface, which is dark leaden grey: the white edgings to the wing-coverts and quills are also much narrower.

Fig. Le Vaill. Ois. d'Afr. pl. 37, fig. 2.

Fam. MUSCICAPIDÆ.

318. *PARISOMA SUBCERULEUM*. Red-vented Flycatcher.
Parisoma rufiventer, Layard, B. S. Afr. p. 115.

Le Vaillant states that this bird is very common on the banks of the "Gouritz" and "Brak" Rivers, dwelling among the mimosas in small flocks, and incessantly traversing the branches in their search after insects, and the eggs and larvæ of *Lepidoptera*, which form their principal food. We have received specimens from the Cedar Mountains, in Clanwilliam, and from the neighbourhood of "Riebecks Kasteel," in Malmesbury, through the kindness of Mr.

Russouw; also from Swellendam, Colesberg, and Kuruman. Mr. Atmore tells us he finds it plentifully in the Bosjesveldt; and we saw it in great abundance in the Karroo, as far as Nel's Poort; also on the New Year's and Great Fish rivers.

Victorin procured the species in the Karroo in January and February, but it does not occur along the south coast, as it has not been found at the Knysna, nor is it contained in Mr. Rickard's lists. Lieut. Trevelyan has sent us a specimen killed by him near Kingwilliamstown. Mr. T. C. Atmore obtained it near Eland's Post, and it is apparently not rare throughout the Transvaal: Mr. T. E. Buckley indeed states that it was very common during his journey from Natal to the Matabili land. Mr. Ayres writes:—"I first found this bird in the Mariqua district, and afterwards along the Limpopo; it creeps about the low bushes, and amongst the grass at the roots of trees, in search of insects." Mr. Andersson also observes:—"This species is common in Damara and Great Namaqua Land, but, from its small size and secluded habits, often escapes notice: it is rather a pretty songster, and utters at times varied and singular notes, and occasionally also a clear ringing call rapidly repeated. It is very familiar, active but not rapid in its movements, and careful in its examination of trees and bushes in search of insects: it is found singly or in pairs. A nest of these birds, taken on the 21st of September, was situated in a hedge and composed outside of grass, fine twigs and tendrils: internally it was lined with hair, and contained two eggs. A second nest, obtained on the 1st of October, was similarly composed externally, but was lined with the softer tendrils of flexible roots; it contained two eggs, hard sat upon. A third nest, taken on the 29th of November, also contained two eggs."

Senor Anchieta has obtained it at Humbe, on the Rio Cunene, and gives its native names as "Tubike" and "Mudiankene."

Adult male.—General colour above grey: wing-coverts brown with grey edgings: primary-coverts and coverts of the thumb black with white margins: quills brown externally washed with grey, the primaries externally edged with white: tail black, the lateral feathers tipped with white increasing in extent towards the outermost, where the white tip occupies the apical third of the feather, and extends quite half-way up the outer web: lores whitish: feathers in front of the eye dusky: ear-coverts grey streaked with

white: cheeks and entire throat and fore neck greyish white, broadly streaked with black: rest of under surface of body white, the sides of the body grey: vent and under tail-coverts tawny chestnut: thighs greyish white slightly washed with rufous: under wing-coverts white, as also the edge of the wing, the bases to the feathers black: lower surface of quills ashy grey with white margins to the inner webs: "bill black: feet black: iris white" (*Buckley*): "iris bluish white" (*T. C. Atmore*): "iris yellowish white" (*Andersson*). Total length, 5·6 inches; culmen, 0·45; wing, 2·75; tail, 2·75; tarsus, 0·85.

Adult female.—Similar to the male, but rather duller grey, and less broadly streaked with black on the throat. Total length, 5·6 inches; wing, 2·65; tail, 2·65; tarsus, 0·85.

Fig. Le Vaill. Ois. d'Afr. pl. 126.

319. *PARISOMA LAYARDI*.

Layard's Flycatcher.

This species closely resembles *P. subcæruleum*, but differs in never having the rufous under tail-coverts. From the fact of Mr. T. C. Atmore having procured a female of the present bird at Colesberg and a male of *P. subcæruleum*, we were inclined to think that they might be sexes of one species, but we now believe that this view is erroneous, and the best evidence we have of their being distinct is found in Mr. Andersson's book, where he treats of them separately. In the British Museum are several specimens obtained by this excellent collector, and we find both males and females with rufous as well as with white vents and under tail-coverts. The MS. names on his labels also show that they were in his mind totally separate. We procured this species at Nel's Poort about the mountains: in its habits it resembled *P. subcæruleum*, for which we at first mistook it. It is difficult to shoot, as it creeps about dense bushes, and on being hunted, conceals itself in the thickest parts and remains perfectly still. My friend, Mr. Henry Jackson, calls it the "Mocking Bird," from its habits of imitation, and informs me that it makes a cup-shaped nest in a bush, and lays three eggs, which are pure white, blotched chiefly at the obtuse end with greenish-brown and faded purple spots: axis, 9''' ; diam., 7'''.

We have received it from Mr. Russouw, who obtained it in Swartland, in the Malmesbury division. Mr. Andersson writes:—"This species greatly resembles *P. subcæruleum* in its habits, but is

not so common: I have observed it, though very sparingly, in Damara and Great Namaqua Land, and near the west coast of the Cape Colony. I have also obtained specimens from the Okavango, which are of a darker and richer hue than those from Damara and Great Namaqua Land: this is also the case with specimens from the western parts of the colony."

Adult male.—General colour above rather dark-grey; the least wing-coverts uniform with the back; rest of the wing-coverts and quills blackish externally, washed with grey; the primary-coverts and primaries margined with white on the outer web rather conspicuously; tail black, the outermost feather obliquely white for the terminal third and along the outer web, the next feathers slightly white at the tip; lores dull whitish; feathers in front of the eye dusky blackish; ear-coverts uniform grey, duller than the sides of the neck, which are also grey; chin and throat white, the latter distinctly streaked with black; centre of the body white, the flanks and sides of the body grey; under tail-coverts whitish, with dusky-brown bases to the feathers; thighs brown; under wing-coverts dusky grey, the edge of the wing white; quills ashy-brown below with white edgings along the inner webs. Total length, 5 inches; culmen, 0.45; wing, 2.55; tail, 2.3; tarsus, 0.8.

Adult female.—Similar to the male. Total length, 5 inches; wing, 2.5; tail, 2.35; tarsus, 0.8.

Young.—Similar to the adult but duller brown; the throat whiter with less distinct blackish streaks.

320. CHLOROPETA NATALENSIS. Natal Yellow-breasted Flycatcher.

Sylvia natalensis, Layard, B. S. Afr. p. 102.

Professor Sundevall gives the following diagnosis for this species:—"Dull yellowish olive: underneath dull yellow: sides of neck, thighs, rump and vent tinged with buffish colour: head rather dusky above, with a dull yellowish superciliary streak: third quill equal to the sixth in length." We find that these characters are exhibited by all the specimens which have at present come under our notice, so that as yet we have not seen the real *C. icterina* (vidè *infra*). Sir A. Smith procured the species near Port Natal, but his typical specimen did not come into the British Museum. Mr. T. Ayres has also met with it in Natal, and Captain Shelley has

received it from the neighbourhood of Durban and Pinetown. Mr. F. A. Barratt procured specimens between Macamac and Lydenburg.

Adult male.—General colour above dull olive-yellow, yellower on the back, all the feathers being brown towards the base: the head browner than the back, the yellow margins not so broad: wing-coverts and quills very dark brown, all margined with dull olive-yellow: tail rather lighter brown, the feathers margined with olive yellow, paler and inclining to whitish at the tip of the outermost: feathers in front of the eye bright lemon yellow: ear-coverts olive with narrow shaft-lines of bright yellow: cheeks, sides of neck, and entire under surface of body, including the thighs and under wing- and tail-coverts bright yellow, the flanks slightly washed with olive-brown: "bill dusky, the under mandible yellow: tarsi and feet dusky: iris hazel" (*Ayres*). Total length, 4·9 inches; culmen, 0·55; wing, 2·4; tail, 2·35; tarsus, 0·5.

Adult female.—Similar to the male, but not quite so bright. Total length, 5 inches; wing, 2·3; tail, 2·3; tarsus, 0·85.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 112, fig. 2.

321. CHLOROPETA ICTERINA.

Icterine Flycatcher.

This species is described from Natal by Prof. Sundevall (*Oefv. K. Vet. Akad. Forh. Stockh.* 1850, p. 105) as being closely allied to *C. natalensis* (which he states to have been also sent by Wahlberg), but differing specifically. He gives the following diagnosis of the species:—"Bright yellowish green: underneath very bright yellow: a yellowish streak above the lores: thigh-plumes very bright yellow. Total length, 5½ inches; wing, 2·45; tail, 2·4; tarsus, 0·85.

322. HYLIOTA VIOLACEA.

Violet Flycatcher.

This West African Flycatcher has been procured by Senor Anchieta at Caconda in Benguela, and therefore comes within our limits. The following description is translated from Dr. Hartlaub's work on the Birds of West Africa, as we have not been able to examine a specimen:—"Above steel black, somewhat purplish: some of the greater wing-coverts nearest to the back white; underneath pale buffish yellow; thighs black; bill rather broad, black, as also the feet; wings very long; tail moderate, square, black. Total

length, 5''; bill, 5''; from gape, 7''; breadth of bill, $2\frac{1}{2}$ ''; wing, 3''; centre tail feathers, 1'' 9''; the outer ones, 2''; tarsus 7''.

323. *ERYTHROCERCUS LIVINGSTONII*. Livingstone's Flycatcher.

This pretty little species was discovered during the Livingstone Expedition in the Zambesi district. The following is a description of the unique type in the British Museum.

Adult.—Crown of head ashy grey: general colour above olive yellow: the rump and upper tail-coverts bright tawny rufous: the tail chestnut with yellowish margins near the base of the feathers: wing-coverts light brown with yellowish margins: quills dark brown, also margined with yellow: lores, cheeks, and chin white: ear-coverts light ashy: rest of under surface of body bright yellow, slightly washed with fulvous on the under tail-coverts: under wing-coverts bright yellow, the greater series white. Total length, 3·7 inches; culmen, 0·3; wing, 1·75; tail, 1·95; tarsus, 0·6.

324. *BIAS MUSICUS*. The Black-and-White Flycatcher.

The late Dr. Dickerson obtained this species in the Zambesi, and Dr. Livingstone brought back a pair from Tete. The male differs from West African specimens in not having the black extending so far on to the breast, while the female is whiter below, but it would not do to separate the Zambesi specimens specifically on the strength of a single pair of birds.

Adult male.—General colour above glossy rifle-green, the head with a long crest, scapulars and the rump slightly mottled with white subterminal spots to the feathers: lesser and median wing-coverts rifle-green, like the back; the greater series and the secondaries black margined externally with rifle-green, the primaries black with white bases extending in a band across both webs of all but the two outermost quills, on which this colour is confined to the inner web only: tail black, slightly glossed with rifle-green on the edges of the feathers: sides of face and of neck, throat, and breast glossy rifle-green: rest of under surface white, the flanks mottled with black, with which all the feathers are broadly margined: thighs black: under wing-coverts rifle-green like the breast: "bill black: feet, yellowish grey" (*Reichenow*). Total length, 6·2 inches: culmen, 0·85; wing, 3·35; tail, 2·05; tarsus, 0·5.

Adult female.—General colour above chestnut, the tail entirely

of the latter colour: all the wing-coverts chestnut like the back, as also the secondaries: primaries black for their terminal half, the basal half chestnut: head, crested, blackish, the hinder neck dusky blackish mottled with chestnut, the margins to the plumes being of this colour: ear-coverts black slightly washed with chestnut: cheeks and under surface of body dull fawn-buff, the chin and lower abdomen white, the breast, flanks, under wing-coverts and inner lining of the quills chestnut, the primaries blackish at tip: thighs chestnut. Total length, 6 inches; wing, 3·3; tail, 2·1; tarsus, 0·5.

Fig. Finsch and Hartl. Vög. Ostaf., pl. iii., figs. 2, 3.

325. *MUSCICAPA GRISOLA.*

Spotted Flycatcher.

The Common Flycatcher of Europe is tolerably widely distributed in South Africa during its absence from that continent, but it is never very plentiful in the Cape Colony. Sir Andrew Smith obtained a specimen during his sojourn in South Africa, and Mr. L. C. Layard met with it at Grootevadersbosch, but neither Victorin nor Andersson appear to have seen it during their stay at the Knysna. From Natal Mr. Ayres has forwarded specimens, and the British Museum also contains examples from this colony. Two specimens only were contained in Mr. Andersson's last collection from Ondonga, and we believe that the note given in the "Birds of Damara Land" (p. 129), under the heading of *M. grisola* refers properly to *M. cærulescens*. The measurements of the wing given by Mr. Andersson do not exactly accord with either of these species, but that of the tarsus agrees with *M. cærulescens*, and not with *M. grisola*, which can also hardly be spoken of as "found in Damara Land throughout the year." The Ondonga specimens of *M. grisola*, formerly in the editor's collection, are now in that of the British Museum, which also contains others from various parts of Western Africa, Abyssinia, and Mombas on the east coast.

Adult.—General colour brown, the forehead and crown of the head broadly streaked with dark brown centres to the feathers: wing-coverts brown, with whity-brown edges to the wing-coverts and secondaries, the primaries and primary-coverts dark brown narrowly margined with paler brown: tail dark brown, with lighter brown edges to the feathers: lores and feathers in front of the eye dull whitish: round the eye a ring of buffy whitish feathers: ear-coverts brown: cheeks dull white, longitudinally streaked with light

brown, broader on the sides of the throat, and forming an ill-defined malar streak: rest of under surface of body dull white, purer on the centre of the abdomen, the chest shaded with light brown and narrowly streaked with darker brown, these streaks becoming nearly obsolete on the lower breast and flanks, the latter being more uniform, like the sides of the breast: thighs light brown: under tail-coverts white: under wing-coverts orange brown, shaded with darker brown in the centre of the feathers: quills ashy brown below, dull buffy white along the inner webs: bill brown, paler at base of lower mandible; feet black; iris dusky brown. Total length, 5·4 inches; culmen, 0·55; wing, 3·4; tail, 2·45; tarsus, 0·6.

Fig. Dresser, B. Eur., part xlv.

326. MUSCICAPA UNDULATA.

Dusky Grey Flycatcher.

Muscicapa fuscula, Layard, B. S. Afr. p. 148.

Stated by Le Vaillant to be very common in Outeniqualand and Natal. Mr. W. Atmore has procured it at Blanco and at Geneva fontein.* Victorin met with it at the Knysna from June to September, and the late Mr. Andersson also procured several specimens there. We have recently received from Lieut. H. Trevelyan, of the 32nd Light Infantry, a pair of birds shot in the Peri bush near Kingwilliamstown, and he informs us that they are not uncommon in that locality. Mr. T. C. Atmore has sent it from Eland's Post, and Mr. T. Ayres gives the following note on the species in Natal:—"The sexes of these Flycatchers are very similar in size and plumage. They are solitary in their habits, and fond of stationing themselves on the bough of some tree, from thence darting upon the small insects which fly around them. They also feed upon seeds and berries in an equal degree; and this cannot possibly be for want of more congenial food, for insects of all kinds abound throughout the year in Natal, although far more numerous in the hot months." Mr. F. A. Barratt obtained the species at Macamac.

The present bird may be described as similar to *M. grisola*, but distinguished by its smaller size, darker and more uniform colour above, and by the absence of light streaks on the forehead, as well

* It may not be uninteresting to the general naturalist to know that Mr. Atmore's farm, Geneva fontein, is the site of Le Vaillant's camp in Outeniqualand, where he so long resided and flirted with the lovely Narina!

as by the shorter and broader bill: the breast is also more uniform brown than that of *M. grisola*, which has the breast whitish with longitudinal brown streaks.

Adult male.—Above ashy brown, the head obscurely mottled by the dark brown centres to some of the feathers of the crown: wings dark brown, the lesser and median wing-coverts edged with ashy-brown like the back, the greater series tipped with dull white: primary-coverts uniform dark brown: quills dark brown with narrow edgings of ashy-brown, the secondaries margined with dull whitish: tail brown, with obscure undulations, under certain lights, the feathers edged with lighter brown near the base: lores whitish, extending backwards above the eye and forming an ill-defined eyebrow: round the eye a ring of whitish feathers: fore-part of cheeks ashy-brown, mottled with whitish tips to the feathers: ear-coverts uniform ashy-brown: throat pure white, with slight ashy mottling on the chin, where the bases show through: breast and sides of body ashy-brown, with a slight fulvous tinge, the chest streaked with fulvous, the feathers being edged with the latter colour: belly and under tail-coverts white: thighs brown: under wing-coverts light tawny-buff with ashy-brown bases to the feathers: lower surface of the quills brown, the inner webs edged with light fulvous brown: "bill and legs black: iris brown" (*T. L. Ayres, MS.*). Total length, 4.6 inches; culmen, 0.5; wing, 2.55; tail, 2.05; tarsus, 0.6.

Adult female.—Not different from the male in colour: "bill black, the under mandible yellowish at base: tarsi and feet dusky: iris dusky hazel" (*F. Barratt, MS.*). Total length, 4.8 inches; wing, 2.65; tail, 2.05; tarsus, 0.65.

Fig. Le Vaill. Ois. d'Afr. pl. 156.

327. MUSCICAPA CÆRULESCENS.

Blue-grey Flycatcher.

The two remaining species of *Muscicapa* which are found in South Africa are distinguished from *M. grisola* and *M. undulata* by their blue-grey colour. They form part of a small group of Flycatchers peculiar to Africa, in which this blue-grey coloration is a prominent feature. The present bird differs from *M. lugens* in having a distinct white eyebrow and a white spot below the eyes, as well as by the white edgings to the inner web of the quills: in *M. lugens* this is brown. Mr. Thomas Ayres, who first brought the bird to the notice of ornithologists, says that in habits it much resembled

Parus niger. He found a family of them seven or eight in number, and they were hunting about some low bushes evidently in search of insects. In the British Museum is a specimen of *M. cœrulescens* procured by the late Mr. Andersson at Ombongo, Damara Land, on the 22nd of June, 1859. It is probably this bird to which he refers under the heading of *M. grisola* (B. Dam. Ld. p. 129), as follows:—“This species is common in Damara and Great Namaqua Land, and is found there throughout the year, either singly or in pairs, perching on some low branch of a tree, whence it makes short and rapid excursions in pursuit of such winged insects as may chance to pass within view, frequently returning to the same post of observation, and uttering at intervals a kind of chirping call.”

Adult male.—General colour above dull blue-grey, the forehead and crown obscurely streaked with dark brown down the centre of the feathers: wing-coverts grey like the back: quills dark brown, externally edged with grey inclining to white on the extreme edge of the primaries, and more distinct on the secondaries which are otherwise entirely grey: tail ashy-brown, with a very slight edging of white at the tip: from the base of the bill a line of buffy white extending above the fore-part of the eye: in front of the latter a blackish spot: above and below the eye a spot of white forming a tolerably distinct superciliary mark, the spot below the eye larger and better defined: ear-coverts dull grey with indistinct whitish shaft-lines: cheeks greyish, slightly mottled with whitish tips to the feathers: under surface of body dull grey, the throat and centre of the abdomen purer white: under tail-coverts ashy with whitish tips: thighs greyish externally, dull white internally: under wing-coverts ashy whitish: quills below dark brown, the inner webs whitish towards their base: bill and feet black: iris dark brown. Total length, 5·3 inches; culmen, 0·55; wing, 2·95; tail, 2·45; tarsus, 0·7.

328. MUSCICAPA LUGENS.

Angola Grey Flycatcher.

Dr. Hartlaub, who described this species in the “Proceedings” of the Zoological Society for 1860 (p. 110), from a specimen obtained by Mr. Monteiro in Angola, mentions that he had also examined a second one from the interior of South Africa in the Stuttgardt Museum. The following description is taken from the typical specimen in the British Museum.

Adult.—General colour above uniform blue-grey, the forehead and crown slightly mottled with blackish centres to the feathers, the upper tail-coverts browner with blue-grey margins; wings black, the wing-coverts broadly edged with blue-grey, the secondaries with ashy-grey, paler at the tips of the feathers: primary-coverts and primaries uniform blackish brown: tail-feathers dark brown, edged with grey near the base, and very slightly tipped with white: lores ashy whitish: feathers in front of the eye dusky: cheeks and ear-coverts dusky grey, the latter slightly streaked with whitish: throat whitish: sides of neck, breast and sides of body ashy-grey, the belly and under tail-coverts white: thighs grey: under wing-coverts ashy-grey, the wing-coverts whitish at tip: quills ashy below with brown edgings along the inner webs: bill dark brown, the lower mandible lighter. Total length, 5·5 inches; culmen, 0·6; wing, 2·85; tail, 2·35; tarsus, 0·55.

329. *MUSCICAPA CINEREOLA*.

Speke's Flycatcher.

Although originally discovered by the late Captain Speke in Usaramo during his travels in Eastern Africa, the present species has been met with by Senor Anchieta at Biballa in Mossamedes and at Humbe on the Rio Cunene. Drs. Hartlaub and Finsch, who have described the species (Vögel Ost-afr. p. 302), state that it is strictly congeneric with *M. grisola*, but that it shows great affinity to several other African members of the genus which, on account of the prevailing grey colour of their plumage, are very closely allied the one with the other, and are not yet satisfactorily proved to constitute different species. The following is a translation of the original description:—Above ashy-grey, underneath dull whitish grey, paler than the upper surface; the wings and tail dusky ash colour, the inner webs of the quills margined with white, the outer tail feather with a whitish edging at the tip; under wing-coverts white; lores whitish; bill rather stout, blackish, the mandible pale at the base, "feet dusky grey: iris brown" (*Anchieta*). Total length, 5''; bill, 5''; wing, 2'' 9''; tail, 2'' 1''; tarsus, 8'' 3''.

Fig. Finsch and Hartl. Vög. Ost-afr. taf. IV, fig. 1.

330. *POGONOCICHLA STELLATA*.

White-starred Bush-Flycatcher.

Muscicapa stellata, Layard, B. S. Afr. p. 148.

Victorin procured this species in the Knysna in the months of

June, July, and October, and it has been sent to us from Blanco by Mr. W. Atmore, who states that it is very scarce in that neighbourhood. We have received a specimen from the neighbourhood of Kingwilliamstown, from Lieut. H. Trevelyan. Mr. T. C. Atmore has collected several examples near Eland's Post, and further northward in the Eastern Transvaal they are more often obtained. Mr. F. A. Barratt found them common at the Macamac Gold-fields, and Mr. Thomas Ayres writes from Lydenburg as follows:—"These birds seem to appear in the spring and summer months, when they become tolerably plentiful, frequenting the thick forest; they are solitary, or at most in pairs, and in habits much resemble our Robin." The sexes, when adult, appear to be perfectly alike, but the young birds are much duller in colour, and have the white spots on the throat and above the eye scarcely perceptible.

Adult male.—Above yellowish olive, the upper tail-coverts bright yellow; least wing-coverts olive like the back, the rest of the coverts and quills blackish, externally blue grey inclining to silvery grey on the outermost greater coverts; tail yellow, with a broad black band at the tip, the outer feather externally blackish for the terminal half of the outer web, the two centre tail-feathers entirely black; head dull blue, including the sides of head and entire throat; lores and feathers round the eye more dusky; above the eye a large spot of silvery white, a spot of which is also apparent on the lower throat; rest of under surface of body orange yellow, including the under wing and tail-coverts; thighs and outermost of the under wing-coverts light grey with whitish margins; "bill black; tarsi and feet dusky pale; iris dusky" (*T. Ayres*). Total length, 6·2 inches; culmen, 0·5; wing, 4·55; tail, 2·75; tarsus, 1·1.

Fig. Le Vaill. Ois. d'Afr. pl. 157.

331. LHOPTILUS NIGRICAPILLUS. Black-capped Bush-Flycatcher.

Pycnonotus nigricapillus, Layard, B.'S. Afr. p. 140.

Le Vaillant found this bird only in the forests of Brintjes Hoogte, and even there sparingly. Major Bulger procured it in the neighbourhood of Windvogelberg. We ourselves saw it near the summit of the Kat-berg, and Mr. T. C. Atmore has sent us several specimens from Eland's Post, Mr. H. Bowker has also forwarded it from the Transkeian region. Mr. Thomas Ayres writes from Natal:

—“I have at different periods met with several solitary individuals of this species, always either amongst dense underwood or thick creeping plants. They appeared to be sluggish in their habits, and to feed on small fruits and berries. Their stomachs contained no insects.” Mr. F. A. Barratt fell in with the species near Lydenburg and Pilgrim’s Rest gold-fields, but Mr. T. Ayres observes that in the former district it is decidedly scarce, and adds that he cannot remember ever having seen more than a pair together.

Adult male.—Upper surface warm brown, the wing-coverts and quills ashy-brown, washed with the same brown as the back externally, the primaries narrowly margined with whitish; tail dark brown, margined on both webs of the feathers with olivaceous; crown of head and nape black, the latter slightly shaded with grey; lores and feathers round the eye black; cheeks and ear-coverts silvery-grey, the sides of the neck, throat, and breast rather darker grey; the chin blackish; centre of the breast and abdomen, white; sides of body and thighs fulvous brown; under tail-coverts light brown edged broadly with buffy white; under wing-coverts yellowish buff; quills ashy brown below, the inner webs white from their base upwards; “bill and legs flesh-colour; iris, ashy hazel” (*T. C. Atmore*). Total length, 6·6 inches; culmen, 0·53; wing, 3·2; tail, 3·15; tarsus, 0·95.

Fig. Le Vaillant, Ois. d’Afr. pl. 108.

332. SMITHORNIS CAPENSIS.

Cape Broad-billed Flycatcher.

Platyrhynchus capensis, Layard, B. S. Afr. p. 142.

A species entirely confined to South-eastern Africa. Sir Andrew Smith who discovered it did not notice it beyond the forests which exist upon the South-east coast towards Delagoa Bay. Captain Shelley has received several specimens from the neighbourhood of Durban obtained by Mr. Gordge, and Mr. T. L. Ayres has collected it near Pinetown. His father, Mr. Thomas Ayres, sent specimens to Mr. Gurney some years ago, and he has published the following note on the species in Natal:—“The stomach contained beetles and a species of bug. These birds frequent the dense bush, and are by no means plentiful; they have a curious harsh, loud and monotonous note, which almost exactly resembles that of *Scops capensis*, and is uttered at about the same intervals four or five times in a minute:

“kroo,” with a good roll on the *r*, would describe the note tolerably well. Each time the bird makes this noise (which is about two seconds in duration), he flits round in a small circle about a couple of feet in diameter, and alights again exactly on the spot from whence he started.”

Adult female.—Crown of head and nape black, the forehead slightly streaked with white; upper surface of body generally olive brown, streaked with black, the longitudinal centres to the feathers being black; in the centre of the back a patch of white caused by the bases to the feathers being of this colour; wing-coverts olive brown with blackish centres, the feathers broadly edged with sandy buff; quills brown with sandy edges; tail brown with paler tips and pale brown edges; lores pure white, the shafts blackish; ear-coverts dark brown with silvery white shafts; throat white with a broad moustachial streak of dusky black on each side; rest of under surface buffy white broadly streaked with blackish, the abdomen and under tail-coverts pure white; under wing-coverts and axillaries buffy white, the outermost of the greater coverts blackish; under surface of the quills greyish-brown, the primaries white along their inner webs, the secondaries buff; “upper mandible nearly black, the under one pale; tarsi and feet pale; iris dark umber-brown” (*T. Ayres*). Total length, 5·4 inches; culmen, 0·65; wing, 2·9; tail, 2·2; tarsus, 0·7.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 27.

333. PLATYSTIRA PELTATA.

Green-throated Flycatcher.

The present very distinct species was discovered by Wahlberg in Lower Caffraria, and we know of only two other specimens besides the typical ones in the Stockholm Museum, viz. a pair in the national collection obtained by Dr. Kirk on the Zambesi. The following is a description of this pair.

Adult male.—Above rifle-green, the lower back and rump rather more greyish; wing-coverts rifle-green like the back; quills blackish, the primaries margined with grey, the secondaries with rifle-green; tail black, glossed with greenish above and just tipped with white; sides of face and pectoral band rifle-green; rest of under surface white, the flank shaded with greyish; axillary tuft rifle green; under wing-coverts white, the edge of the wing rifle green; eye-

wattle scarlet; bill black; iris yellow. Total length, 4·9 inches; culmen, 0·6; wing, 2·55; tail, 2·2; tarsus, 0·8.

Adult female.—Similar to the male, but more grey on the back; the entire throat and upper breast dark rifle-green, the chin and a spot on the fore-part of the cheeks white.

Fig. Sharpe, *Ibis*, 1873, pl. 4, figs. 2, 3.

334. *BATIS CAPENSIS*.*

Cape Flycatcher.

Platysteira pristinaria, Layard, *B. S. Afr.* p. 143.

The genus *Batis* can be generically separated from the genus *Platysteira* by the absence of any wattles round the eye. The present species is a very distinct one, being always recognisable by its rufous flanks.

It is rather abundant in certain favourite localities in the neighbourhood of Cape Town, and is generally distributed throughout the colony. I have shot it at the Knysna; and received it from Swellendam, Colesberg, and Beaufort. It frequents wooded places, generally hunting about thickets, high or low, for its insect prey, upon which it darts, when at rest on the under side of leaves and on the branches. I have occasionally seen it fly out and capture an insect on the wing; but this is rare. It generally makes known its presence by its curious note, which sounds as if two stones were ground together. I have seen the bird about at all seasons, but never could find a nest. Le Vaillant also was equally unsuccessful, but Mr. L. C. Layard detected them nesting at Grootevadersbosch, and procured a nest which had two

* In my copy of Le Vaillant, this bird is marked, in Swainson's own handwriting, *G. Todus*, Sw.; sub-genus *Platysteira*, Jardine. This copy formerly belonged to Mr. Swainson, but was wrecked in Table Bay, in the ship conveying his effects to New Zealand. Several of his books were recovered and bought up by a number of gentlemen who admired his talents, and he was informed that they would be forwarded to him if he would indicate his address. This he never cared to do, and the books remained here. Of them, I was kindly presented on my departure from the Cape by my most kind and valued friend Sir Thomas Maclear, one of the trustees of the S. A. Museum, with the following:—Temminck's *Planches Coloriées*, Le Vaillant's *Oiseaux d'Afrique*, the 1st Vol. of his *Histoire Naturelle d'Oiseaux Nouveaux de l'Amerique et des Indes*, and Wilson's *American Ornithology*. They contain many curious manuscript notes on the plates and margins, all bearing on his ideas of the affinity of species.—E. L. L.

hard set eggs on the 20th November, 1868. The nest is just like that of *Tchitrea*; cup shaped, built of grass-bents and fibres, lined with horse-hair, and stuck all over with lichens so thickly as to be entirely covered. The eggs are of a dull white tinted with green, more or less spotted with pale brown dots and surrounded at the obtuse end by a very broad band of close-set brown and brown-purple blotches. Axis 9''', diam. $6\frac{1}{2}$ '''. Both Andersson and Victorin procured it at the Knysna, and it is included in Mr. Rickard's East London list. It has been procured both by ourselves and by Mr. T. C. Atmore in the neighbourhood of Graham's Town. We have also seen numerous specimens from Natal, and Mr. F. A. Barratt procured it on the stony coppices on the sides of the hills at Macamac, where he observed them fitting about among the stunted brushwood.

Adult male.—Entire head deep ashy grey, with a black line drawn from the forehead on each side, inclosing the eye and ear-coverts, and extending down on each side of the neck so as to form a border to the grey head; the rest of the back olive-brown, the rump irregularly mottled with white, which shows more conspicuously on the disarrangement of the feathers; upper tail-coverts glossy greenish-black, with a white tip; least wing-coverts olive-brown like the back, the greater ones darker, the median and the inner greater coverts bright orange-rufous; quills dark brown, the inner secondaries tipped with white, the outer secondaries broadly edged with orange-rufous, continuous with the coverts, which are similarly coloured; tail black, with a very slight greenish gloss, the feathers more or less broadly tipped with white, the outer feathers margined externally with a broad white line; entire throat and sides of neck pure white; fore part of chest black, forming a very broad pectoral band, slightly tinged on the side with olive-brown, some of the lower feathers slightly margined with white; centre of belly and under tail-coverts white; sides of body bright orange-rufous; tibial plumes blackish; under wing-coverts white, the outermost small coverts brown; bill and feet black; iris yellow. Total length 3.9 inches; culmen, 0.5; wing, 2.2; tail, 1.65; tarsus, 0.65.

Adult female.—Forehead and eyebrow whitish, but otherwise very similar to the male on the upper parts. Underneath white with a patch of orange-rufous occupying nearly the whole of the throat;

upper part of breast and sides of body rich orange-rufous, deepening into rust-colour on the pectoral band.

Fig. Le Vaill. Ois. d'Afr. pl. 160.

335. *BATIS MOLITOR.*

White-flanked Flycatcher.

Plate X., fig. 1.

Platysteira strepitans, Layard, B. S. Afr. p. 144.

This is the bird generally called *B. pririt* or *B. strepitans*, by ornithologists, but, as shown by the Editor in an article on the genus (Ibis, 1873, pp. 156-177) the true *B. pririt* is the next species. The males of both are very much alike, those of *B. molitor* being slightly larger, but we cannot discover any difference in coloration: the females, however, are very distinct, as will be seen by the figures in the accompanying plate.

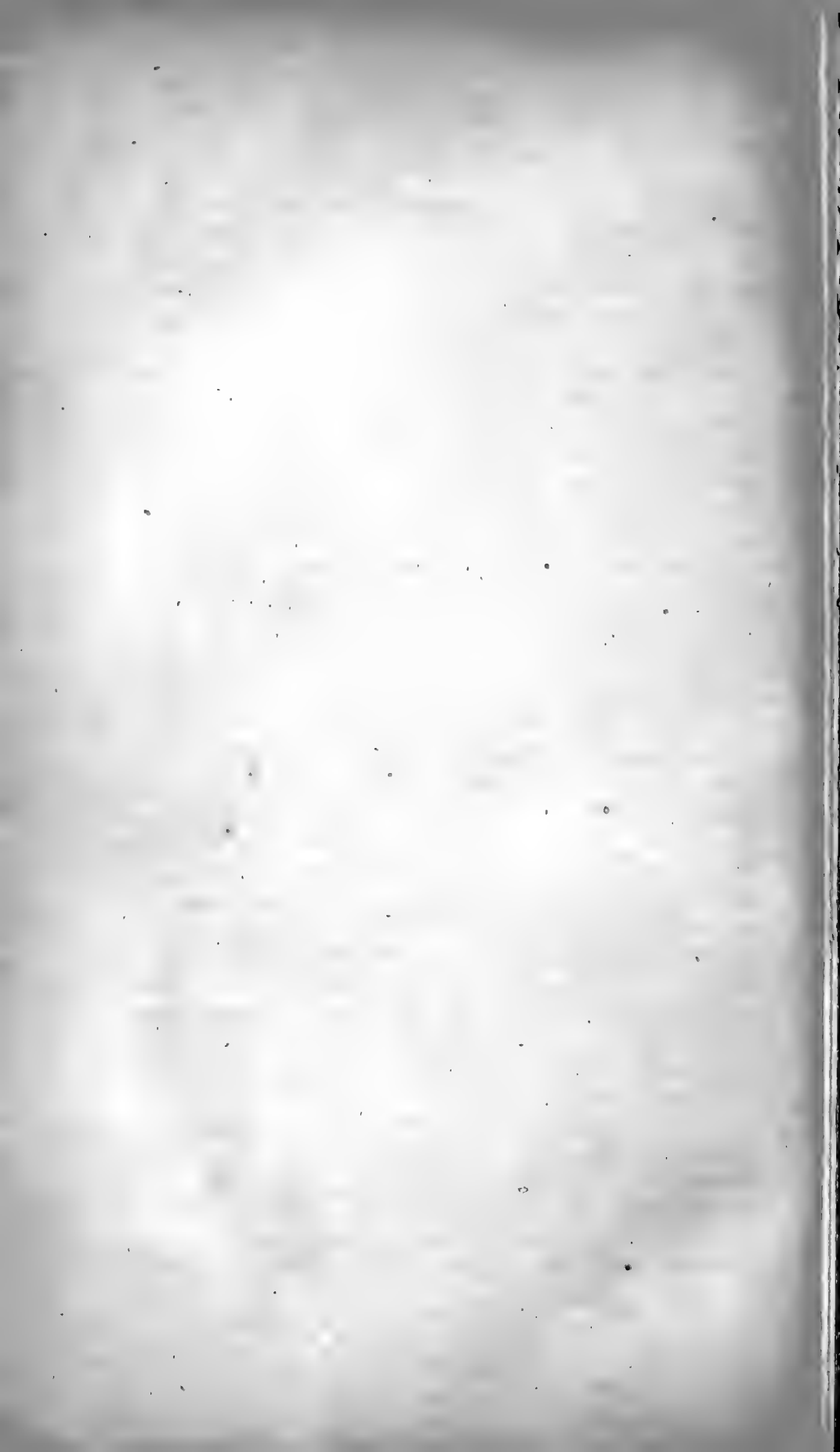
It seems to be a more eastern bird than *B. pririt*. We have received it from Eland's Post from Mr. T. C. Atmore, and it is found sparingly about Grahamstown. Mr. Thomas Ayres writing from Natal, says:—"These Flycatchers frequent the dense bush. Their flight is weak. They are restless in their habits, constantly flitting and hopping about in search of small slow-flying soft insects, which they take on the wing. Their note is harsh and grating to the ear; more than two are seldom seen together. They are found here all the year round." Captain Shelley writes:—"Plentiful about Durban and Pinetown, usually frequenting the thick bush, but not uncommonly taking up their position in the small scattered trees, like true Flycatchers."

Mr. T. E. Buckley states that it was a common species from the Transvaal up to the Matabili country, and it extends to the Zambesi, having been collected by Dr. Kirk at Tete and Shupanga. In Damara Land Mr. Andersson has obtained it at Elephant Vley and at Ovaquenyama. Prof. Barboza du Bocage also identifies a specimen obtained at Humbe by Senor Anchieta as belonging to the present species.

Adult male.—Above dull bluish grey, the nape whitish, and the rump also mottled with white; a narrow line from the base of the bill over the eye, running as far as the hinder part of the eye, but not joining the nape, white; lores, feathers above and below the eye, ear-coverts, and sides of the upper neck deep black, extending down the back to the limit of the nuchal spot; wing-coverts and



1. . BATIS . MOLITOR .
2. 3. — PRIRIT .



scapulars black, the least coverts slightly margined with whitish, the median and inner greater ones broadly tipped with white, forming a conspicuous alar bar; quills dark brown, very narrowly edged with whitish, the secondaries black, more broadly margined, so as to form a line continuous with the wing-band; upper tail-coverts and tail black, slightly tipped with white, the penultimate feather a little more broadly, the outermost altogether white on the external web; cheeks, sides of neck, and under surface of the body white, with a broad pectoral band of glossy black; thighs black; flanks also mixed with blackish; under wing-coverts black, the lower ones and those along the bend of the wing white; bill and feet black; iris yellow. Total length, 5·3 inches; culmen, 0·5; wing, 2·5; tail, 2·2; tarsus, 0·73.

Adult female.—Above similar to male, but differing below. Under surface white, sides of body mixed with grey; a patch in the centre of the throat and a pectoral band deep chestnut.

336. BATIS PRIRIT.

Western White-flanked Flycatcher.

(Plate X. figs. 2, 3.)

As before mentioned the male of this species is so similar to that of *B. molitor*, that a slight difference in size seems to be the only character for separating them. The females are quite unlike each other, and we believe that any one comparing the hen of the present bird with the plate in Le Vaillant's work will see that this is the "*Pririt*" figured by him. Mr. Ortlepp has procured it near Colesberg, and the only other localities whence we have seen specimens are Benguela and Damara Land. Mr. Andersson observes:—"This species is very abundant in the Swakop valley; it is usually seen in pairs about large trees, which it explores carefully and systematically in search of insects. It has at times a peculiar far-sounding note, which a stranger might imagine to be uttered by a bird at a great distance, whilst, in reality, the bird is near at hand."

Adult male.—Indistinguishable from *B. molitor* in colour, but a little smaller; "iris light lemon-yellow on the inner edge, shading off into greenish grey in the outer circle" (*Andersson*). Wing, 2·15.

Adult female.—Above clear bluish grey, the rump mottled with white; sides of neck and nuchal spot clear orange buff; a narrow superciliary line of white from the base of the bill; lores, feathers

round the eye, ear-coverts, and sides of upper neck black; wings and tail as in *B. molitor*; throat and entire breast clear orange-buff; abdomen and under tail-coverts white; flanks mixed with blackish; thighs black; bill and feet black. Total length, 3·8 inches; culmen, 0·5; wing, 2·2; tail, 1·7; tarsus, 0·7.

337. *BATIS MINULLA*.

. Lesser White-flanked Flycatcher.

This species has lately been described by Professor Barboza du Bocage from examples obtained by Senor Anchieta at Biballa in Mossamedes. It will be figured in his forthcoming work on the Birds of West Africa, and as he has kindly lent us the typical specimens for examination we are able to state that the species appears quite distinct from the two foregoing, the male being distinguished by the absence of a white circlet round the crown, while the female differs not only in this respect, but also in having only a single pectoral band of chestnut without any spot on the throat, which is white like the abdomen.

The following descriptions are taken from the type-specimens in the Lisbon Museum.

Adult male.—Upper surface of body dark grey, the nape with a white patch; scapulars, lower back and rump mottled with white subterminal spots to the feathers; upper tail-coverts and tail black, the penultimate feather narrowly edged with white, the outermost rectrix white on the outer web and at the tip; wings black, the least coverts very narrowly edged with white, the greater series very broadly tipped, especially the innermost, which are white for the terminal half, the inner secondaries also edged narrowly with white, forming a thin longitudinal line down the wing; lores whitish, giving the appearance of a narrow frontal line; feathers between the bill and the eye as well as the sides of the face and ear-coverts black; a line of black feathers drawn down the sides of the neck on each side of the white nuchal spot; cheeks, sides of neck and under parts pure white, the sides of the body mottled with greyish black; across the chest a broad band of glossy black; thighs black; under wing-coverts black, tipped with white, the axillaries entirely white; bill and feet black; iris bright yellow. Total length 4·2 inches; culmen, 0·55; wing, 2·18; tail, 1·6; tarsus, 0·65.

Adult female.—Similar to the male, but distinguished by a chest-

nut pectoral band instead of a black one. Total length, 4 inches; culmen, 0·5; wing, 2·05; tail, 1·6; tarsus, 0·65.

338. LANIOTURDUS TORQUATUS.

White-tailed Flycatcher.

This fine species of Flycatcher was first described by Mr. Waterhouse from specimens brought by Sir J. Alexander from Damara Land, where Mr. Andersson afterwards met with it. It seems to be entirely confined to South-western Africa, having been found only in Damara Land, and at Biballa in Mossamedes. Mr. Andersson gives the following account of the species:—"I met with this fine Flycatcher in the south of Damara Land; and I also found it very common, and in many cases paired, about the Omaruru River in October and November. In the latter locality it was very tame, and I could procure almost any number of specimens; but in the former it was shy and very restless, seeking the thickest part of the tree or bush on which it might chance to be perched immediately that it found itself pursued, and making its escape from the side opposite to that on which its pursuer might be watching for it, not, however, flying far, but settling on the nearest tree on which it deemed itself secure. This Flycatcher presents a pleasing appearance on the wing, although its flight is slow and apparently laborious; it is gregarious in its habits, and seeks its food amongst dwarf vegetation, and also on the ground. I love this little bird, it is so odd-looking, and often enlivens with its quaint appearance and movements an otherwise dreary and monotonous solitude. It has a very clear and plaintive call-note; but generally its notes are querulous, and at times not unlike the distant call of a Corncrake. The tail feathers in this species are of extraordinary stiffness."

Adult male.—Head black, including the lores and ear-coverts, the latter produced backwards along the sides of the neck: forehead and superciliary streak (not extending beyond the eye), cheeks, throat, sides of neck, and a large nuchal patch white: back dark grey, the rump mottled with white: upper tail-coverts black: tail pure white, the two central feathers longitudinally marked with black: upper wing-coverts black, the primary coverts white at tip, as also the inner greater coverts, which form a conspicuous patch on the wing; quills black tipped with white, the secondaries more broadly, the primaries white at base of inner web, and the outer

ones also white at base externally: across the breast a conspicuous band of black; centre of the body white, the sides of the breast and flanks grey: tibial plumes white varied with black: a tuft of axillary plumes under the wing white: under wing-coverts black, the lower ones tipped with white: edge of wing white: "bill almost black: feet very dark brown, with a whitish or lead-coloured tint about the joints: iris greenish yellow" (*Andersson*). Total length, 5.5 inches; culmen, 0.7; wing, 3.3; tail, 1.6; tarsus, 1.2.

Fig. Bp. Rev. et Mag. de Zool. 1857, pl. v.

331. *STENOSTIRA SCITA.*

Fairy Flycatcher.

Platysteira longipes, Layard, B. S. Afr. p. 143.

This lovely little bird was found by Le Vaillant in Kaffraria and Namaqua Land, about the Orange and Groote Rivers, and we found it ourselves very abundant in the neighbourhood of Nel's Poort, frequenting mimosa thickets along the borders of the rivers. Victorin also procured it in the Karroo, and Mr. Ortlepp says that it is plentiful on the banks of the "Sea-Cow" River. Mr. T. C. Atmore has also sent us a skin procured on the Orange River, and Prof. Wahlberg found it in the Transvaal, a skin procured by him on the 4th of August, 1843, being in the British Museum.

Adult male.—Above greyish, a little paler on the rump: wings black: the least wing-coverts greyish, like the back, with a vertical line of white extending the whole length of the wing, beginning at the outer median coverts: tail black, the outermost feather white, the penultimate white for its apical half, and the next one with a little less white towards the tip: a narrow superciliary line of white from the base of the forehead to the hinder ear-coverts: cheeks and ear-coverts black: a narrow cheek-stripe and chin white, the latter with a delicate blush of rose-colour: lower throat and chest greyish: lower breast, abdomen, and under tail-coverts white, with a beautiful blush of rosy on the former: outer wing-coverts whitish: the outermost ones slightly shaded with grey: tibial plumes black: bill and feet black: iris black. Total length, 4.5 inches; culmen, 0.5; wing, 2.25; tarsus, 0.8.

Fig. Le Vaill. Ois. d'Afr. pl. 154.

340. *TERPSIPHONE CRISTATA.*

South African Paradise Flycatcher.

Tchitreia cristata, Layard, B. S. Afr. p. 145.

This bird has a great range in South Africa. We have received

specimens from most of our correspondents. It is found not far from Cape Town, at Somerset West, and in Drakenstein. It forms a deep nest, in the fork of some small branch of a tree, and generally in the neighbourhood of water. It is composed of fibres and dead leaves, stuck over with bits of bark, cobwebs, and lichens, to resemble a knot in the tree. Mr. L. C. Layard has sent to the South African Museum more than a dozen eggs of this bird. It is one of the handsomest and richest looking eggs that we know of, being of a rich cream-colour, spotted chiefly at the thick end with rich red spots, with here and there a pale purple one. These spots usually form a circle, more or less: sometimes they are thickest at the extreme top, at others they are distributed generally over the whole egg: axis, 9''; diam, 6''. We have seen several specimens of this Flycatcher collected by Mr. Andersson at the Knysna, where also Victorin procured it from September to November. He also obtained it in the Karroo in January. Mr. Rickard has met with it at Port Elizabeth, but says that near East London it is rather rare. In Natal, according to Mr. Thomas Ayres, "these Flycatchers are by no means scarce; they frequent bushy land, and are found within a range of twenty miles from the coast. Their note is harsh, with the exception of one short warble which they frequently repeat, and which both male and female have to an equal degree. Their food consists of flies, gnats, and small beetles. Five or six of these pretty birds may frequently be seen together, generally one or two males to four or five females; and pleasant it is to watch their graceful motions when in pursuit of their food." Captain Shelley also found them plentiful in the thick woods about Durban and Pinetown. Mr. F. A. Barratt writes:—"I shot one of these birds near the town of Rustenburg, and I found them also near the waterfall under the mountain and by the side of an old stone wall. I have also seen them in the bush near Pretoria." In the Zambesi, Dr. Kirk states that it inhabits shaded forest, frequenting mango plantations. Mr. Andersson states: "I have only observed this very pretty and elegant Flycatcher in the neighbourhood of the Okavango River, where, however, it is scarce; at Lake N'gami it is less uncommon. The few specimens that I have personally secured were exceedingly wary and difficult to approach. These birds live in pairs and frequent the forests, perching only on the larger trees.

The males are said to be very quarrelsome, and to fight with considerable ferocity and tenacity."

Senor Anchieta states that it is called "Mucombia" by the natives of Humbe, on the Cunene River, and the same traveller has met with it at Caconda in Benguela, and at Biballa in Mossamedes: here it is called "Katambuixe."

Adult male.—General colour above bright chestnut, the tail entirely chestnut with dark red shafts: wing-coverts also chestnut like the back, the primary-coverts and quills blackish on the inner web, chestnut on the outer one, the innermost secondaries entirely chestnut like the back: head, which is much crested, glossy steel-green, as well as the sides of the face and the throat: rest of under surface of body leaden grey, the steel-green colour of the throat descending on to the fore-neck, the feathers of which are edged with the latter colour: thighs, vent and under tail-coverts pure white: under wing-coverts and axillaries white, slightly washed with chestnut near the base, coverts near the edge of the wing dull chestnut mottled with brown bases to the feathers: lower surface of quills blackish, the inner web reddish along the edge: "bill grey tipped with black, wattled eyelids of a bright greyish blue: legs grey: iris dark brown." (*Shelley*.) Total length, 14 inches; culmen, 0·7; wing, 3·25; tail, 3·5; long central tail-feathers, 11·2; tarsus, 0·65.

Adult female.—Differs from the male in wanting the two long tail-feathers. The colours are altogether duller and paler, the head dusky leaden grey, and the throat and under-surface dull grey with no green gloss anywhere, excepting a little on the crown, the chest slightly washed with brown on the sides: soft parts in the female as in the male. Total length, 6 inches; culmen, 0·7; wing, 3·05; tail, 3·2; tarsus, 0·65.

Fig. Le Vaill. Ois. d'Afr., pls. 142, 143.

341.—*TROCHOCERCUS CYANOMELAS*. Grey-mantled Flycatcher.

Tchitrea cyanomelas, Layard, B. S. Afr. p. 146.

Le Vaillant found this bird in the forests of Outeniqua Land, and in the mimosa groves of Kaffraria, and it seems to be tolerably plentiful at the Knysna, where the late Mr. Andersson procured many specimens, and where Victorin also met with it between May and September. Mr. L. C. Layard found it breeding near Groot-

vadersbosch, and sent us the nest and eggs with the birds. The nest is cup-shaped, placed in the fork of a tree, and covered with moss and lichens. The eggs, two in number, are pale cream-colour, profusely spotted and blotched in a band near the thick end with red brown and purple, much resembling those of *T. cristata*: axis, 8"; diam-6". Lieut. Herbert Trevelyan has recently sent us a specimen killed in the Peri bush near Kingwilliamstown, and Dr. Atherstone tells us that it has been found near Grahamstown. In Natal it has been met with by Mr. Thomas Ayres, who writes as follows:—"In habits these Flycatchers are excessively active, incessantly hopping and flying from twig to twig amongst the under-wood in search of small flies and beetles. When thus employed, they frequently expand the tail to its fullest extent, sometimes perpendicularly, then to one side or the other, and again downwards, which has a very pretty effect. Their note is harsh, and much resembles that of the *T. cristata*."

Adult male.—General colour above light grey with a bluish gloss: head crested, bright steel-green, as also the sides of the head and the throat: sides of neck grey, glossed with steel-green: lesser and median wing-coverts dark grey glossed with steel-green: greater series black, slightly edged with greenish and narrowly tipped with white, the innermost of this series white on the outer web, forming a conspicuous white longitudinal patch with the innermost secondaries, which are entirely pure white, all the rest of the quills blackish: tail blackish, undulated with dusky under certain lights, the outer webs of the feathers washed with grey: under surface of body white, the bases of all the feathers greyish, the flanks also slightly washed with grey: under wing-coverts and axillaries white, the outermost coverts and the edge of the wing grey: "bill, tarsi and feet slate colour: iris dusky." (*F. A. Barratt*). Total length, 5·2 inches; culmen, 0·5; wings, 2·6; tail, 3·1; tarsus, 0·7.

Adult female.—Differs from the male in having the back washed with olive-brown, as also the sides of the face: crown of head slightly crested, metallic greyish steel-blue: lores and cheeks whitish, mottled with grey bases to the feathers: under surface of body white, the flanks washed with olive-brown: the throat also white, mottled with greyish bases to the feathers. Total length, 5·8 inches; wing, 2·6; tail, 3·1; tarsus, 0·7.

Fig. Le Vaill. Ois. d'Afr., pl. 151.

Fam. HIRUNDINIDÆ.

342. PSALIDOPROCNE HOLOMELÆNA. Black Saw-winged Swallow.
Atticora holomelas, Layard, B. S. Afr. p. 57.

The Swallows of the world may be divided into two great groups, those with smooth wings and those with serrated wings. The latter have the outer edges of the first primary minutely jagged like the teeth of a very fine saw, and one species of these Swallows is found in South Africa, viz., the present bird.

This little Swallow first fell under our notice on the "Keurboom's River," Knysna district, where we saw it apparently breeding in holes in the banks, but were unable to investigate its doings more closely. We found it abundantly in the forest, hawking after flies over pools, frequently dipping into the water, and perching on the overhanging boughs in clusters of six or eight, to dry themselves.

Their habit of perching is noted by Mr. Cairncross, who writes: "This bird flies about very much like a bat (this resemblance also occurred to us when we saw it), amongst thick forests, and is generally more visible in rainy, heavy weather; but I have never seen or heard of their breeding here (Swellendam). They remain here after the winter has set in. Sometimes I have seen them roost on trees at the bottom of my garden, where I shot the specimen sent."

Mr. L. C. Layard noticed its arrival at Grootevadersbosch on the 5th of September, 1869. It is found throughout the wooded districts of the eastern province. We saw it near Grahamstown, the Kowie, Fish River bush, &c., and Lieut. Herbert Trevelyan has procured it in the Peri bush near Kingwilliamstown. Mr. Thomas Ayres writes from Natal:—"This species is common here all the year round, but I think not immediately on the coast. They are generally to be seen two or three together, searching for insects, about the bushy valleys, and occasionally, though not often, alighting to rest on some dead bough. Their food consists of minute beetles and other insects." Captain Shelley says that he found it very plentiful about Pinetown in Natal, and occasionally met with it near Durban. He observes:—"It is a woodland bird, usually seen in small flocks, often perching on boughs on the shady side of large trees. They appear to avoid the glare of the mid-day sun, feeding

mostly in the evening, often long after sunset." Mr. F. A. Barratt noticed the species both at Rustenburg and at Macamac, but in either place it was rather scarce: he states that he shot them in the forest as they flew up and down in the open spaces.

Adult male.—Above dark greenish black, deepest in the centre of the back and on the breast: quills deep black, with a slight greenish lustre, the outer web of the first primary distinctly serrated: tail dark greenish black, long and deeply forked: "bill black, legs purplish-brown, shading off into flesh-colour on the back of the tarsus and on the soles of the feet: iris dark brown." (*G. E. Shelley*.) Total length, 6·4 inches; wing, 4·1; tail, 3·0; tarsus, 0·3.

Adult female.—Similar to the male, but somewhat smaller and more dusky: outer edge of first primary *not* serrated: tail less forked.

Fig. Cass. Pr. Philad. Acad. 1850, pl. 12.

343. PETROCHELIDON SPILODERA.

Prince Alfred's Swallow.

Hirundo lunifrons, Layard, B. S. Afr. p. 55.

The genus *Petrochelidon* is entirely peculiar to America with the exception of this single species, which inhabits South Africa. Here it represents the North American Barn Swallow (*P. lunifrons*), which it resembles so strikingly as to have led to its being actually confounded with it in the first edition of this work. The circumstances of its re-discovery in Southern Africa were very curious. The author was first led to a knowledge of this species by observing an unusual appearance on an overhanging rock photographed near Middleburg during the journey of H.R.H. Prince Alfred through South Africa in 1860. On applying a strong magnifying power to the picture, he distinctly made out that the appearance consisted of a cluster of birds' nests. He at once concluded that they were constructed by some kind of Swallow unknown to us, and requested our zealous contributor, Mr. Jackson, to look well after them, if ever he found himself in the neighbourhood. This he did, and tells us he counted about twenty nests, under a rock, clustered together.

Mr. Ortlepp writes from Colesberg:—"The nests are composed of pellets of mud closely packed together. I counted no less than sixty in a square yard against an overhanging bank. Each nest is a half sphere, with a small hole for entrance. The Boers tell me

that formerly these birds were unknown to them, and when first seen they appeared in small numbers, which is not the case now, as I saw hundreds hawking about in the neighbourhood. I calculate that at least two thousand will be hatched at this place this season." We were informed that in 1870 they bred at Sidbury, about twenty-eight miles from Grahamstown, and we are indebted to our kind friend Dr. Exton for specimens of the birds and eggs taken in Bloemfontein in the Orange Free State.

Mr. Thomas Ayres has procured the species in the Transvaal, where it also breeds. The specimens sent home by this last-named naturalist were described by Dr. Hartlaub as *Hirundo alfredi*, but a comparison of specimens showed that the species was identical with *Hirundo spilodera*, described by Sundevall in 1850 from "Caffraria."

Adult.—Head dark brown, obscurely glossed with dark blue, lighter brown towards the nape; back and scapulars deep blue, the feathers edged laterally with white, giving a striped appearance to the whole back; the scapularies and wing-coverts just faintly edged with rusty white; the lower part of the back blue, not marked with the stripes; rump and upper tail-coverts pale rufous; wing-coverts and quills brownish-black, with a slight blue gloss on the latter and on the extremities of the quills; tail brownish black also slightly glossed with blue; a patch of feathers in front of the eye pale sienna; cheeks, ear-coverts, and sides of the neck dark blue; chin white, the throat tinged with sienna and covered with little black spots; below this a blackish band marked with whitish; under surface of body white, washed on the flanks and upper part of the breast with sienna, with a few scattered black spots on the breast; under tail-coverts and vent pale rufous, some of the former entirely black and the others rufous with a blackish spot. Total length, 5·9 inches; culmen, 0·4; wing, 4·5; tail, 2·1; tarsus, 0·5.

Fig. Hartl. Ibis, 1868, pl. IV.

344. COTYLE CINCTA.

Brown-collared Sand-Martin.

The first specimens of this bank Swallow reached us from Capt. Bulger, of H.M. 10th Regiment (2nd Batt.), who procured it at Windvogelberg, on the frontier. We subsequently, in October, 1865, discovered it about 14 miles from Cape Town, hawking about a small stream; it was there in some abundance. We again recognized

a pair sitting on the telegraph wires near Somerset West ; and on arriving at Mr. Vigne's farm found a pair breeding in the bank of the River Zonder End. The nest was about three yards deep, in a low bank. We did not obtain the eggs. The parent birds never seemed to fly far from the spot, but skimmed up and down the river. On our pointing them out, the Messrs. Vigne, who have paid some attention to the birds found in their neighbourhood, pronounced them strangers to them ; and we do not think they have been in the vicinity of Cape Town till the year 1865. During the whole of 1866 Mr. L. C. Layard found them abundant near Cape Town, and after that date until we left the Cape this swallow could always be met with in that vicinity during the summer months. We fancy that previously to this the species could not have been very plentiful at the western end of the Colony, although Mr. F. R. Surtees, who has made a special study of these birds, tells us that he procured it in 1862. About the Berg river we found it not uncommon in September, 1869, breeding in the river banks and the sides of the ditches along the road to Malmesbury. It tunnels a hole about three feet long, of the size of a man's arm, inclining upwards, and the eggs (four or five) are pure white and rather sharp at the thin end. Axis, 10'' ; diam, 6''. Mr. Ayres gives the following note respecting the bird in Natal :—"These birds I only found inland. Their flight much resembles that of the Rollers, and they make a loud chattering note whilst flying. The specimen sent I shot in February near Pietermaritzburg ; it is a heavy, large-sized Swallow, solitary and scarce. The stomach contained good sized beetles somewhat broken up." Mr. T. E. Buckley obtained a male bird in the Drakenberg Mountains during his journey to the Matabili country. He observes :—"A summer migrant apparently, as I only saw them on our return journey ; they were not particularly abundant, a few pairs only being seen together in this one spot." Mr. Thomas Ayres says that he also noticed it in the Lydenburg district.

Adult.—Above greyish-brown, darker on the head and paler on the rump, where the dark shafts of the feathers become plainer ; quills dark brown, the secondaries edged at the tip with whitish ; tail dark brown, narrowly margined with whitish, no spots on the inner webs ; lores black ; ear coverts dark brown ; a patch of feathers extending from the nostrils to the eye, throat, breast, under wing and tail-coverts pure white ; a band across the breast and thighs brown ;

“beak and legs black; iris dark hazel” (*T. E. Buckley*). Total length, 6 inches; of wing, 4·8; tail, 2·0.

Young.—Similar to the adult, but has the plumage somewhat darker; rump very pale brown with a light rufous tinge; the whole of the upper surface, quills, and the band on the breast with rusty edgings to the feathers; bill dark horny brown; feet brown. Total length, 6 inches; wing, 4·7; tail, 2·0.

Fig. Buff. Pl. Enl. 723.

345. COTYLE FULIGULA.

Buff-throated Sand Martin.

This Swallow remains with us all the year round, merely shifting its quarters from a town to a country residence. As soon as our summer visitants are gone, these crowd into the villages and take their places. We have counted upwards of one hundred sitting together on the cornices of the Dutch Church in Cape Town on a cold day, basking in the sun. They breed in the mountains, and seem generally distributed, as we have received specimens from Damaraland, Swellendam, Beaufort, and Colesberg, and Victorin procured it at the Knysna. We have also found them nesting under the eaves of houses in November. They lay 3 or 4 eggs, of a creamy white, much spotted with brown, with here and there a grey patch; in some these spots seem to form a circle at the obtuse end: axis, 10''; diameter, 6''. The flight of this species is very slow and sailing, and they seek their prey usually near rocks, and are more crepuscular in their habits than any of our other species, often flying so far into the darkening twilight, that they can scarcely be distinguished from the bats with which they mingle. Mr. H. Jackson writes from Nel's Poort, 4th January, 1869:—"We have taken the eggs of a pair of brown martins five times this season. They have their nest against the gable of my house and do not forsake it when robbed, as do the Chats and others." Mr. Thomas Ayres in his paper on the birds of the Lydenburg district writes:—"Though I have seen this Martin in other parts of the Transvaal, I shot specimens for the first time at the gold-fields. They came in the autumn and winter months, but were not in such numbers as the two preceding species." Mr. Andersson writes:—"This Martin is common in Damara and Great Namaqua Land, and is the only species of Swallow which remains throughout the year, a few couples being always to be found in suitable localities. I once saw a very large

number at Hykomkap on the 20th of May. This species breeds in the holes of low rocks and clay-banks. The nest is cup-shaped, and built of the usual clay materials; the eggs are five or six in number, white, tinged with fawn, and spotted with brown." Senor Anchieta has sent it from the Rio Coroca, and from Biballa in Mossamedes: at the latter place it is called "Kapiapia."

This Sand Martin differs from *Cotyle cincta* in its dusky brown colour underneath, the throat being rufous without any pectoral band, the tail feathers are also spotted with white.

Adult.—Above dark greyish-brown, having a faint olive green gloss in certain lights, paler on the rump and upper tail-coverts, the shafts of the latter being distinctly marked; wing-coverts dark brown, with the same olive-green gloss as the back in some lights; quills dark brown, grey underneath; tail rather paler brown, all the feathers except the two centre ones having a conspicuous white spot on the inner web, this being exceedingly small or sometimes wanting altogether on the outermost rectrix; lores blackish brown; entire throat and breast deep fulvous; flanks and abdomen dark brown tinged with fulvous; "bill brown, the upper mandible being darker than the lower, legs and toes brown, iris very dark brown," (*Andersson*). Total length, 5·7 inches; wing, 5·3; tail, 2·0.

Fig. Le Vaill, Ois. d' Afr. V., pl. 246.

346. COTYLE PALUDICOLA.

South African Sand Martin.

The Cape bank Swallow is the earliest comer of all our migratory swallows and swifts. It is rarely seen far from water, and breeds in the banks of rivers or artificial dams, over which it continually hawks for flies. It lays three or four white eggs of the same size and shape as those of our European *C. riparia*, and the nest is often run to the depth of two or three feet into the soil, when it is loose and friable.

Mr. Cairncross of Swellendam informs us that, if the winter is mild, it remains about that part of the country during the whole year. Mr. Jackson has sent it from Nel's Poort. He also states that it stays with him all the year round. We saw this little species hawking about over a river in the Strand Veldt near Mr. J. Van der Byl's residence at mid-winter (end of June, 1868). We found it breeding at the Berg river in the banks in the month of September. We also found it breeding at the "Clay pits" near Graham's Town. Captain Shelley writes:—"At Cercs in Cape Colony, I found this

species very abundant, reminding me strongly of *C. riparia*, from which its dull-coloured breast most readily distinguishes it." Mr. T. E. Buckley obtained one specimen out of a flock at Pietermaritzburg. Mr. Thomas Ayres gives the following note on the species in Natal:—"These Martins I have never seen on the coast. I found many of them during the winter months about the stream near Pietermaritzburg; they occasionally alighted to rest on the overhanging reeds, where, I have no doubt, they roost at night, as I have frequently found them thus perched before the sun rose. Sometimes they hunted singly, sometimes in companies; and their flight being very eccentric, I found them difficult to shoot." The same gentleman observes:—"This Martin is as common in the Transvaal in June and July as it is in the upper districts of Natal. They are fond of following in the course of a river, skimming along with rather eccentric flight within a few feet of the surface of the water." Dr. Kirk shot it in the Zambesi as it was "flying round the ship in the Elephant Marsh."

This is the smallest of the South African Sand Martins, and is distinguished by the entire absence of white spots on the tail feathers.

Adult.—Above brown with lighter edgings to the wing-coverts and secondaries; throat and breast greyish brown, the sides of the body a little darker brown; under wing-coverts brown mixed with white, abdomen and under tail-coverts pure white; "bill and feet black; iris dark hazel" (*T. E. Buckley*). Total length, 4·7 inches; wing, 4·0; tail, 2·1.

Young.—Similar to the adult but a little more reddish in colour and having the upper plumage mottled.

Fig. Le Vaill. Ois. d'Afr. V, pl. 246.

347. HIRUNDO RUSTICA.

European Swallow.

The fork-tailed Swallows of Africa may be divided into three groups, the first of which have the lower back and rump blue like the mantle; to this section belong six species, of which the present is one. It may be distinguished by the following characters: rufous forehead and throat, and rufous-tinged under tail-coverts.

The European Swallow is a regular and common visitant to the Cape Colony, throughout the whole of which it is distributed. In 1867 the first bird arrived in Cape Town on the 27th of July, and

we have noticed a few stragglers as late as the 2nd of April. Although the species stays with us for the greater part of the year, it does not appear to breed, and we believe that all the young birds which are seen in South Africa are not natives but are visitors from the north. These young birds, during their stay with us, go through a peculiar phase of plumage which was fully described by Messrs. Sharpe and Dresser in the Proceedings of the Zoological Society for 1870 (p. 244), from specimens obtained at the Cape by Mr. F. R. Surtees. Captain Shelley during his three months' visit to South Africa found it by far the most abundant Swallow in Capetown. Victorin obtained it at the Knysna from September to November. In Natal, writes Mr. Ayres, "these Swallows arrive in November in great numbers, and congregate and leave again in March and April; they are fond of alighting to rest on the outer twigs of bushes, stems of tall grass, and trees, especially at the time of their departure, when many hundreds assemble together. Like most other Swallows they are almost constantly on the wing." Mr. F. A. Barratt states that "these Swallows appear every year in the district of Potchefstroom during our summer months," and in the Lydenburg district of the Transvaal, Mr. Thomas Ayres states that they "appeared in fair numbers amongst the mountains during the summer months, and very probably bred among the rocks." Although not observed to breed in other parts of South Africa it would seem to do so from the accompanying note of Mr. Andersson's:—"This well-known species is pretty common in Damara and Great Namaqua Land during the rainy season, and I have found it very numerous at Walvisch Bay and in other localities near the coast. In uncivilized parts of Africa these Swallows affix their nests to some projections of a rock or trunk of a tree, or occupy cavities in rocks or banks."

Upper side steel-blue, with greenish reflections; quill-feathers of wing and tail rusty; throat and forehead deep rufous; under parts dull flesh-colour, with a broad collar of the same colour as the back, joining the red throat; tail deeply forked; the two outer feathers much prolonged; all the inner vanes with a patch of white, which together form a distinct white bar, most visible on the under side; "iris dark brown, bill black, legs brownish" (*Andersson*). Length, $6\frac{1}{2}$ " ; wing, 5" ; tail, 4" .

Fig. Dresser, B. Europe, pt. xxxvii.

438. *HIRUNDO ANGOLENSIS*.

Angola Swallow.

This Swallow is smaller than *H. rustica*, which it resembles in its rufous forehead and throat, and is further distinguished by its ash-coloured under surface and under tail-coverts. It was discovered by Senor Anchieta in Angola, and has also been found by him at Huilla in Mossamedes.

Adult.—Forehead, throat and upper part of the breast deep brick-red; the entire upper surface rich steel-blue, having a greenish lustre in some lights: tail gradually forked, the two middle feathers steel-blue, the whole of the inner web white, except a black border at the tip: a narrow interrupted band across the breast below the red throat, steel-blue; rest of the breast and under tail-coverts ash-coloured, a little paler in the centre of the breast, the under tail-coverts washed with rufous, each feather margined with pale grey, and having a little heart-shaped blue mark before the end of the feather, the black shaft being also strongly defined; under wing-coverts dark ashy grey, washed on the edge of the wing with steel-blue; bill and legs black. Total length, 5·7 inches; culmen, 0·35; wing, 4·7; tail, 2·5; tarsus, 0·5.

Fig. Sharpe, P. Z. S. 1869, pl. xciii.

349. *HIRUNDO ALBIGULARIS*.

White-throated Swallow.

Hirundo albigula and *H. rufifrons*, Layard, B. S. Afr. pp. 53, 55.

Although belonging to the red-fronted Swallows, this species is distinguished by its white throat from the two foregoing birds. It is probably this Swallow that Le Vaillant intended to figure in his plate of the "Hirondelle à front roux," which is, however, apparently drawn from memory, and cannot be recognized.

If any of our Cape swallows could be mistaken for the European species, this would in all probability be the deceiver. In fact, for a long time we were deceived by it, until one bright sunny morning, while watching the flight of some of these lovely aerial creatures, it struck us that the blue of the back and white of the breast looked brighter than in the old-country bird. For some time they confined their course to the narrow river, on the bridge over which we stood, but at last one strayed for an instant over the bank; a well-directed shot laid him on the green sward, and we instantly recognized the

supposed "Hirondelle à front roux" of Le Vaillant. They were breeding beneath the bridge, but we were unable at the time to get at the nests, which we have since visited, and found to resemble those of the European bird in shape and structure. Le Vaillant says he only found this species in the rainy season (our winter). In this he is most undoubtedly mistaken, so far as the Cape peninsula is concerned. No other swallow than *C. fuligula* remains during this time, whatever they may do in the more inland districts; but, from all we can gather from our correspondents, we have no reason to think that even there *H. albigularis* is to be found in the winter.

Mr. L. C. Layard found the species breeding at Grootevadersbosch near Swellendam, and together we procured its nest at the Berg river in the middle of September. The nest was a half cup attached to a beam in a stable, and was composed of mud and lined with hay and feathers. The eggs were very thin, white (pink when containing the yolk), and spotted, chiefly at the obtuse end, in the shape of a ring, with minute dots of green, brown, and yellow, with here and there a larger spot. In shape they were sometimes much pointed, at other times they were very round: axis, 11''; diam. 7''. Andersson and Victorin both procured this Swallow at the Knysna, and we have seen several specimens from Natal. Mr. Thomas Ayres has also found them in the Transvaal, and he says that they were fairly common near Lydenburg, where they were most frequently to be seen hawking along the streams.

Adult.—Above deep purplish blue: quills blackish brown, with a faint gloss on the upper surface, the innermost cubital feathers marked on the inner web with a greyish white spot: tail blackish brown, the two centre feathers unspotted, but all the others marked on the inner web with a large patch of white: forehead deep chestnut: space between the bill and the eye, and the ear-coverts, dusky-black: throat, cheeks, and sides of the neck white; below the throat a broad band of purplish blue feathers, broad at the sides and narrow in the centre of the breast: rest of the under surface of the body dull white, greyish on the flanks: bill black: feet dark brown. Total length, 6.3 inches; culmen, 0.4; wing, 5.25; tail, 3.2; tarsus, 0.45.

Fig. Strickl. Contr. Orn. 1849, pl. 15.

350. *HIRUNDO DIMIDIATA*.

Pearly-breasted Swallow.

This Swallow is very rare in the neighbourhood of Cape Town, but becomes more common on the mainland. It will be as well to treat the peninsula bounded by False and Table Bays as apart from the continent. The vast tract of land called the "Cape Flats," together with Table Bay on the one hand, and False Bay on the other, quite shut it off from the mainland, so to speak; and to aid in this isolation, the mainland ends in an abrupt precipitous wall of mountains, which are only to be passed in one or two places. Doubtless the peninsula of Table Mountain was once an island, and "Table" and "False Bays" part of a strait between. As soon as the hills are reached on the opposite side of Table Bay, this Swallow commences; and from Swellendam Mr. Cairncross writes:—"It is very common, and builds its nest generally under the thatch of an old mill or stable, where it is quieter than in a dwelling-house, lays a small white egg, and tradition says that it drives the sparrow and house-swallow (*H. cucullata*) from their nests, occupies them, and breeds therein. For this reason it receives no mercy from the farmer, but its eggs and young are destroyed whenever met with."

We found it abundant all along the route as far as Nel's Poort; there it was breeding among the rocks, and under the eaves of Mr. Jackson's barn. They construct a nest of mud very similar to that of *H. cucullata*, but without the elongated neck. The eggs, three or four in number, are pure white: axis, 7''' ; diam., 5''' . We have also found it breeding about the Berg River. Victorin procured it at the Knysna and we ourselves have met with it near Grahams-town, where it breeds. Professor Sundevall described it originally from specimens obtained by Wahlberg near Port Natal. Mr. Andersson writes:—"These Swallows are tolerably common in Damara Land, where they arrive about November; but on the Okavango river I have seen them as early as the 1st of September. They do not stay any great length of time in Damara Land, in fact barely long enough to rear their young. In December 1863 a pair of these birds took up their abode in my dining-room at Otjimbingue where they half completed a nest and then abandoned it; another pair (at least I conjectured that they were not the same) after a time continued the labour; but finally they also abandoned the nest whilst still incomplete; the next season, however, it was finished, probably



1. HIRUNDO SEMIRUFA
2. — ATROCÆRULEA

by the original projectors, and the parent birds safely brought up their young. The nest of this Swallow is cup-shaped, and the eggs pure white."

This little Swallow may be told by its entirely blue head and wholly white undersurface.

Adult.—Above purplish blue: quills brownish black, grey on the inner web, the innermost of the greater wing-coverts white, forming a white spot, which, however, is generally concealed by the scapulars; occasionally in very old birds a small white spot also occurs on the innermost secondaries: tail brownish black, without any spots, glossed on the upper surface with dark blue, with a faint greenish lustre; entire under surface silky white, having in some specimens a certain woolly appearance, greyish in certain lights: on each side of the upper breast a patch of dark blue feathers: "bill and feet black: iris dark brown." (*Andersson*). Total length, 5·5 inches; wing, 4·2; tail, 2·6; tarsus, 0·4.

Young.—Not so bright above, and more distinctly tinged with greenish: the white spot on the greater wing-coverts either absent altogether, or when present, of a dull greyish colour, and very little developed.

Fig. Cass. Pr. Philad. Acad. V., pl. 12.

351.—HIRUNDO ATROCERULEA.

Blue Swallow.

(Plate IX. fig. 1).

This very distinct species of Swallow is distinguished by its entirely blue colour above and below. It is a native of Natal, where it was first discovered by the late Professor Wahlberg. Mr. Thomas Ayres writes from the same colony:—"These are the most uncommon of the Swallows here; they frequent the open country, and appear to be solitary in their habits, skimming with rapidity and ease over the long grassy hills. I have never seen them take a rest, but on and on they go, apparently without ceasing. They are, I think, here all the year round; at all events, I have seen them in the following months, viz. March, April, August, November, and December."

Adult.—Entirely glossy blue-black, a little more dusky underneath: shafts of the primaries and of the tail-feathers white and very plain on the underside: bill black: feet dark brown. Total length, 7·2 inches; culmen, 0·3; wing, 4·5; tail, 4·6; tarsus, 0·35.

352. *HIRUNDO FILIFERA*. Wire-tailed Swallow.

This fine Swallow has been obtained by Dr. Kirk in the Zambesi region, and a specimen was shot at Tete during the Livingstone Expedition. Senor Anchieta has also procured it at Gambos and at Capangombe in Mossamedes. It is distinguished from the other blue-backed species of South Africa by its entirely chestnut head.

Fig. Gould, B. Asia, part xviii.

353 *HIRUNDO GRISEOPYGA*. Ashy-backed Swallow.

The present species appears to be distributed over the greater part of Africa, but is nowhere very plentiful. It is the sole representative of the second group of African Swallows, and has the lower back and rump as well as the crown dusky grey. It was originally discovered by Wahlberg in Natal, and has been recently obtained by Mr. T. E. Buckley in Suaziland.

Adult.—Entire head, lower part of back, and rump brownish grey; middle of the back and wing-coverts dark blue; quills brownish black, glossed with dull blue; tail dull brown, glossed with blue; lores black; a narrow line of feathers extending backwards over the eye, whitish; cheeks and ear-coverts dull greyish-brown; under surface of body milky-white, the sides of the upper breast being greyish brown; bill and feet pale brown. Total length, 5·8 inches; wing, 3·9; tail, 3·3.

Fig. Heugl. Orn. N. O. Afr. Tab. VII.

354. *HIRUNDO MONTEIRI*. Monteiro's Swallow.

The third section of the South African Swallows comprises all those species which have the lower back and rump rufous. Of these the largest and finest species is Monteiro's Swallow, which is distinguished by the following characters from the other members of the rufous-backed section, viz., by its blue crown, rufous under-surface, whitish throat, and above all by its large size.

The species was originally discovered by Mr. J. J. Monteiro in Angola, and it has since been found by Senor Anchieta at Capangombe and Biballa in Mossamedes, as well as at Humbe on the Cunene River. Mr. Andersson gives the following account of the bird in Damara Land:—"To the best of my knowledge this fine

Swallow (of which I first obtained a few individuals on the River Okavango in 1859) never extends its migration so far south as Damara Land proper; and, indeed, very few individuals come much further south than the Okavango. Those that came under my notice were always found in large open forests, flying high above the tree tops in pursuit of their insect prey, or occasionally perching on lofty, isolated, and aged trees, and they were in consequence by no means easy to procure." Dr. Kirk also met with the species in the Zambesi region, where they were seen "on the banks of the River Shiré, away from dwellings, flying near the water, and alighting on the clay-banks, where they were observed entering holes, but whether these had originally been formed by Bee-eaters was not ascertained."

Adult male.—Above glossy blue-black, the head capped and united to the nape by a broad interrupted band of blue-black feathers; a narrow line of feathers from the base of the nostrils to the eye dusky black; space below this line, and the base of the beak, cheeks and ear-coverts whitish, tinged with grey on the latter; lower part of the back and rump deep chestnut; upper tail-coverts blue-black; quills dusky brown, with a dark greenish-blue lustre on the upper surface; tail greenish-blue above, black underneath, with an oblong white spot on the inner web of the outer tail-feathers; throat and under wing-coverts white, tinged with light rufous; a triangular patch of feathers on the side of the head extending from the eye backwards, nearly encircling the head and extending down the sides of the neck, very bright rufous; shoulders and sides of the chest dark blue-black, like the back; breast and under tail-coverts deep rufous, with a black spot near the tip of the two interior feathers of the latter; thighs white; bill black; feet dark brown. Total length, 8.5 inches; culmen, 0.45; wing, 5.75; tail, 4.75; tarsus, 0.65.

Young.—Above blue-black, but not so rich or so glossy as in the adult: quills and tail dusky brown, with scarcely any perceptible gloss on the upper surface; lower part of back pale rufous; throat, cheeks and under wing-coverts pure white; sides of neck and breast rufous, but not so rich as in the adult; under tail-coverts rufous, the basal half of the two interior feathers black.

Fig. Hartlaub, Ibis, 1862, pl. 11.

357. *HIRUNDO SEMIRUFA*, *Sundev.* Red-breasted Swallow.
(Plate IX., fig. 1.)

Although having a rufous back and blue head like *H. monteiri*, the present species is easily distinguished by its smaller size and deep rufous under surface. It was described originally by Prof. Sundevall from Natal, where it was discovered by the late Prof. Wahlberg, and Mr. Thomas Ayres has procured it in the Transvaal. He writes:—"These Swallows appear in Potchefstroom in September, in the spring of the year, and continue throughout the summer. They appear to be somewhat solitary in habits during their stay, and are decidedly scarce. Their flight is comparatively heavy." The late Mr. Frank Oates, during his journey to Matabili Land, met with it at Tati on the 4th of October, 1874, and again at Inehlangin about the beginning of December.

Adult.—Above dark blue, inclining to indigo; rump chestnut; upper tail-coverts dark blue; quills black, brownish underneath, glossed above with dark blue; tail black, glossed with blue above, every feather, except the two centre ones, having a very large white spot on the inner web; space between the bill and the eye velvety black; cheeks and ear-coverts deep blue-black; entire under surface chestnut, very deep on the flanks and abdomen; under wing-coverts fulvous; edge of wing fulvous, mottled with black: "bill black; legs dusky; iris dusky" (*T. Ayres*). Total length, 8·8 inches; culmen, 0·69; wing, 5·2; tail, 5·3; tarsus, 0·56.

356. *HIRUNDO CUCULLATA*, *Bodd.* Larger Stripe-breasted Swallow.
Hirundo capensis, *Layard*, *B. S. Afr.* p. 54.

The two remaining species of the rufous-backed Swallows are easily distinguished by their rufous heads.

[This is the household Swallow of the colony, breeding freely about the houses and in the country, often selecting the usual living-room of the family. In the city this familiarity is not permitted, on account of the dirt made by the birds; but the Boer fixes up a board under the nest, to prevent the worst fouling, and considers that the rest is atoned for by the destruction of the myriads of flies, of which his little favourites rid him during the season of their stay. And only those who have sojourned in a Boer's house can estimate the plague of flies that infest it: they swarm on "bed and board;" they pollute the food and drink; chairs, tables, walls, everything is

blackened by them. No wonder, then, that the Swallow is a welcome guest, and that to rob his nest is to get into the bad books of every member of the family.

[As you sit at meals, the graceful bird hawks over the table, and snatches the flies from the walls and ceiling; nor is this the only service he renders, for, sitting on the top of the window or door (always left open for his accommodation), he pours out a short but lively song, which enlivens the dreary solitude and silence of the lone homestead.

The nest of this species is always attached to the under side of the place chosen, and is composed of little pellets of mud, like that of the English Swallow. In shape it resembles a gourd with a long neck, cut through longitudinally and glued up by the edges to the ceiling. It lays four or five pure white eggs: axis, 10"; diam. 6".]

The Rev. John Fry, of Rondebosch, once related to us a singular instance of the reasoning powers of this Swallow. The tube of a nest in his bath-room fell down, and was not replaced by the old birds, who had brought up their young, till within a few days of their flight, when one, more venturesome than his brothers and sisters, crept to the edge of the nest and fell over. After vainly trying to replace their dead offspring, the disconsolate parents, although their nesting was nearly over, repaired the broken tube to prevent a recurrence of the catastrophe.

It arrives in the western part of the colony about the end of August or beginning of September, but is somewhat irregular as regards its advent. Thus in 1868 we observed the first Cape Swallow at Uitkek, near Cape Town, on the 29th of August, but in the succeeding year the first bird was noticed by us at Greenpoint, near Cape Town, on the 19th of September, and Mr. Atmore saw it at George on the previous day for the first time. Victorin procured it in the Karroo in December and January, and at the Knysna between September and March, and he believes that it remains there as late as April. We have no record of its occurrence in the Eastern district of the colony, but they are found in Natal. Captain Shelley writes:—"Very plentiful throughout Cape Colony and Natal, and very often seen feeding in company with the Swifts. In March and April I frequently saw it engaged in constructing its nest, which it places against walls of houses in similar positions to those chosen for that purpose by our common House-Martin."

The following note is by Mr. Thomas Ayres :—"These birds arrive in Natal in October or November, and leave again in March or April; they are fond of building under the eaves of houses, constructing a chamber of about eight inches in diameter, with a long horizontal neck to it; the nest is lined with fine grass, feathers, and down. When flying about in search of food, they constantly utter a short note, somewhat resembling the 'chisick' of the Sparrow, but rather modulated." The same gentleman has found it in the Transvaal; and during his visit to the Lydenburg district he also noticed the species. Mr. Frank Oates procured it at Tati in October. Mr. Andersson gives the following account of the bird in South-western Africa :—"This is not a very common Swallow in Damara Land, where it usually arrives later than *Hirundo dimidiata*; it courts the society and neighbourhood of man, and, where permitted, will unhesitatingly enter his dwellings and construct its nest and rear its young in the midst of the household duties of the family. The nest is built of clay, and at first resembles in shape that of *Hirundo rustica*; but gradually the hollow bowl is narrowed into a tube of some extent. If the nest be destroyed at this stage, the poor bird at once sets about repairing the damage, but generally contents itself with rebuilding the dome, to which a narrow entrance is added. I have known a pair of these Swallows reconstruct their nest three times in one season, the female depositing a nearly full complement of eggs on each occasion. At the Cape this species commences its incubation towards the latter end of September or early in October, but in Damara Land it is somewhat later. The eggs are four or five in number, of a pure white, dotted over with minute brown spots." Senor Anchieta has procured it at Humbe, on the Cunene River, and also at Huilla and on the Rio Coroca in Mossamedes.

Adult.—Head intense sienna, the base of the feathers blue-black, shewing occasionally a few markings of this colour on the crown; upper part of back and scapulars steel-blue, marked with white on the extreme upper part at the back of the neck, the feathers being edged with whitish; wing-coverts steel-blue, the edge of the wing marked with white, especially on the primary-coverts which are all edged with white; quills brownish black, lighter on the inner web, washed externally with dark greenish steel-blue; lower part of back pale sienna, much lighter on the upper tail-coverts, which are

nearly white, the outermost tail-coverts steel-blue; tail brownish black, glossed with greenish steel-blue, the middle feathers without any white spot, the next two on each side with a small white spot on the inner web, and so on till the last, where the white spot is very large; under surface buffy white, the shaft of each feather strongly marked with brown, these shaft-streaks very minute on the throat and cheeks; sides of body marked with pale sienna; under tail-coverts white, with very distinct shaft-stripes; "bill black; legs and irides brown" (*Shelley*). Total length, 7·8 inches; culmen, 0·35; wing, 5·1; tail, 4·1; tarsus, 0·6.

Fig. Buff. Pl. Eul. 723, fig. 2.

359. *HIRUNDO PUELLA*, *Temm.* Smaller Stripe-breasted Swallow.

This is a diminutive of *H. cucullata*, and differs from that species by its smaller size and broadly striped under surface, which has the appearance of being profusely spotted with black. It was first observed by Dr. Edwin Atherstone near Grahamstown, and we ourselves afterwards saw it, in company with Mr. G. Atherstone, in the open space near the fort at Committee's drift (in the Eastern province). Here it was in large flocks, perching freely on the ground, and we were assured by the hotel-keeper that it had bred there: this we can easily believe, as we shot both old and young birds. We have since seen specimens from Natal, and the late Mr. Frank Oates shot the bird at Tati in Matabili Land, in October, 1874, along with *H. cucullata*. Dr. Kirk states that it was observed during two successive seasons, building in the house at Shupanga, on the Zambesi, in the months of December and January: it was not seen elsewhere, and was absent during the dry season. It is a well-known species in Western and North-eastern Africa.

Adult.—Head and back of neck pale sienna; back and scapulars bright steel-blue; wing-coverts steel-blue, but rather duller; lower part of back and rump deep sienna; quills brownish black, glossed with dull greenish blue; tail-feathers brownish black, glossed above with greenish steel-blue, with a large white spot on the inner web of all but the two centre ones; underneath buffy whitish, profusely marked with broad longitudinal stripes of dark brown; under wing-coverts deeper buff; bill and feet black; iris black. Total length, 7·8 inches; culmen, 0·3; wing, 4·2; tail, 4·8; tarsus, 0·5.

Fig. Rüpp. Syst. Uebers. pl. 6.

Fam. LANIIDÆ.

358. LANIUS MINOR, *Gm.*

Lesser Grey Shrike.

As far as has been recorded at present this well-known European Shrike has been procured chiefly in South-western Africa. Anchieta has obtained it at Humbe, on the Cunene River, and the following note appears in Mr. Andersson's work:—"This species is very common in Damara Land during the rainy season; but on the return of the dry weather it mostly disappears, though I believe a few individuals remain throughout the year. These Shrikes usually perch on some conspicuous tree or other elevated object, whence they can obtain a good view of what passes around them; they feed chiefly on insects, which they catch both on the wing and on the ground. A great number of these birds are often found in a very limited space and not unfrequently in the same tree." The only occurrence that we are aware of in other parts of South Africa has been the single instance when Mr. Frank Oates shot two on the Tati River, on the 19th November, 1874.

Adult.—Above delicate French grey; wing-coverts black, the least ones mixed with grey; quills black, the inner web pure white at the base; the outer web of the primaries also white at the base, forming a broad white alar band; the innermost secondaries narrowly tipped with the same colour; the four centre tail-feathers entirely black, the next two white at the base and tip, black in the centre of the feather, the next two similar, but with less black, and the outer ones on each side are entirely white; a broad black band across the forehead, extending backwards over the eye to the ear-coverts, which are also black; entire under surface white, tinged on the breast and sides of the body with delicate pink; bill and feet black. Total length, 8 inches; wing, 4·7; tail, 4; tarsus, 0·9.

Fig. Sharpe and Dresser, B. Eur. pl. xiii.

359. LANIUS COLLARIS, *L.*

Fiskal Shrike.

This Shrike is more abundant in the neighbourhood of Cape Town than in any other part of the colony that we have visited. It appears to affect the vicinity of habitations at all times, as in the very wild country it is seldom seen. It is bold, daring, and rapacious, a deadly foe to cage-birds, Canaries in particular, entering into rooms regardless of the assembled family, and tearing them from their cages. It preys upon all kinds of small living things;

and we have seen the spikes of an aloe—a favourite resort of these birds—garnished with snakes, locusts, small birds, hard-cased beetles, crabs, lizards, and sometimes even a fish. We have been assured on good authority that they seize gold-fish out of the fountains. It builds in trees and bushes, and constructs a nest of grass, lined with fibres and hair. Eggs, four or five; of a pale grey colour, blotched at the obtuse end, in the form of a ring, with greenish and reddish spots; axis, 12''; diam., 9''.

Mr. Guillemard says that the Fiskal Shrike may be said to be tolerably common throughout the whole of South Africa, wherever it can find a tree to perch on. Both Victorin and Andersson procured it at the Knysna, and Mr. Rickard records it both from Port Elizabeth and East London. We are indebted to Lieut. H. Trevelyan for specimens from Kingwilliamstown, and Mr. F. A. Barratt says that he has noticed the species plentifully in British Kaffraria, as well as in the neighbourhood of Bloemfontein in the Orange Free State. Captain Shelley says that it is not rare in Natal, and that he met with it frequently near Durban and Pinetown. Mr. Buckley obtained a specimen in the Transvaal, and Mr. F. A. Barratt mentions his having seen it on the Rhinoster River, a few miles south of the Vaal, and he has also shot it near Potchefstroom. Mr. T. Ayres writes:—"This Shrike is about as plentiful in the Lydenburg district as in most other parts of the country, a single one or a pair may often be seen frequenting some particular portion of ground." Senor Anchieta has met with the species at Ambaca and Caconda in Benguela, and Quillengues near 14° S. Lat., as well as at Humbe, on the Cunene River; it is common everywhere. Its native name at Biballa is "Kitiapi," at Humbe "Kissanda-suala." This last name has been given from its custom of searching for insects among the heaps of dried leaves on the ground.

"This Shrike," writes Mr. Andersson, "is common in the southern and middle parts of Great Namaqua Land, but further north it is replaced by *Lanius subcoronatus*; indeed, where the one species ceases, the other may be said to begin, as, to the best of my belief, *L. collaris* does not exist in any numbers where *L. subcoronatus* is found. South of Namaqua Land the Fiskal Shrike is very abundant, and nowhere more so than in the neighbourhood of Cape Town, where a pair may be seen in almost every garden. It is a bold,

fearless, and quarrelsome bird, never allowing any bird of prey to remain long within its particular district. This species has the habit of impaling its prey, immediately after capture, on a thorn or a naturally pointed stick or branch—a custom which is said to have earned for it, from the colonists, the name of Fiskal, derived from the title of the Dutch colonial magistrate of former times. The food of this Shrike consists chiefly of various insects; but it will also attack young birds, rats, and mice. It perches on some branch of a tree commanding a good view, whence it precipitates itself upon its prey when perceived, whether on the ground or on the wing. It flies low, alternately rising and dipping, but invariably in a straight line, and does not move far at a time, generally only to the first convenient tree. During the breeding season battles take place between the males; and it is at this season also that the bird is heard to sing in a strain at once varied and continuous, accompanying his warblings with many different gesticulations. This species builds in the forks of trees, and constructs its nest of bark, moss, and flexible roots, lined inside with feathers, wool, &c. The eggs, which both parents assist in incubating, are four or five in number, broad at one end and very short, of a dusky green, with brown spots clustered thickly round the larger end.”

Mr. T. Ayres gives a similar account of the habits of this bird in Natal, and says that it impales mice, small rats, lizards, chameleons, and other large insects on the thorns of the bush on which it perches.

Adult male.—General colour above sooty black, the lores, feathers round the eye, ear-coverts, and sides of neck uniform with the head; scapulars white, with dull greyish bases; wings entirely blackish, the quills rather browner, the inner primaries white at the base of both webs, forming an alar speculum; rump and upper tail-coverts dark-grey; tail-feathers black, the four outer ones on each side white at the tip, increasing in extent on both webs towards the outermost, which is entirely white with the exception of the inner web, which is blackish at the base; checks and throat white; breast and sides of body light ashy grey, the centre of the abdomen and under tail-coverts pure white: thighs white with dusky bases to the feathers; under wing-coverts white with blackish bases, the axillaries blackish with broad white edges; under surface of the quills ashy brown with pale brown edges to

the inner webs; "bill black: feet greyish black; iris black" (*Andersson*). Total length, 8.5 inches; culmen, 0.7; wing, 3.9; tail, 4.2; tarsus, 1.1.

Adult female.—Similar to the male but with chestnut flanks. Total length, 9 inches; wing, 3.7; tail, 4.3; tarsus, 1.05.

The young bird has a rufous tinge throughout, darkest on the back, and minutely crossed with small dark brown bars. The edges of the wing and tail feathers are very rufous.

Fig. Le Vaill. Ois. d'Afr. pls. 61, 62.

360. LANIUS SUBCORONATUS, *Smith*.

Coronneted Shrike.

This species is nearly allied to *L. collaris*, but is distinguished at once by its broad white eyebrow; it so closely resembles the last mentioned bird in all its habits, that it was not found to be distinct until one was accidentally killed by the members of Sir A. Smith's expedition. It was first seen by them at Latakoo, and we have received it from Kuruman, where it was procured by Mr. R. Moffat. Mr. Andersson gives the following note:—"This Shrike is common in the northern parts of Great Namaqua Land, and also in Damara Land, and the parts adjacent to the east and north. Its mode of flight, manners, and habits, are identical with those of the preceding species."

Three specimens have been also obtained by Anchieta near the mouth of the River Coroca, in Mossamedes.

Mr. Guillemard considers that the present bird replaces the Fiskal Shrike to a certain extent in the Orange Free State and the country north of the Diamond Fields. Mr. T. Ayres has shot it on one occasion near Potchefstroom on the 23rd of March.

Adult male.—Above, slaty-blackish; lores and a broad eyebrow, white; feathers in front of and round the eye, dusky; ear-coverts blackish, darker than the head; scapulars, white; wing-coverts and quills dark brown, the primary-coverts and secondaries narrowly tipped with white, the primaries white at the base, forming a large alar speculum; lower back and upper tail-coverts grey, the rump white; tail feathers blackish, the four middle ones entirely so, the next slightly tipped with white, these white tips increasing in extent towards the outermost, and running along the outer edge of the feather, until in the last the white occupies the outer web and the terminal half of the feather; cheeks and entire under surface of

body white, rather duller and greyer on the sides of the breast; under wing-coverts and axillaries white with dusky bases, the greater series dusky brown, forming a patch; quills brown below, white at the base of the inner web; "bill, brown horn-colour, livid at base; feet, blackish brown; iris, dark brown" (*Andersson*). Total length, 8 inches; culmen, 0·75; wing, 3·65; tail, 4·1; tarsus, 1·05.

Adult female.—Similar to the male, but distinguished by the chestnut streaks on the flanks. Total length, 8·3 inches; wing, 3·65; tail, 4·1; tarsus, 1·05.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. lxxviii.

361. ENNEOCTONUS COLLURIO, L.

Red-backed Shrike.

Le Vaillant states that this well-known European species inhabits the country about the Sunday and Zwartkop Rivers (Port Elizabeth), Little and Great Namaqua Land and other places, but is not found near Cape Town. We ourselves met with it about Graham's Town, the Blinkwater, Alice, Eland's Post, and the Katberg, but we believe that it does not come further eastward than Port Elizabeth; young birds were common in the months of March and April. Lieut. Trevelyan has shot it near Kingwilliamstown, and we have received specimens from Mr. J. J. O'Reilly at Graaff-Reinet, and Mr. Ortlepp has found it breeding with him at Colesberg, while Mr. T. C. Atmore obtained it near Beaufort. Captain Shelley says that he shot it on several occasions at Durban in Natal, and Mr. T. E. Buckley procured the species on the Limpopo. Mr. Barratt shot a specimen in the Potchefstroom district, but Mr. T. Ayres found it scarce at the Goldfields, where it was solitary in its habits, sitting stationary on the top of some low bush. The latter gentleman has also procured it near Potchefstroom in December. Dr. Kirk obtained a specimen at Shupanga, and Mr. Oates shot the bird at different places during his journey to the Zambesi from November to March. Mr. Andersson writes in December:—"This Shrike is pretty common in Great Namaqua and Damara Land, as also in the Okavango region, where it breeds. It is migratory, and returns to Damara Land at the approach of the rainy season. It watches from some elevated position for its prey, which usually consists of insects. Senor Anchieta has sent it from Humbe, on the River Cunene, where its native name is stated to be "Kissanda-

suala," as well as from Biballa in Mossamedes, where it is called "Kitiapi;" he has also met with it at Caconda in Benguela. He states that it is common all over the country visited by him.

Adult male.—Head and neck grey; a narrow frontal band, lores, feathers round the eye and ear-coverts, black, separated from the grey crown by an indistinct line of whitish across the forehead and over the eye; mantle and back rufous, duller on the lower back, the rump and upper tail-coverts dull grey; scapulars rufous, like the back; wing-coverts blackish, broadly bordered with rufous; primary-coverts blackish, with indistinct narrow margins of rufous; quills brown, narrowly edged with pale rufous, the innermost secondaries almost entirely of the latter colour; primaries white at the base, forming an indistinct alar speculum; four centre tail-feathers blackish narrowly tipped with white, the four outer feathers on each side white with black shafts, and having a broad subterminal band of black, the tips of all the feathers conspicuously white; cheeks and sides of face and throat whitish with a pink gloss; rest of under surface of body light pink, much deeper on the sides of the body; vent and under tail-coverts white; thighs greyish; under wing-coverts and axillaries white with ashy-grey bases, the outermost of the greater series ashy-grey, forming an indistinct patch; quills dusky brown below, edged with very pale rufous along the inner web; bill black; feet black; iris hazel brown. Total length, 6.5 inches; culmen, 0.6; wing, 3.65; tail, 3.0; tarsus, 0.9.

Adult female.—General colour above reddish brown, slightly ashy on the hind neck, and more decidedly rufous on the scapulars; wing-coverts, dark brown with very broad rufous edgings; quills, dark brown, narrowly edged with pale rufous, more broadly on the secondaries; no alar speculum; lower back and rump dull ashy brown, the upper tail-coverts rufous, mottled with a subterminal line of black and obscurely tipped with fulvous; tail-feathers brown, slightly marked with rufous, all of them narrowly tipped with fulvous, before which are generally some obscure dusky lines, the outermost feather dull white for the extent of the outer web; a frontal line, lores, and a broad eyebrow, buffy white, slightly mottled with dusky tips to the feathers; round the eye a ring of dull buff plumes; ear-coverts rufous; cheeks and under surface of body, dull white, mottled with circular lines of dull brown on the

cheeks, chest and sides of the body, the sides of the vent washed with rufous; under wing-coverts and axillaries dull white, with dusky bases to the feathers. Total length, 6·7 inches; culmen, 0·55; wing, 3·6; tail, 2·9; tarsus, 0·9.

Fig. Sharpe and Dresser, B. Eur. part ii.

362. *UROLESTES MELANOLEUCUS*, *Smith.*

South African Long-tailed Shrike.

Lanius cissoides, Layard, B. S. Afr. p. 158.

This fine species was discovered by Sir A. Smith originally in the neighbourhood of the Orange River. We have received several specimens from Colesberg from our valued correspondent, Mr. David Arnott. It occurs in Natal, and Dr. Exton found it plentiful from Secheles' into Mosilikatze's country, and Mr. T. E. Buckley shot a specimen in the Transvaal in July, 1873, and according to Mr. Thomas Ayres it is generally distributed throughout the bushveldt, but is a somewhat local species. Mr. Andersson writes as follows:—"I did not find this species in Great Namaqua Land, but first met with it in the central parts of Damara Land, from whence to the River Okavango and to Lake N'gami it is not uncommon. It is found in flocks of a few individuals, which at times create a tremendous hubbub amongst themselves, especially on the approach of a bird of prey; and the moment this alarm is sounded, every little bird in the neighbourhood precipitately betakes itself to a place of safety. This Shrike usually seeks its food, which consists of insects, amongst the branches of trees and bushes or on the ground; but it will also watch for its prey from some elevated perch. Senor Anchieta has procured it in several localities south of the latitude of Benguela, and at Humbe on the River Cunene; here it was known to the natives by the name of 'Bitocatoca.'

Mr. Guillemard, who has recently travelled through a great part of South Africa, writes in the *Field*:—"Although Layard mentions this bird as common about Colesberg, I have personally never seen it further south than the Rhenoster River, in the Free State, where, however, I only procured one specimen." The localities where the late Mr. Frank Oates procured it were the Crocodile River, the Ibex River, Tati, and the First Makalaka River on the Zambesi Road. He procured a brown variety, now in the British Museum, and the note was said to be different from that of the ordinary black bird.





LANIARIUS QUADRICOLOR

Adult male.—General colour above, glossy black, the head much crested; scapulars white with black bases; wings black, the secondaries tipped with white, the primaries white at the base, gradually increasing in extent towards the middle of the wing, and forming a conspicuous wing-patch; lower back and rump white somewhat shaded with greyish; upper tail-coverts and tail black; under surface of body black, the feathers of the throat lanceolate and of a bronzy brown tint; long flank-plumes black, with a faint subterminal spot of white on a few of them; under wing- and tail-coverts black; "bill and legs black; iris, dark hazel" (*T. E. Buckley*). Total length, 16 inches; culmen, 0·8; wing, 5·14; tail, 11·2; tarsus, 1·3.

Adult female.—Like the male, but distinguished by the long flank-plumes being pure white, some of the longer ones being white internally, and black on the outer web.

Fig. Jard. and Selby; Ill. Orn. iii, pl. 115.

363. LANIARIUS QUADRICOLOR, *Cass.*

Natal Bush Shrike.

(Plate XI.)

This species chiefly inhabits the country about Port Natal, and Mr. Fellowes informs us that it was not unfrequent on the Umgene. It has also been found once in Oliphant's Hoek, between Port Elizabeth and the Cowie, but its principal habitat seems certainly to be Natal, whence we have seen a large number of specimens. It was also included in one of Mr. Thomas Ayres' recent lists of Transvaal birds. Respecting its habits in Natal, the latter gentleman writes:—"These birds inhabit the dense bush along the coast, never leaving it; they creep about the underwood in search of their food, and are easily obtained by those who can imitate their call, for they will immediately answer, and come to the sportman if within hearing; on perceiving their mistake, they make a low chirring noise, as they do also if they see a cat, snake, panther, or other beast of prey."

Adult.—General colour above deep grass-green, the wing-coverts uniform with the back; quills dusky blackish, externally green like the back, the inner secondaries entirely green; tail black washed with green near the base, the two centre feathers green for nearly their entire length, the ends only being black; lores black, surmounted by a broad line of orange from the base of the bill to

above the eye; ear-coverts green with a black line along the lower margin; cheeks and entire throat deep scarlet, the bases to the feathers yellow; across the chest from each side of the neck a broad band of black; centre of the body yellow, the upper breast washed with scarlet, the under tail-coverts being also of the latter colour; sides of the body, thighs and under wing-coverts green; lower surface of the quills ashy, lighter along the inner webs; bill black; "feet lead-colour; iris dark" (*T. Ayres*). Total length, 7·7 inches; culmen, 0·8; wing, 3·15; tail, 3·4; tarsus, 1·15.

Female.—Like the male (*T. Ayres*).

Young.—Differs from the adult in wanting all the facial markings, the black lores, and chest band, and in having the throat yellow instead of scarlet; the line above the eye, and the fore-part of the cheeks are yellow, as well as the centre of the body, the under tail-coverts being slightly tinged with red; the tail is entirely green.

364. LANIARIUS OLIVACEUS, *Shaw*.

Olivaceous Bush Shrike.

This is the "Oliva" figured by Le Vaillant in his "Oiseaux d'Afrique" (pl. 75, fig. 1). The bird intended to be represented by fig. 2 on the same plate is thought by Professor Sundevall to be his *Laniarius rubiginosus*. It is a rare species apparently, and as far as we know is confined to Natal. Captain Shelley writes:—"I shot two specimens in the thick bush near Durban, but never heard their note; and as they were very cautious in their movements it was exceedingly hard to find them. Those that I met with were slowly climbing up amongst the tangled boughs."

Adult male.—General colour above olive green, fading to yellow over the eye and forming an indistinct eyebrow; wing-coverts olive-green like the back, the quills dusky brown on the inner webs, green on the outer webs, the inner secondaries almost entirely green, rather yellower on the edges; tail black, the middle feathers edged and tipped with greenish, the outer ones with yellow, increasing on the two outermost which are for the most part yellowish-green, more or less black towards the base of the inner web, which has a terminal spot of bright yellow; a loreal spot of bright yellow; feathers round the eye as well as a line above the latter and ear-coverts, black; cheeks and under surface of body deep orange yellow, brighter yellow on the abdomen and under tail-coverts, sides of the body olive-greenish; under wing-coverts and

inner lining of quills yellow. Total length, 7 inches; culmen, 0·65, wing, 3·2; tail, 3·2; tarsus, 1·0.

Adult female.—Similar to the male, but duller in colour and having the region of the eye dusky green instead of black; the tail feathers also are greenish and not black, and the orange of the breast is not so bright. Wing, 3·1 inches; tail, 3·0, tarsus; 0·95.

Fig. Le Vaill. Ois. d'Afr. pl. 75, fig. 1.

365. LANIARIUS RUBIGINOSUS, *Sund.* Ruddy-breasted Bush Shrike.

Although nearly allied to *L. olivaceus* this species may be told by its having the crown and hinder neck grey, instead of green like the back as in the latter species. From the number of specimens which we have received from Mr. George Rex, this Bush Shrike would appear to be common at the Knysna, where it was also procured by Andersson and Victorin. Mr. Atmore has found it in the George Forests, whence it seems to extend at least as far as East London; here, however, it appears to be rarer, for Mr. Rickard only succeeded in obtaining a single specimen. Mr. T. C. Atmore obtained it near Grahamstown, and Lieut. Trevelyan shot specimens near Kingwilliamstown in June, and near Panmure in July. Mr. Gurney states that he has seen a specimen from Natal, where, however, it must be very rare, being replaced by the foregoing species. Mr. F. A. Barratt collected a specimen at Macamac in December, and Mr. Thomas Ayres gives the following note, in his paper on birds from the Lydenburg district:—"No doubt these Bush Shrikes are amongst the mountains all the year round; but they are particularly shy and difficult to see, especially during the breeding-season, when they make the woods joyous with their varied songs and calls. Many of their notes are very liquid, and remind me much of those of the Nightingale. Often have I been very close to one of these songsters, and, though his song was pretty constant and he was frequently moving from bush to bush, I could do no more than catch a glimpse of him now and then, so skilfully did he conceal himself. During the winter they are silent."

Adult male.—General colour olive-green, the scapulars and wing-coverts uniform with the back; quills dusky blackish on the inner web, olive-green on the outer, the inner secondaries almost entirely of the latter colour, all the quills light yellow at their tips; tail-

feathers black, edged with olive-green, the three outermost tipped with yellow, the latter more extended on the inner webs of the two outermost, which are black for the greater part of the inner web, olive-green on the outer; head and neck delicate slaty-grey, separated from the black ear-coverts by a line of white; feathers round the eye and ear-coverts black running down the sides of the neck; in front of the eye a white spot; lores fawn-rufous; cheeks and under surface of body clear fawn-rufous, the belly and under tail-coverts white; thighs white with yellowish bases; sides of body olive-greenish; under wing-coverts and axillaries bright yellow, as also the inner lining of the quills; "bill black; tarsi and feet bluish ash-colour; iris bright hazel" (*T. Ayres*). Total length, 7·2 inches; culmen, 0·7; wing, 3·4; tail, 3·45, tarsus; 1·0.

Adult female.—Very similar to the male, but not so brightly coloured, although in summer there is scarcely any difference, the flanks slightly rayed with dusky cross-bars; "bill black, the under mandible ashy at base; tarsi and feet as in male; iris reddish hazel" (*T. Ayres*). Wing, 3·25 inches; tail, 3·35; tarsus, 1·0.

Fig. Le Vaill. Ois. d'Afr. pl. 75, fig. 2.

366. *LANIARIUS SULPHUREIPECTUS*, *Lesson*.

Yellow-fronted Bush Shrike.

Laniarius similis, Layard, B. S. Afr. p. 163.

This is one of the rarer species of South Africa, and was discovered there first by Sir Andrew Smith, who procured a single specimen near Kurrichaine. It has also been met with near Grahams-town, and once occurred to Mr. Rickard near East London. Mr. H. F. Guillemard shot one in the Kowie bush, and it is also found in Natal, where Captain Shelley says it is apparently of rare occurrence about Durban. Mr. T. E. Buckley shot the species on the Limpopo, and two specimens collected by Dr. Kirk at Tete, in the Zambesi, are in the British Museum collection, while Mr. Andersson states that he obtained several specimens from Lake N'gami, but never observed it to the west of that locality. His last collection, however, contained a single specimen procured by him on the Cunene River in June, 1867. Senor Anchieta has also met with it at Humbe on the same river, and at Capangombe in Benguela. Here also the late Mr. Montciro shot the species, and

it appears to extend along the entire West Coast of Africa as far as Senegambia.

Adult male.—Forehead, lores, and a broad superciliary streak bright golden yellow, shading off into greenish yellow upon the crown; hinder part of the crown, hind neck and upper back bluish grey; rest of upper surface of body yellowish olive, the long feathers on the side of the rump brighter yellow with greyish bases; upper tail-coverts and tail-feathers dull olive-green, the inner webs broadly edged with yellow and having a large spot of orange at the tips; quills blackish brown, externally edged with olive-yellowish, brighter on the edge of the primaries, the secondaries tipped with yellow, the innermost entirely greenish; eyelid yellow above, black beneath, according to the colour of the adjacent parts; a streak of black commencing at the base of the bill, drawn under the eye and including the ear-coverts; cheeks and under surface of body golden yellow, including the under wing and tail-coverts and the inner lining of the quills; the lower throat and fore-neck rich deep orange, or orange-scarlet; "bill black; feet lead colour; iris dusky amber" (*Heuglin*). Total length, 7 inches; culmen, 0.65; wing, 3.45; tail, 3.55; tarsus, 0.95.

Fig. Smith, Ill. Zool. S. Afr. Birds, pl. 46.

367. LANIARIUS GUTTURALIS, *P. L. S. Müll.*

Bacbakiri Bush Shrike.

Telephonus bacbakiri, Layard, B. S. Afr. p. 161.

Common throughout the colony, feeds on insects, and breeds in low bushes, making a nest of small twigs and bents of grass, coarsely lined with dry grass. Eggs, from three to five in number, of a beautiful verditer colour, spotted with brown, chiefly at the obtuse end: axis, 12''; diam. 9''. It is usually found in small families, excepting during the breeding season. Its loud call of "bacbakiri," its imitative powers, and bright plumage, render it one of the most conspicuous birds of the colony. We have not unfrequently heard two birds uttering their peculiar note for twenty or thirty minutes together—one bird giving out the harsh "backback," the other the shrill "kiri," the two performers being at a considerable distance from each other.

Captain Shelley writes:—"Very common in Cape colony,

especially about Cape Town; I also found them plentiful at Port Elizabeth; but did not meet with them in Natal. They are generally seen in pairs, or in small family parties, frequenting the low bushes, and often running on the ground." Victorin records it from the Knysna, and Mr. Rickard states that it is very common at Port Elizabeth, and is also found near East London: we have also had it from Eland's Post from Mr. T. C. Atmore. Lieut. H. Trevelyan shot specimens near Kingwilliamstown. In the Editor's collection was a specimen from Natal, whence also Mr. Ayres has forwarded specimens. Mr. Andersson gives the following account of this Shrike: "This species is sparingly met with in Damara Land, and only in a few localities; but as the traveller proceeds southward it becomes more numerous, till on reaching Cape Town it is found in every garden. In Damara Land I have usually found it very shy and retired in its habits, quickly escaping, the moment it finds itself observed, into the thickest part of the nearest bush, and thence moving hurriedly on as near to the ground as the locality will admit, so that it is often difficult to flush it a second time. At the Cape, on the contrary, it is very familiar, and is frequently seen perched on the garden walls, whilst it utters a succession of ringing calls which the Dutch liken to the word 'Baebakiri;' but its notes and calls are in fact very varied. This Shrike feeds chiefly on insects, but it is said occasionally to kill and devour young birds; it hunts for its prey amongst low bushes and on the ground, and runs with great swiftness. It is usually found in pairs, but for some time after the breeding season the parents are accompanied by their families, which they tend with much care. This species builds in thick bushes; and the eggs, which are four or five in number, of a greenish-blue colour, spotted with reddish brown, especially round the thicker end, are incubated by both parents." Mr. Monteiro met with this species in Benguela, and Anchieta has forwarded five specimens to Lisbon from the Rio Coroca in Southern Mossamedes.

Adult. — General colour above dull olive-green, the wings uniform with the back, slightly more yellowish-green on the outer webs of the quills and greater coverts, all the quills light sepia on the inner web; two centre tail-feathers dull olive, the next on each side blackish, more or less shaded with olive and slightly tipped with yellow, all the others jet-black, very broadly tipped with

bright yellow; head and hind-neck dull ashy grey, as also the ear-coverts and sides of neck; a broad loreal streak of bright yellow drawn from the base of the nostrils and forming a distinct eyebrow; eyelid blackish; in front of the eye a distinct black spot; cheeks and throat bright yellow, succeeded by a broad black collar running across the hinder part of the cheeks to below the eye; rest of under surface of body yellow, the flanks with greyish bases, imparting a grey shade to this portion of the body, the longer ones on each side of the rump creamy buff at their ends; under wing-coverts dull olivaceous, the lower series ashy like the lower surface of the quills; "bill black; legs and toes lead-colour; iris reddish brown" (*Andersson*). Total length, 8.5 inches; culmen, 0.95; wing, 3.9; tail, 3.8; tarsus, 1.3.

Adult female.—Similar in colour to the male. Wing, 3.75 inches; tail, 3.9; tarsus, 1.35.

Young.—Duller coloured than the adult, the head greenish like the rest of the upper surface; throat and chest ashy; the ear-coverts ashy grey; rest of under surface yellowish buff, deeper orange buff on the under tail-coverts; no pectoral collar.

Fig. Le Vaill. Ois. d'Afr. II. pl. 67.

368. LANIARIUS POLIOCEPHALUS, *Licht.*

Large Grey-headed Bush Shrike.

Laniarius icterus, Layard, B. S. Afr. p. 164.

This species is often known by the name of *Laniarius olivaceus* of Vieillot, but inasmuch as Shaw had already conferred this name upon Le Vaillant's "Oliva," the present species must be called *L. poliocephalus* (*Licht. Verz. Doubl. p. 45*). It may be mentioned that specimens from South Africa are rather more orange on the breast than others from Western or North-Eastern Africa.

This is a rare bird in collections from South Africa, arising more perhaps from its shy and retiring habits than from its actual scarcity in the haunts which it frequents, as it is rarely seen out of the densest bush. Mr. H. Bowker has sent it from the country beyond the Kei, Captain Harford from Natal, and specimens have been procured near Grahamstown. The stomach of one examined by Captain Harford "contained beetles and insects."

Mr. Henry Bowker writes, "I send you the skin of a bird I shot the other day on the 'Kwelega:' they are common in some parts,

and make a curious 'moping' noise, something resembling the word 'mope,' drawn out into a long low whistle. I have some doubt in stating that the bird calls during the night, as I think there are two species of them. There was one species very common at the 'Umboolo' Forest, which used to call all day and night, and I looked after them for hours, but could never get a shot, as they always left off calling when I got close to them. This same bird used to bother me at Tharfield (near the Kowie) when I was a boy, as I could never get a shot at one, and only once saw a specimen. It was about four yards off in a thick bush, and to the best of my memory seemed a browner bird, about the same size and shape as the enclosed. The one I send calls more quickly, and it usually keeps on five or six times and then leaves off for about two minutes. I may be wrong, and write to you in hopes that the thing may be brought to light, as they ought to be common in the western forests. They are known to the Dutch by the name of the Spook Vogel (ghost bird), and the low call of the bird during the night certainly would lead a person inclined to these things to think that there was something supernatural about the cry. Since writing I have had a conversation with my brother about this bird, and he tells me he once saw one of them pounce upon and kill a small bird after the manner of a butcher bird. He is opposed to my idea of there being two species."*

Captain Shelley obtained a single specimen from Durban, where he thinks it cannot be very common. One skin is in the British Museum, procured during the Livingstone Expedition to the Zambesi, and it occurs in South-Western Africa, as Anchieta has met with it at Humbe on the Cunene River, and also at Capangombe. It is found on the West Coast and also in North-Eastern Africa.

Adult.—General colour above light olive-green; wing-coverts tipped with yellow, whiter on the greater series; quills ashy brown, externally olive-green like the back, the primaries margined with yellow towards their tips, the secondaries entirely olive-green and tipped with yellow like the coverts; tail olive-green, tipped with yellow; head and hind neck, sides of face, cheeks and sides of neck blue-grey; lores and a ring of plumes round the eye white; entire

* We suspect that our correspondent has sometimes seen and heard the other large Bush Shrike, *Laniarius senegalus*, and that this must be the "browner bird" to which he alludes.

under surface of body bright yellow, richer on the chest, the flanks somewhat washed with green; under wing-coverts yellow, as also the broad edges to the inner web of the quills; "bill black; feet lead-colour; iris yellowish orange" (*Heuglin*). Total length, 9·8 inches; culmen, 1·2; wing, 4·85; tail, 4·6; tarsus, 1·5.

Fig. Sharpe, P. Z. S. 1870, pl. 13, fig. 2.

369. LANIARIUS ATROCOCCINEUS, *Burch.*

Crimson-breasted Bush Shrike.

It is not difficult to recognize this fine Bush Shrike, which has the entire upper parts black and the breast of a beautiful crimson. It is not found near the Cape, but has been met with plentifully in Griqualand and near Kuruman, and has also been procured near Grahamstown. We have also seen it from Natal and near Pretoria. Mr. T. Ayres obtained specimens near the Limpopo River, and Mr. T. E. Buckley shot a specimen in Bamangwato, whence it appears to extend up to the Zambesi region. Mr. Andersson observes:—"This brilliantly coloured Shrike is pretty generally dispersed over Damara and Great Namaqua Land, and also over the Lake regions. It is usually found either singly or in pairs, and is a wary bird, frequenting both open woods and dense thickets, but preferring the latter. In such localities it searches industriously for insects and their larvæ, and, whilst thus occupied, occasionally utters pleasant, clear, ringing notes, but with the prelude of a harsh, guttural sound. This species builds its nest in the fork of a tree, constructing it roughly of the inner bark of trees, with a few grasses interlaced, but without any softer lining. I have found the nest in the more northern portion of Damara Land as early as November; but one which I met with at Omapja contained two fresh eggs on the 8th of January. The eggs are white spotted with light brown, and sometimes tinged with green." We are informed by Professor Barboza du Bocage that he has received it from Senor Anchieta from the neighbourhood of the Cunene River, and from the interior of Mossamedes.

Upper parts, thighs, and under the wings shining black, under parts bright crimson; a white bar down the wing. Length, 9 inches; wing, 4; tail, 4·9.

Fig. Swains. Zool. Ill. New Series, pl. 76.

370. *LANIARIUS ATRICROCEUS*, *Trimen*.

Golden-breasted Bush Shrike.

Only a single specimen of this beautiful bird is known at present, which was obtained by Dr. Bradshaw far in the interior of South Africa on the Upper Limpopo or Crocodile River, about sixty miles in a south-easterly direction from Shoshong, on the edge of the southern tropic. It exactly resembles the Crimson-breasted Bush Shrike, but is distinguished by the entire under surface being beautiful golden yellow. It was found by Dr. Bradshaw in the same districts as *L. atricoccineus*, and was at first taken for a variety of that species. Having ourselves examined the bird, through the kindness of Mr. Trimen, we fully believe it to be a good species. The following description has been given by Mr. Trimen in the "Proceedings of the Zoological Society" for 1880.

Entire upper surface (including that of wings and tail), together with sides of head and neck, glossy black shot with a steel-blue lustre; under surface throughout, from base of bill to under tail-coverts, *rich yellow*, with a surface-tint of warm orange; rump irregularly varied with numerous whitish-tipped feathers; middle upper wing-coverts and external borders of outer webs of three last secondaries pure white, forming a continuous longitudinal wing-stripe; all quill-feathers dull fuscous beneath, paler towards their bases; under wing-coverts dull blackish, irregularly flecked with whitish; tail beneath not so black as above and without steel-blue lustre.

"Bill and legs black; iris lavender" (*B. F. Bradshaw*).

Total length, 8·3; length of culmen, 8; of folded wing, 3·6; of tail, 3·9; of tarsus, 1·3.

Fig. Trimen, P. Z. S. 1880, pl. lix.

371. *LANIARIUS GULARIS*, *Finsch and Hartl*. Zambesi Green Shrike.

This species was discovered during the Livingstone Expedition at Tetè in the Zambesi country. It differs from all the other Green Bush Shrikes of Africa in the want of the gaudy colours, being rather a plain-plumaged bird. The following description is from the typical specimen in the British Museum.

Adult.—General colour above dull olive-greenish, the fore part of the head ashy brown; lores whitish; sides of face, cheeks and

throat pale fawn-colour; centre of the body creamy white, the sides of the body yellowish green; thighs and under wing- and tail-coverts bright yellow; scapulars and upper wing-coverts olive-green like the back, the rest of the coverts brown with a large rounded spot of pale yellow; quills brown, externally margined with olive-yellow, the inner secondaries brown with a terminal spot of white; tail olive greenish, tipped with bright yellow, broader on the outermost feather, which is also externally bordered with yellow; quills and tail-feathers below edged with yellow along their inner webs. Total length, 7.6 inches; culmen, 0.85; wing, 3.55; tail, 3.8; tarsus, 1.2.

372. LANIARIUS MAJOR, *Hartl.*

Hartlaub's Pied Bush Shrike.

This species may be briefly described as black and white, faintly washed with rose-colour below, and with more or less distinct white spots on the rump, which is greyer in plumage. A longitudinal band runs down the wing, formed by certain of the inner wing-coverts and outer webs of *two* secondary quills. It is a West African species, ranging from the Gold Coast to the Congo, and thence from Angola to Benguela, where it was found by Mr. Montiero. At Biballa and Capangombe, Senor Anchieta procured it also, and gives the native names as *Sequi* and *Gongo* at the latter place, and *Kikacia* at Biballa. It is possible, however, that the birds from the Congo and Angola are really different from those of the Gold Coast, as no specimens have been found in the intervening localities, in which case the bird of the southern habitat must bear Hartlaub's name of *L. guttatus*.

Prof. Barboza du Bocage has recently in his "Ornithologie d'Angola" separated another species as *Dryoscopus neglectus* from Mossamedes, the region of the Cunene River and Lake N'gami. The chief character of this species consists in the band down the wing being formed of *three* white-bordered secondaries. He does not adopt the name of *L. sticturus*, F. and H., as he finds that both of the species have occasionally white tips to the outer tail-feathers, whereby he considers the name inappropriate. These white-tipped birds are probably not so adult as those with the tail uniform. Beyond its occurrence in Benguela and Mossamedes, where it has been procured by Senor Anchieta, it was also met with by the late Mr. Andersson on the Cunene River, and at Lake N'gami. According

to the latter naturalist it frequents secluded, dense, tangled brakes, and though not particularly shy is somewhat difficult to obtain from the nature of its resorts. It utters pleasant ringing notes.

Fig. Hartlaub, Beitr. Orn. West-Afr. pl. v.

373. *LANIARIUS CUBLA*, *Lath.* Lesser Puff-backed Bush Shrike.

This little species is common in the forests of the Knysna as well as in the eastern province. According to Lieutenant Trevelyan it is common near Kingwilliamstown, particularly so in the Peri Bush. In Natal, according to Captain Shelley, it is a very abundant species about Durban and Pinetown in the thick woods, and it appears to extend throughout the Transvaal and the Matabili country to the Zambesi, where, however, the birds are rather smaller and whiter than in the Cape Colony, and this is particularly the case with the females. This white-breasted race appears to extend along the east coast of Africa as far as Zanzibar and the adjoining country. In the Transvaal Mr. Ayres found these birds not uncommon among the bush on the Rustenberg Mountains, where they were generally in pairs and their habits shy and retiring. Mr. T. E. Buckley procured specimens on the Limpopo in December, and the late Mr. Frank Oates shot the species on the Tuti River. In Damara Land Mr. Andersson observed it very sparingly, meeting it first at Okamabuté, and thence northward as far as the Okavango; but Senor Anchieta has found it in nearly every place where he has collected in Benguela and Mossamedes. At Capangombe the native names were *Kissuala* and *Kikundi*; at Humbe, *Kassa-lacatoto* and *Nangombeiomapupo*; and at Quillengues, *Kiriamahuco*.

Both Mr. Ayres and Mr. Andersson speak of the curious way in which this species sometimes elevates the loose white feathers on the back till they nearly encircle the bird. This is generally done during the courting season, but occasionally when the bird is alarmed. "When flying away," says Mr. Ayres, "they look at first sight like a white ball with a black spot in the centre. The male has the upper parts glossy black, except the lower back and rump, where the feathers are pure white, and very loose and fluffy; the under parts are greyish white; the bill is black, the legs slate colour, and the iris varies from yellow to red. Length, 7 inches; wing, 3·7; tail, 3·5.

The female may always be told by its greyish white loreal spot, and by its duller colours; the under parts being greyer as well as the loose feathers of the rump. The bill is black with the lower mandible bluish slate colour, black at the tip.

Fig. Le Vaill. Ois. d'Afr. pl. 72.

374 LANIARIUS FERRUGINEUS, *Cuv.* Large Puff-backed Bush Shrike.

This species is the "Boubou" of Le Vaillant, and the "Bonte Canaribyter" and "Zwarte Canaribyter" of the colonists. It appears to be distributed over the whole of Cape Colony, and is not uncommon about wooded places in the neighbourhood of Cape Town and Rondebosch. Mr. Rickard found it at Port Elizabeth and at East London, and we have received it from Grahamstown. Mr. Ayres found it breeding in Natal, making a coarse open nest in a low bush. Mr. F. A. Barratt gives the following note:—"Shot near Lydenburg. I also received it from Macamac Goldfields, near the Drakensberg Mountains. It has a peculiar habit of puffing itself out, which is thought by some to be a habit it assumes in order to terrify other birds. It is certainly very pugnacious, and will not allow others to molest it." It was procured by Mr. Frank Oates on the Crocodile River. "In Natal," writes Mr. Ayres, "these birds are almost invariably seen in pairs; they frequent the dense bush, and are, I believe, equally distributed throughout the colony. Their notes are loud and curious: the male calls first, and is so immediately answered by the female that anyone not acquainted with the fact would suppose all the notes to be uttered by the same bird."

Male.—Upper parts glossy black, with bar on the wing white; under parts, from chin to middle of belly, pure white; the rest rufous.

Female.—Upper parts dull brown; tail and wings darker, with a faint white bar along the latter; under parts russet, paler on the chin and throat. Length, $8\frac{3}{4}$ " ; wing, $4\frac{1}{4}$ " ; tail, 4".

According to Mr. Guillemard the female is considerable larger than the male, and Mr. Gurney mentions that a bird of this sex procured by Mr. Ayres was nearly as black as the male and even richer coloured underneath, the white bar on the wing being equally distinct.

Fig. Le Vaill. Ois. d'Afr. pl. 68.

375. *LANIARIUS ERYTHROPTERUS*, Shaw.

Cape Red-winged Bush Shrike.

Telephonus erythropterus, Layard, B. S. Afr. p. 161.

Great confusion has always existed as to the species of *Tchagra* or Red-winged Bush Shrikes, but as was pointed out in the "Ibis" for 1870 (p. 460), by the author, the true *Tchagra* of Le Vaillant is the bird generally known as *Telephonus longirostris* of Swainson. It may be distinguished from all the other Red-winged Bush Shrikes by the following characteristics:—Its uniform scapulars, which are not variegated with black, its perfectly brown head, its ash-coloured under tail-coverts, and its wing-feathers not margined internally with rufous. Total length, 8 inches; culmen, 1.05; wing, 3.25; tail, 3.75; tarsus, 1.1. Young birds are like the adult, but are everywhere paler and are more olivaceous; the wing coverts are washed with fulvous at the tip; the eyebrow is washed with rufous; the under surface of the body is ashy and the under tail-coverts are ashy fulvous.

The present species is a true bird of the Cape Colony, being very common at Nel's Poort and Zootendals Vlei, and we have received the bird also from Swellendam and Colesberg, as well as from Grahamstown, but it does not seem to extend its range further eastward.

Le Vaillant states that it lives only in the thickest brushwood and densest foliage, such haunts being most productive of its favourite food, which consists of the larvæ and pupæ of different insects. Its eggs, five in number, are marked with brown.

Above brown; beneath cinereous; chin, ears, and stripe above the eye whitish; ears margined above by a black line; bill much lengthened, and slightly curved. Length, 8½"; wing, 3"; tail, 4".

Fig. Le Vaill. Ois. d'Afr. pl. 70.

376. *LANIARIUS SENEGALUS*, L. Common Red-winged Bush Shrike.*Telephonus erythropterus*, Layard, B. S. Afr. p. 160.This is the common *Tchagra* of the greater part of the African*

* *Laniarius cucullatus* of Algeria is generally considered to be the same as *L. senegalus*, but this I now consider to be an error, as the Algerian bird has the ear-coverts ashy-brown, nearly the same colour as the flanks, whereas *L. senegalus* has the ear-coverts ochraceous brown, and the flanks ashy-grey.—*Ed.*

continent. It inhabits only the eastern province of the Cape Colony, and we saw it not uncommon near Grahamstown, the Kowie, Keiskamma, where it frequents bushy country, creeping about the scrub, uttering the most singular and discordant cries, loud enough to proceed from a bird of ten times its size, and feeding on grasshoppers, caterpillars, &c. Mr. Rickard notes its occurrence at Port Elizabeth and East London, and Lieutenant Trevelyan has forwarded many specimens from the neighbourhood of Kingwilliamstown, and we have also received it from Eland's Post, from Mr. Atmore. "In Natal," writes Mr. Ayres, "this Shrike frequents the dense underwood and jungle, being occasionally found in more detached bushes; its flight is weak, and it therefore trusts most to hiding for safety in the matted coverts; its notes are harsh; the food consists, I believe, entirely of insects; during its short flight the tail is frequently expanded, which gives the bird rather a showy appearance." According to the same observer it also breeds in Natal, constructing a nest amongst a mass of tangled creeping plants, merely placing the nests on or amongst them, either not at all adhering to them or very slightly indeed. Mr. Ayres also states that it is not uncommon in the Transvaal, and the same is stated respecting the species about Bamangwato by Mr. T. E. Buckley. The late Mr. Frank Oates procured it on the Pantamantanka River and other places on the road to the Zambesi, where Dr. Kirk found it frequent. On the east coast we have seen specimens from Mozambique and as high as Mombas, but in Abyssinia a smaller and distinct race (*T. blanfordi*, Sharpe) takes its place. In South-Western Africa it is generally distributed, but according to Mr. Andersson it was only found by him in the northern parts of Damara Land, whence it occurs throughout Benguela and Angola to the Congo, being found also in West Africa, from the Gold Coast to Senegambia.

The following characters distinguish this species:—The scapulars are varied with black, being black with rufous margins; the under tail-coverts are whitish or pale ochraceous buff; the sides of the body are ashy; and the ear-coverts are ochraceous brown. Total length, $8\frac{1}{4}$ inches; culmen, 0·85 to 0·95; wing, 3·05 to 3·5; tail, 3·9. The specimens from beyond the tropics are smaller than those from Natal and South-Eastern Africa.

Fig. Daubent. Pl. Enl. I. pl. 479, fig. 2.

377. *LANIARIUS TRIVIRGATUS*, *Smith*.

Smith's Red-winged Bush Shrike.

At one time we were inclined to believe that the present bird was only the young of the preceding species, but having now examined a very large series we are convinced that it is quite distinct. It is a smaller bird than *L. senegalus*, and may be distinguished by its ochraceous under tail-coverts, which are of the same colour as the flanks. The ashy-brown head uniform with the back, and bordered on each side of the crown by a black streak, also marks the species.

First discovered by Sir A. Smith to the north-east of Kurrichaine, between 24° and 25° S. Lat., it is now known to extend over the greater part of Southern Africa, but does not occur within the Cape Colony. Mr. T. C. Atmore forwarded a male from Griqualand, and we have received it from Mr. Moffatt at Kuruman, as well as from Lieut. Trevelyan at Kingwilliamstown. Mr. Guillemard pronounces it to be the commonest Shrike in the Transvaal, and Mr. Ayres found it equally numerous near Rustenberg, with *L. senegalus*, and inhabiting similar situations. Mr. T. E. Buckley procured the species in Bamangwato, and it was shot by the late Mr. Frank Oates on the Crocodile River and also near the Metli River, on his way to the Zambesi, where Dr. Kirk also procured the species. From South-Western Africa Mr. Andersson gives the following note:—
 "This species is by no means uncommon in Southern Damara Land, and it also occurs in the parts adjacent; it confines itself to dense thickets or low bushes, where it hops about incessantly, flitting rapidly from twig to twig, and passing out of sight directly you have caught a glimpse of it. It is generally found either singly or in pairs. Two nests of this bird, which I found in the month of January, were composed of stalks of plants loosely put together, and lined with stalks of a softer kind. One nest was placed very low in a low bush, the other about five feet from the ground in a thorn bush; each nest contained three eggs." Mr. Monteiro found it abundant in Benguela, and Senor Anchieta has also procured it at different localities in that province. At Humbe it was called by the natives *Himba*, and at Capangombe, *Embolio* and *Kissandassuela*. It likewise ranges into Angola proper, having been sent from the Rio Bengo by Dr. Welwitsch. In West Africa it is replaced on the Gold Coast by the nearly allied *L. ussheri*, Sharpe.

The length of the present species is about $7\frac{1}{2}$ inches; wing, 2·9 to 3·1; culmen, 0·75 to 0·8.

Fig. Smith, Zool. S. Afr. pl. 94.

NOTE BY THE EDITOR.—The following is a list of the Red-winged Bush Shrikes at present known:—

1. LANIARIUS ERYTHROPTERUS, *Shaw.* *Hab.* Cape Colony.
2. LANIARIUS CUCULLATUS, *Temm.* *Hab.* Algeria and Morocco.
3. LANIARIUS SENEGALUS, *L.* *Hab.* Western, Southern, and Eastern Africa.
4. LANIARIUS BLANFORDI, *Sharpe.* Similis *L. senegalo* sed subcaudalibus cineraceis albido terminatis distinguendus. Long. tot. 7·6, alæ 2·95—3·08. *Hab.* N.E. Africa.
5. LANIARIUS REMIGIALIS, *F. and H.* *Hab.* N.E. Africa.
6. LANIARIUS TRIVIRGATUS, *Smith.* *Hab.* S. Africa.
7. LANIARIUS USSHERI, sp. n. Similis *L. trivirgato*, sed subtus cinereus, gulâ et abdomine albis, subcaudalibus cinereis albo terminatis nec pallide cinereis distinguendus. Long. tot. 7·3, alæ 2·8.
8. LANIARIUS MINUTUS, *Hartl.* *Hab.* West and East Africa.
9. LANIARIUS ANCHIETÆ, *Bocage.* *Hab.* S.W. Africa.

378. NILAUS BRUBRU.

Brubru Bush Shrike.

Nilaus capensis, Layard B. S. Afr. p. 159.

This little Shrike occurs in Natal, where it is apparently not very plentiful, but it is more common in the Transvaal, and according to Mr. Buckley is frequent in the Matabili country; it ranges to the Zambesi. Mr. Andersson states that it is "widely distributed, extending from the Okavango River on the north to Lake N'gami on the east and the Orange River on the south. It is nowhere numerous, but is scarcer near the last-named river than in the other localities above referred. Its usual resorts are forests or large trees, amongst which it hops about incessantly in search of insects. I do not think that I have ever seen more than a pair together."

Many specimens have been sent by Senor Anchieta from Humbe, on the Cunene River, and one example from Huilla; at the former place it rejoices in the native name of *Kandilanakiuna*.

Top of the head, and all the upper parts, black; the latter mottled and marked with white; tail black and white; wings the same; superciliary eye-streak white; throat, chest, and centre of belly white; sides of body, from the shoulders, rufous. Length, 6"; wing, 3" 4"; tail, 2" 7".

Mr. Andersson gives the soft parts as follows:—"The iris is a fine rich brown, with a very slight tint of red; the bill varies some-

what with age, but in a male in perfect plumage the upper mandible was very dark horn-colour, the under livid blue; the legs are greenish blue, the toes somewhat darker."

Fig. Le Vaill. Ois. d'Afr. pl. 71.

Fam. CAMPOPHAGIDÆ.

379. CAMPOPHAGA NIGRA, V. Black Cuckoo Shrike.

This species is not uncommon in the forests of the Knysna, and we have seen it from Swellendam. It occurs throughout the eastern province, for Mr. Rickard procured several at East London, but he met with it only once at Port Elizabeth. Lieut. Trevelyan tells us that he has seen very few specimens from the neighbourhood of Kingwilliamstown; a few examples were contained in Mr. T. E. Atmore's collection from Eland's Post, and in Natal it also occurs sparingly. Captain Shelley only fell in with a few specimens in the latter colony, and Mr. Ayres, writing from Natal, says:—"This bird, when sitting, resembles the Drongo Shrikes in appearance, but, on a near inspection, may be readily distinguished by its straight tail, that of the Drongos diverging broadly at the tip. The few I have seen were solitary birds. The one now sent I observed frequently fly down from the tree on which it was stationed, on to the grass, to pick up caterpillars." Mr. Andersson, who only procured this species in the neighbourhood of the Okavango River, states that it is migratory, and that he never saw it in Damara Land proper or Great Namaqua Land, and Senor Anchieta has only obtained it in Mossamedes, at Biballa and Cacondo, and at Humbe on the Cunene River.

The Black Caterpillar Catcher is easily recognized by its entirely black coloration, which is glossed somewhat with green; "bill black, yellow at the gape, tarsi and feet black, iris very dark brown" (T. Ayres). Total length, 8.3 inches; culmen, 0.65; wing, 4.1; tail, 4.1; tarsus, 0.75. The female is mottled with blackish bars on the back, and the under surface is white barred across with blackish brown.

Fig. Le Vaill, Ois. d'Afr. IV. pl. 164.

380. CAMPOPHAGA HARTLAUBI, *Salvad.* Hartlaub's Cuckoo Shrike.

Campophaga xanthornoides, Layard, B. S. Afr. p. 153.

This is a still rarer species in South Africa than the preceding,

from which it is distinguished at a glance by its bright yellow shoulder-spot. We have received a few specimens procured by Mr. Atmore in the neighbourhood of George. It likewise occurs in Natal, where Mr. Ayres has found it inhabiting the coast range. He states that the females are more numerous than the males, and are generally found in small companies when moving about; in appearance and shape, and also in flight, they much resemble the hen-bird of the Emerald Cuckoo (*Cuculus smaragdineus*). It has also been procured in Benguela by Senor Anchieta.

Adult male.—Glossy black, with a bright shoulder-spot of lemon yellow, occupying the lesser coverts and the outermost of the median series. Total length, 8·5 inches; culmen, 0·7; wing, 4·15; tail, 4·6; tarsus, 0·8. The female is of a greenish grey colour, banded with black above; white below, also banded with black, and is, in fact, not to be distinguished from the female of *C. nigra*. The red-shouldered *Campophaga phœnicea* does not occur in South Africa.

381. GRAUCALUS CÆSIUS, *Licht.*

Grey Cuckoo Shrike.

Campophaga Levillantii, Layard, B. S. Afr. p. 153.

This species has a limited range, and is strictly South African in its habitat. We found them in small flocks frequenting the tops of lofty trees in the Knysna forests, searching after insects. Le Vaillant also seems to have procured them in the Outeniqua, and on the borders of the Sunday and Zwartkop Rivers. Mr. Rickard notes them both from Port Elizabeth and East London, and we have seen them from the neighbourhood of Grahamstown. Lieut. Trevelyan informs us that near Kingwilliamstown it is rather scarce, and in Natal it inhabits the dense bush on the coast range.

Captain Shelley writes:—"Not very uncommon in the thick bush near Durban. A boy who was with me shot at one of these birds with a catapult, when it dropped a *Mantis* it was feeding on, but was so intent upon its prey, that it came quite close to pick it up again, and was dispatched by another shot."

Adult male.—General colour above and below dark bluish grey, somewhat lighter on the forehead and sides of the crown; wings like the back, the primaries blackish, narrowly edged with grey; tail-feathers blackish, slightly washed with grey, the outermost paler towards the tip; round the eye a ring of whitish or grey; lores and feathers in front of the eye slaty black, the shade of this colour

extending on to the cheeks; quills ashy below, whitish on the inner webs. Total length, 10 inches; culmen, 0.8; wing, 5.05; tail, 4.8; tarsus, 0.95.

Adult female.—Similar to the male, but decidedly lighter grey, and having the lores grey instead of blackish. Total length, 10 inches; wing, 4.95; tail, 4.8; tarsus, 0.95.

Fig. Le Vaill. Ois. d'Afr. IV. pls. 162, 163.

Fam. PRIONOPIDÆ.

382. *EUROCEPHALUS ANGUITIMENS*, *Smith*. Smith's Wood Shrike.

This is a bird of the interior, and is not found further south than the Transvaal; here Mr. Ayres met with it in the district of the River Limpopo, in companies of from six to ten. Mr. T. E. Buckley shot a specimen in Bamangwato, and also procured it at Tati, where the late Mr. Frank Oates likewise fell in with the species. Dr. Exton found it at Kanye, and informs us that it keeps much to the open forest, and is very shy and wary. It ranges to the Zambezi, and in Damara Land, writes Mr. Andersson "it is pretty common as well as in the parts adjacent, including the Lake regions. In the neighbourhood of the Okavango I observed single individuals perched on the highest and most conspicuous boughs of trees, from whence they would dart on passing winged insects; but in the other localities where I met with this species, I found it associated in considerable flocks, which, when disturbed, moved leisurely to the nearest tree, rarely all at once, but one or two individuals at a time, chattering incessantly whilst moving. These flocks frequent indiscriminately bush and forest, hopping about amongst the branches and foliage in search of insects. The flight of this species is straight, with a short, rapid, and quivering motion of the wings."

Senor Anchieta states that it is very common at Humbe, where it is called *Bamba*, and he also met with it at Capangombe in Mosamedes; the native name is here *Kitecuria*. Mr. Sala shot a specimen at Katenbella, in Benguela.

Adult male.—Head creamy white above, extending on to the nape; lores and feathers below the eye black; car-coverts, hinder part of cheeks, and sides of neck blackish brown, shading off into deep chocolate-brown on the latter; fore part of cheeks white, like

the throat; entire back clear light ashy brown, many of the feathers shading off into whitish on their edges; wings dark brown, the coverts and quills very narrowly edged with lighter brown, the quills darker brown than the coverts; tail dark brown, the feathers with very narrow edgings of lighter brown; throat and entire breast white; abdomen and under tail-coverts light ashy brown, the thighs and under wing-coverts rather darker ashy brown; "bill blackish horn-colour; legs and toes a livid brown; iris brown" (*Andersson*). Total length, 9 inches; culmen, 0·8; wing, 5·35; tail, 4·4; tarsus 1·05.

Adult female.—Similar to the male. Total length, 8·5 inches; wing, 5·35; tail, 4·4; tarsus, 1.

Young.—Much paler on the back than the adult; lores and anterior parts of cheeks very pale brown; sides of neck white; ear-coverts whitish and mottled with brown; under surface of body whitish, with a wash of pale brown on the abdomen and thighs.

383. BRADYORNIS MARIQUENSIS.

Mariqua Wood-Shrike.

Saxicola mariquensis, Layard, B. S. Afr. p. 209.

Sir Andrew Smith discovered this species in the interior, where he found it seeking its food generally in dense thickets, and, when in quest of it, moving languidly from branch to branch. We have received a single specimen from Kuruman, and Mr. Ortlepp has found it at Colesberg. A single male was collected in Griqualand by Mr. T. C. Atmore, when *en route* for the Diamond Fields, and Mr. Buckley met with it in the Transvaal and in Bamangwato. Mr. Ayres writes:—"I noticed two of these Flycatchers on my way to the Limpopo, and two others near the junction of that river with the Mariqua; they appeared to have much the habits of the common English Flycatcher." According to Mr. Andersson "this species is very common throughout Damara Land and Great Namaqua Land, and is very partial to burnt ground; it usually watches for its prey from some elevated position, whence it pounces on any coming within reach. It appears to me a true Flycatcher in its habits, or a Butcher bird. I have met with its newly fledged young in March and April."

Senor Anchieta has met with it at Humbe, where it is called *Katena*.

This species is easily recognized by its light brown upper surface; the under surface is dull white, and the under wing-coverts are white.

Adult.—General colour above light brown, the scapulars and least wing-coverts like the back; lesser and median coverts darker brown, edged with light brown like the back; primary-coverts and quills dark brown, externally edged with light fawn-colour, paler on the secondaries; upper tail-coverts rather more rufescent than the back; tail brown; lores buffy white; in front of the eye a dusky spot, round the eye a ring of buffy white feathers, and above the ear-coverts a slight streak of whitish feathers; ear-coverts light brown, with obsolete lighter shaft-streaks; cheeks and throat dull white, as also the rest of the under surface, the breast slightly washed with isabelline, the flanks rather browner; under wing-coverts whitish; quills light brown, edged with fulvous along the inner web; "bill and legs black; iris dark hazel" (*T. E. Buckley*). Total length, 6·9 inches; culmen, 0·5; wing, 3·35; tail, 3·15; tarsus, 0·9.

Young.—Brown, mottled with longitudinal streaks down the feathers, widening into a rather broad spot at the tip, very distinct on the wing-coverts; under surface of the body dull whitish, the feathers mottled with brown edges.

Fig. Smith, Ill. Zool. S. Afr. pl. 113.

384. *BRADYORNIS OATESII*, *Sharpe*.

Oates' Wood-Shrike.

Oates' Wood-Shrike was discovered by the gentlemen whose name it bears in the Zambesi region, having been procured by him at Geruah and the first Makalaka Kraal. A specimen in the British Museum, from the Congo, also appears to belong to the same species, but being in worn plumage it is difficult to say for certain. Nothing has been recorded of its habits, but Mr. Oates found the stomach of one of his specimens to be full of ants.

The characters by which *Bradyornis oatesii* may be distinguished are as follows:—The upper surface is ashy above, the throat is white, contrasting with the ashy under surface, and the under wing-coverts are like the breast. Total length, 7·5 inches; culmen, 0·55; wing, 3·85; tail, 3·1; tarsus, 0·85.

Fig. Sharpe in Oates' Matabele Land, App. pl. A.

385. *BRADYORNIS PALLIDUS*, *Von. Müll.*

Pale Wood-Shrike.

This species was met with by Senor Anchieta at Caconda, in Benguela, and was named *B. murinus* by Drs. Finsch and Hartlaub. Judging only from the characters given by these gentlemen, the bird

described by them will probably be found to be identical with *Bradyornis pallidus*, which inhabits Eastern and North-Eastern Africa, and occurs also on the west coast. It may be distinguished by its uniform light brown colour, white throat, and fawn-coloured under wing-coverts.

Adult male.—Above earthy brown or fawn greyish; wings dark brown, slightly edged with rufous brown along the outer web, for the basal half of the inner web clearer and broader reddish fawn; secondary coverts externally edged with pale reddish fawn; from the base of the nostrils above the lores to the eye an indistinct reddish white streak, the eye surrounded with an ill-defined ring of the same; in front of the eye on the lores an obsolete dusky spot; region of the ear fawn-reddish brown, like the sides of the neck, crop, breast, and sides; under wing-coverts clearer reddish isabelline fawn-colour; chin, throat, lower part of the breast, vent, and under tail-coverts white, with a tinge of fawn colour; tail-feathers dark brown, externally and at the tips very slightly edged with pale reddish brown; bill and feet blackish horn-colour; "iris chestnut-brown" (*Anchieta*). Total length, about 7 inches; wing, 3·9; tail, 2·10; bill, 6''; tarsus, 10''. (*Hartlaub and Finsch*.)

386. BRADYORNIS WOODWARDI, *Sharpe*. Woodward's Wood-Shrike.

A single specimen of this interesting bird was forwarded by the Messrs. Woodward to the British Museum, having been obtained by them on the Berea Hills, near Durban. It may be distinguished by its olive brown colour; the throat, breast, and under wing-coverts being pale yellowish buff with the abdomen whitish.

Adult.—General colour above olive brown, the wing-coverts resembling the back; greater wing-coverts and quills ashy brown, edged with the olivaceous colour of the back, the secondaries resembling the latter, and having paler tips; tail-feathers ashy brown, margined with olivaceous; lores and an indistinct eyebrow buffy whitish; round the eye a ring of buffy white feathers; ear-coverts light fulvous brown; sides of neck washed with clear grey; cheeks and under surface of body yellowish buff, whiter on the centre of the abdomen, the flanks darker and more ochraceous brown; under tail-coverts white, with dusky brown centres; under wing-coverts yellowish buff; quills below ashy brown, the inner webs ashy whitish along their inner edge; bill brown, lighter at

base of lower mandible; feet brown (in skin). Total length, 5·8 inches; culmen, 0·45; wing, 3·25; tail, 2·4; tarsus, 0·85.

Fig. Sharpe, Brit. Mus. Cat. B. III, pl. 14.

387. *BRADYORNIS SILENS*, *Shaw*.

Pied Wood-Shrike.

This species appears to be spread over the whole Cape Colony; Victorin procured it at the Knysna, where we ourselves have found it common, as well as at Swellendam and Beaufort. Mr. Rickard procured it at Port Elizabeth, and we have received specimens from different parts of the eastern frontier. Mr. Ortlepp informs us that it is found about the Orange River, and we have likewise seen it from Natal. Mr. Ayres at first considered it scarce near Potchefstroom, but he informs us that it has lately become more common. He says:—"It frequents the hedgerows, and when perched on the outer twig of some hedge it much resembles in appearance *Lanius collaris*. They are inveterate bee-eaters, and I see a pair which frequent my garden catching the bees in the morning and evening as they fly from and to their homes."

Mr. Ortlepp says that its song is sweet and sustained, and that it has considerable powers of imitation. Le Vaillant states that it nests in trees, forming a beautiful structure of flexible twigs, lined with cotton, gathered from cotton-producing plants. Lays three or four eggs, of a pale green colour, daubed (*barbouillés*) with light red.

This we can confirm. The axis is 10", diameter $7\frac{1}{2}$ ". When at Nel's, Poort, in December, we procured several young birds in their first phase of plumage, when they were spotted like a young Chat.

Writing from the Transvaal, Mr. Ayres observes:—"This species is tolerably plentiful about Rustenberg, and I may also mention that I took its nest and eggs, on the 26th of October, near Potchefstroom. The nest was in my garden, placed about eight feet from the ground, on the top of a rough post, sheltered by grape-vines. It was cup-shaped and rough in structure, composed of dry grass, rags, and feathers, giving it a generally white appearance, with bits of wool, fluffy grass-seeds, and finer feathers inside. The eggs, three in number, were of a pale tawny or dingy white, faintly but uniformly marked with very pale brown. They varied slightly in colour and size, measuring respectively $1\frac{1}{8}$ of an inch by $\frac{1}{2}$,

$\frac{1\frac{3}{8}}$ by $\frac{1\frac{9}{32}}$, and $\frac{1\frac{1}{8}}$ by $\frac{9}{16}$. Considering the size of the bird, the egg is small and delicate; it somewhat resembles that of *Motacilla capensis*.

This Wood-Shrike is easily recognizable by its black upper surface and white under surface.

Adult male.—General colour above glossy black, all the feathers with ashy grey bases; wing-coverts black like the back; quills black, the inner primaries white at the base of both webs, forming a large alar speculum, the outer secondaries white along their outer margin, forming a longitudinal bar down the wing; two centre tail-feathers black, all the other feathers white, with a black terminal band, the base of the inner web also dusky blackish; lores, sides of face, and sides of neck black; cheeks and under surface of body dull white, the flanks greyish; under wing-coverts white, the quills black below, white at the base of the inner webs; "bill and feet black; iris dark hazel" (*T. E. Buckley*). Total length, 7 inches; culmen, 0.55; wing, 3.6; tail, 3.2; tarsus, 0.95.

Adult female.—Brown where the male is black, the alar speculum not so distinct, and the outer edges of the secondaries also not so broadly white, the white on the outer tail-feathers also not so extended; under surface of body dull ashy white, the under wing-coverts whitish, with brown bases; greater series of under wing-coverts brown, edged with white. Total length, 6.5 inches; wing, 4.5; tail, 3.2; tarsus, 0.95.

Fig. Le Vaill. Ois. d'Afr. II, pl. 74.

388. BRADYORNIS ATER, *Sund.* Southern Black Wood-Shrike.

This species does not come further south than Natal, where Mr. Ayres believes that it breeds. It is also found in the Transvaal, where, however, it is not very common. Mr. Ayres has met with it near Rustenberg, and it extends to the Zambesi, as Dr. Kirk shot a specimen at Shupanga. In 1877 the editor separated the Damara Black Wood-Shrike from the present species under the name of *Bradyornis diabolicus*, chiefly on account of the ashy black aspect of the under surface of the wing, the inner webs of the quills being light ashy, whereas in the Natal bird the quills are deep black below. Since that time Mr. Gurney has carefully compared a Transvaal specimen with the type of *B. diabolicus*, and considers that they cannot be separated.

If this should turn out to be the case, the range of *Biadyornis ater* must be extended to Damara Land and even to Benguela; Senor Anchieta procured it at Caconda, as well as at Humbe on the Cunene River, where it is called *Mungando*.

Adult male.—General colour above and below blue-black, with a dull gloss; quills and tail dark brown, the secondaries externally glossy black, the innermost entirely like the back; tail-feathers blackish brown, externally glossed with black; under wing-coverts like the breast; quills ashy below, decidedly lighter grey towards the base of the inner webs. Total length, 7.9 inches; culmen, 0.7; wing, 4.5; tail, 3.8; tarsus, 0.9.

389. PRIONOPS TALACOMA, *Smith*. South African Helmet Shrike.

Sir Andrew Smith first met with this species about 25° S. Lat., in flocks of six or eight individuals, frequenting low bushes, or hunting the ground for insects. It occurs throughout the Transvaal, and is sparingly found in small parties throughout the wooded parts of the Rustenberg district; and Mr. Ayres, who has also procured it on the Limpopo, says they are extremely wild and difficult of approach after being shot at once or twice. Dr. Exton met with it in the Matabili country, and both Mr. T. E. Buckley and the late Mr. Frank Oates procured specimens at different places on their way to the Zambesi, where the species was also procured by Dr. Kirk during the Livingstone expedition. In Damara Land Mr. Andersson did not meet with it until he had passed Omanbonde in 20° S. Lat., and Senor Anchieta has sent specimens from Humbe on the Cunene River, and from Capangombe and Huilla, while Sala met with it on the Rio Dande. It does not, however, according to Professor Barbosa du Bocage, occur north of the Congo.

Mr. Andersson's accounts of its habits are as follows:—"It is always seen in flocks of from half a dozen to a dozen individuals, which frequent secluded spots, where they restlessly hop from branch to branch on the bushes and the lower boughs of the trees, never remaining long on the same tree, but hunting most systematically for insects, which, with the occasional addition of young shoots and leaves, form their food. Whilst some individuals of the flock are examining a tree in search of insects, others keep moving slowly on, but rarely going further than the next tree. When the locality is open, those which first reach a tree fix their

gaze intently on the ground, and, if any prey be in sight, pounce upon it with great celerity, their companions, whilst the successful foragers are devouring their booty, continuing to move on slowly as before."

Head light pearl-grey; cheeks white, margined behind by a black crescent; neck and under parts pure white; back and wings glossy, greenish-black, with a white strip along the latter; two outer tail-feathers pure white; all the tail-feathers broadly tipped with white; bill black; legs pale yellow. Length, 8''; wing, 4 $\frac{1}{4}$ ''; tail, 3'' 10'''.

Fig. Smith, Ill. Zool. S. Afr. pl. 5.

390. SIGMODUS RETZII, (*Wahlb.*). Retzius' He'met Shrike.

This species is easily recognized from the other South African Helmet Shrikes by the colouration of its back, which is ashy brown, contrasting with the head, which is black, as well as the frontal crest and hind neck. The whole under surface is black. It only occurs in the very northern parts of the South African sub-region. Mr. Andersson writes:—"When encamped in the desert, a few days' journey south of the Okavango, I for the first and only time observed this fine Shrike. The flock consisted of six individuals, an adult male and female and four young birds of both sexes, all of which I secured after much running and dodging, as they were exceedingly wary and watchful, always perching on the loftiest and most exposed trees, in which respect they differed from the preceding species, though they resembled it in the manner in which they were feeding when I first saw them." Senor Anchieta has met with the species at Caconda, Maconjo, and Humbe; it was very abundant in the latter locality, and was called by the natives *Kanjuele* and *Banvo*.

391. SIGMODUS TRICOLOR, *Gray*. Kirk's Helmet Shrike.

This species replaces the foregoing one in the Zambesi, where it was discovered by Dr. Kirk during the Livingstone expedition. It may be briefly described as resembling *S. retzii*, but is smaller, with the wing 5 instead of 5.25 inches, and differs by having the back drab brown.

Adult.—General colour above black, with a slight greenish gloss, the quills and tail uniform with the back, all the primaries with a

broad bar of white across the inner web; head pearly grey, with a slight gloss of lilac, the forehead and lores white, the grey colour occupying the chin and entire sides of the face, as well as the head; throat black, forming a collar which runs round the neck and separates the head from the greenish black of the back; breast greyish white; rest of under surface light chestnut or deep tawny; under wing-coverts black; bill and feet red. Total length, 7·5 inches; culmen, 0·85; wing, 4·45; tail, 3·2; tarsus, 0·85.

Fam. DICRURIDÆ.

392. BUCHANGA ASSIMILIS, *Bechst.*

African Drongo.

Dicrurus musicus, Layard, B. S. Afr. p. 154.

This species is easily told by its entirely black colour and forked tail; it is very abundant in the forests of the Knysna, and extends to Swellendam, Beaufort, and the Karroo. We have also seen them near Grahamstown and the whole of the eastern frontier. Mr. Rickard records the species both from Port Elizabeth and East London; and it is very common near Kingwilliamstown, according to Lieut. Trevelyan. Mr. Ayres states that in Natal they are plentiful throughout the coast district, and he gives the following note:—"They are generally found in pairs, excepting during the winter months, when they hasten from fire to fire as the grass is burnt, and take insects on the wing as they are driven out; in fact, I have frequently seen them dart through the densest smoke in their eagerness to seize some coveted morsel. They are intrepid little birds, attacking without hesitation the largest *Raptors*; and they are especially fond of bullying any unlucky Owl or strange bird that attracts their notice, rising quickly and repeatedly in the air, and darting upon the back of, or making feints at, the object of their aversion, at the same time uttering loud and harsh notes of alarm or defiance, and spreading and shutting the tail very quickly, which has a curious appearance. Many small birds collect at once to add their voices to the hubbub, until they fairly worry their victim away. These Drongos appear particularly fond of bees, feeding on scarcely anything else when these are plentiful; so that a few of them would soon clear a hive. They generally take up a position on a dead bough of any con-

venient tree, and dart from thence upon insects as they pass. Their ordinary flight is of a dipping character.

Mr. F. A. Barratt writes:—"I observed this Drongo Shrike in great quantities in the bush near the Magaliesberg Mountains, on the Rhinoster River (Free State), in the bush about the Vaal, and in many other places in the Transvaal." Mr. T. E. Buckley procured a specimen in Bamangwato in August, and the late Mr. Frank Oates met with it at Tati in October, and afterwards on the Ramaqueban River, on his way to the Zambesi; in the latter district Dr. Kirk shot specimens at Tete. In South-Western Africa it is stated by Mr. Andersson to be common in all parts of Great Namaqua Land and the Damara country; he also found it plentiful in Ondonga, but it was there partially migratory. Senor Anchieta has procured it in different parts of Mossamedes and Benguela, and it may be said to occur in all other parts of Africa beyond our limits, with the exception of the forest region on the west coast. It is a bold, fearless bird, darting about in the forest after insects, or chasing another one from tree to tree, uttering loud cries, which to some ears are anything but musical. Le Vaillant says that they assemble in flocks, morning and evening, to catch the bees as they go out from, or return to, their hives. He says they make their nests in forks at the extremity of horizontal branches. They are composed of roots and flexible twigs, and of such a loose texture that the eggs are plainly visible from below. The number of eggs is generally four, sprinkled with black dots, nearly all of a square form. Mr. L. C. Layard found several nests at Grootevadersbosch, some of which resembled that figured by Le Vaillant, though not quite so open. He puzzled us by sending two very distinct types of eggs, but we afterwards ascertained that he was quite right in his identification. One set were of the palest pink, unevenly marked with spots of pale and dark purple, but not approaching to black, and not square, as Le Vaillant stated. Another set were of a deep, rich pink (nearly salmon colour), marked throughout with dark salmon-coloured spots, interspersed with purple blotches, chiefly in the form of a ring, at the thick end. The spots are large and coarse. Axis, $11\frac{1}{2}$ ''; diameter, $8\frac{1}{2}$ '' . The birds frequent cattle for the sake of picking off the ticks.

As an instance of the bold character of the present species Mr. Ayres has published the following note:—"I found a nest of these birds built on a horizontal bough of an acacia, overhanging

a pool of water, and about twenty feet above it. I sent a Caffre boy up the tree to saw the bough off. While he was thus engaged the old birds attacked him furiously, making repeated swoops and feints at his head, and uttering at the same time loud notes of anger." Mr. T. E. Buckley writes:—"Very common from the north of Pretoria into the Matabili country. This species is an early builder, as I found full-grown young ones in a nest on the 28th of November; the nest was placed in the fork of a branch, and seemed very small for the young birds; the parents sat in the tree close to me while I was inspecting the nest. This bird sits on a branch of a tree, high up, on the look-out for insects, which it catches on the wing, and then returns to its perch. They are generally found in pairs."

This species measures: Total length, 9.5 inches; culmen, 0.95; wing, 5.55; tail, 4.1; tarsus, 0.9. The bill and feet are black, the iris red.

Fig. Hemprich and Ehrenb. *Symb. Phys. Aves*, fol. s. pl. viii. fig. 3.

393. *DICRURUS LUDWIGII*, *Smith*.

Small Drongo.

The smaller size and square tail distinguish the present species from the foregoing. Sir A. Smith first observed it in the forests about Natal in 1832. They were very shy, and only one specimen was procured. In habits they seemed to resemble others of the family, perching on dead trees, and performing rapid evolutions in the air in search of food.

Dr. Exton procured this scarce species at Kanye, in the Matabili country, and the specimens sent by him exceed the measurements given by Sir A. Smith. They are: length, 8''; wing, 4'' 3''; tail, 4''. He writes:—"Smith's statement as to its shyness is certainly correct, *D. ludwigii* being as shy and unobtrusive as *B. assimilis* is noisy and bold. In regard to the migration of birds, it is noteworthy that I have not observed *D. ludwigii* prior to the 26th December, on which date I saw four and obtained two specimens, and that in a part of the Veldt, with which I was well acquainted, and which I had constantly visited during the previous three months, so that I could scarcely have overlooked its presence had it been there. From the number of species collected here, which have hitherto only been obtained in Damara Land and Natal, I conclude this would be an excellent place for further research." Mr. T. Ayres says that in

Natal this species "appears to frequent more dense bush than is the case with *Buchanga assimilis*, and is never seen (like its congener) to frequent the grass fires. It is a less plentiful species than the above-mentioned Drongo, and its notes are neither so harsh nor so loud." Captain Shelley found them "not uncommon near Durban, always in the thickest parts of the bush, where their loud, harsh cry may be frequently heard." He adds that they were very active and restless in their movements, and rarely failed to show their curiosity by approaching quite close to an intruder, but they seldom remained long in view.

Adult.—General colour above greenish black, somewhat greyer on the rump; wing-coverts and quills black, the coverts and the secondaries narrowly edged with the same glossy green as the back; tail black, the feathers washed on their outer webs with glossy greenish black; lores and frontal feathers, as well as the sides of the face black, the latter with a slight gloss; under surface of body greyish black, with a slight greenish gloss on the breast-feathers; "bill and legs black; iris deep orange." Total length, 7 inches; culmen, 0·8; wing, 3·9; tail, 3·7; tarsus, 0·7.

Fig. Smith, Ill. Zool. S. Afr. pl. 34.

Fam. ORIOLIDÆ.

394. ORIOIUS GALBULA.

Golden Oriole.

The Golden Oriole of Europe, when it leaves that continent, visits South Africa for its winter quarters, arriving probably by the east coast, as it has been shot at Mombas, but has never been seen on the west coast of Africa. The late Mr. Andersson met with it at the Knysna, whence a specimen of his collecting is in the British Museum. Mr. T. Ayres has procured it in Natal, and Mr. F. A. Barratt writes as follows:—"I observed several of these birds in the bush near Rustenberg; and I think I saw them at Lydenburg Gold-fields. I also received a specimen from Marico. They are rather abundant, but at the same time so wary of approach that it was some time before I got a specimen." A female was obtained by the late Mr. Frank Oates on the Marico River. Mr. Andersson also procured a specimen in Ovampo Land, and he observes:—"The European Golden Oriole arrives in Damara Land with the return of the rainy season, but it is comparatively rare, and very few adult

birds are seen." He found it, like Mr. Barratt, very shy and difficult of approach. Senor Anchieta has not yet met with it in Angola.

Adult male.—Above rich golden yellow; wing-coverts black, the cubital coverts with a narrow tip of yellow; primary coverts black, broadly edged with yellow, forming a conspicuous spot; quills black, lighter underneath, the secondaries edged towards the tip with yellowish white; tail black, the middle feathers entirely of this colour, with a spot of yellow at the tip, all the other feathers black at the base, yellow towards the tip, the outer feathers having more yellow than black; a spot between the base of the bill and the eye black; entire under surface golden yellow; bill dull reddish; feet leaden grey; iris blood-red. Total length, 9 inches; of bill from front 0·1, from gape 2·2; wing, 5·9; tail, 3·1; tarsus, 0·8; middle toe, 0·7; hind toe, 0·4.

Young.—Golden yellow above, tinged with olive green; quills and wing-coverts brownish black, tinged with olive green; tail-feathers marked as in the adult, but the feathers olive green, blackish towards the tip; throat and breast grey, with black stripes; flanks bright yellow, with fainter stripes; loreal spot indistinct, dusky; bill brownish red; feet black. Total length, 9·5 inches; of bill from front 1, from gape 1·2; wing, 5·2; tail, 3·3; tarsus, 0·8; middle toe, 0·7; hind toe, 0·4.

Fig. Dresser, B. Europe, part 43.

392. *ORIOIUS NOTATUS*, Peters.

Andersson's Oriole.

It is just possible that Le Vaillant may have intended the present species when he spoke of his "Loriodor" being found in the forests of Kaffirland, but the bird figured by him is the West African *Oriolus auratus*, which never comes so far south, nor does the present bird, as far as we know, ever visit the countries he mentions, and therefore we must look upon the "Loriodor" to be of doubtful authenticity as a South African bird.

Andersson's Oriole has been found on the east coast from Mombas to the Zambesi region, where it was discovered by Dr. Peters at Tete, and here Dr. Kirk also met with it. On the western side it has occurred to Senor Anchieta in Benguela at several places, and he also found it at Humbe on the Cunene River. Mr. Andersson obtained a specimen in Ovampo Land, and he gives the following note:—"I only obtained the adult of this species in Damara Land on a few occasions, and that always during the rainy season; the young,

however, are frequently met with, and at the Okavango River it is more common than in Damara Land proper. The young birds are easily obtained, but the old are excessively shy and difficult to procure, as they always perch on the most elevated and conspicuous trees, and retire into the densest parts of tangled brakes and thickets on the least approach of danger. The food of this Oriole consists of seeds, berries, and insects."

Like *O. galbula* the present species has the head entirely golden yellow, but has all the wing-coverts and the secondaries broadly margined with golden yellow. It has also the outer tail-feather entirely golden yellow without any black at the base at all. Total length, 8 inches; culmen, 1.1; wing, 5.4; tail, 3.1; tarsus, 0.8.

Fig. Sharpe, Ibis. 1870, pl. vii. fig. 2.

396. *ORIOLOUS LARVATUS*, *Licht.* South African Black-headed Oriole.
Oriolus capensis, Layard, B. S. Afr. p. 134.

This is the only species of Oriole that builds in South Africa. It is not uncommon in the forests of the Knysna, and along the south-east coast of the colony in general. Le Vaillant met with it in the same locality, and states that its nest is placed in very high trees and composed of twigs and fibres, covered with moss, and lined with feathers. Eggs four, of a dirty white colour, with brown blotches.

On the left bank of the Keurboom's River, which falls into Plettenberg's Bay, about half a mile from where the mountains narrow down to the river, there is a lovely kloof, which opens to the water's edge, and stretches back inland for about a couple of miles. A clear running stream flows through the centre of it, and on each side rocky, inaccessible precipices hem in a splendid forest. In this lovely spot the silence was only broken by the babbling brook and the loud pipe of the Oriole, which frequented the summits of the gigantic yellowwood trees, whose mighty heads, hung with dense masses of a grey moss, seemed, like vegetable Titans, to watch over the solitude around them. Thinking this a very paradise for birds and game we twice visited it; but, with the exception of the Oriole, the little black swallow (*P. holomelæna*), and the Loury (*Corythæix leucolopha*), not a creature was to be seen.

Mr. Rickard tells us that this species is found both at East London and Port Elizabeth; and Mr. T. C. Atmore has forwarded some specimens from Eland's Post. Capt. Trevelyan found it near King-

williamstown, and in Natal, Capt. Shelley says it was "common at Durban and Pinetown, preferring the more open country, and always in pairs. They have a loud call-note, which may be heard at a considerable distance." Mr. Barratt procured a specimen about four miles west of Rustenberg. It has not been recorded from the Zambesi, nor did Mr. Andersson find it in the Damara country, but Anchieta has collected it at Humbe on the Cunene River, and at various places in Benguela, whence it ranges into Angola proper. It should be noted, however, that the birds brought by Mr. Monteiro from the latter country belonged to the small race called by Count Salvadori *Oriolus rolleti*.

The present species is distinguished from the two other South African Orioles by its black head.

Adult male.—Whole of the head deep glossy black, extending down to the breast; nape and sides of the neck rich golden yellow; whole of the back and scapulars bright yellow, with a slight olive tinge on the latter, and brighter yellow on the rump; wing-coverts black, but so broadly edged with yellow that the black does not show; the outermost cubital coverts edged with grey; the primary-coverts black, tipped with white, forming a distinct speculum; quills black, the inner web paler, especially in the secondaries; the secondaries broadly edged with yellow on the outer web, those nearest the primaries having also a margin of white, which in the primaries themselves entirely takes the place of the yellow, so that these are edged and tipped with pure white; tail-feathers for the most part yellow, black at the base; as they approach the middle feathers the black colour occupies the most part of the feather, being, however, strongly tinged with olive on those nearest the middle feathers, which are entirely olive-green; under surface of the body brilliant golden yellow; bill brownish red; feet black. Total length, 9 inches; bill from front 1.1, from gape 1.4; wing, 5.4; tail, 3.2; tarsus, 0.9; middle toe, 0.8; hind toe, 0.4.

Young male.—Similar to the old male, but the colours not nearly so pure, with indistinct brown stripes on the feathers of the upper part of the body; head dusky brown; quills brown, edged exteriorly with lighter brown; breast with black longitudinal markings; tail darker olive-green.

Fig. Le Vaill. Ois. d'Afr. pl. 261.

Fam. CORVIDÆ.

397. HETEROCORAX CAPENSIS (*Licht*). African Rook.
Corvus segetum, Layard, B. S. Afr. p. 168.

This species never approaches Cape Town, but appears to be otherwise generally distributed. We have seen it in considerable numbers near Caledon and the Knysna, and have received it from Kuruman; but it is not mentioned in Mr. Rickard's lists from Port Elizabeth or East London. It is called by the colonists *Korenland Kraai*, *lit.* "Corn-land Crow," and keeps more to the cultivated land than do the other Crows; but it will not disdain to eat carrion when its natural food, which consists of grubs, is scarce. It breeds in trees, making a large nest of sticks, and laying from three to five eggs, of a light pink colour, spotted with dark brown pink: axis, 2'' 2''' ; diam., 1'' 2''' . It has not been recorded from Natal. According to Mr. F. H. Guillemand, it is pretty abundant in the Free State. Mr. T. E. Buckley noticed it on his Matabili journey, but it was not so common as *C. scapulatus*. Mr. Ayres has found it in Natal. Mr. Andersson gives the following account of its habits:—"I found this Crow very common in Ondonga, where it nests. In Damara Land it is very local and nowhere common; but it is more frequent in Great Namaqua Land, especially towards the Orange River; and in the Cape Colony it abounds. In Damara Land, where, till lately, the natives never cultivated the ground, it is a shy bird, and I never saw it there near the native villages; but in the Cape Colony it is pretty sociable, frequenting the cultivated land, where it resorts to the vicinity of domestic buildings, and sometimes follows in the wake of the plough in search of insects and larvæ, which constitute its chief food, though it is said that it will also feast upon carrion, and will sometimes plunder the crops of maize. It is usually found in small flocks, and is a clamorous bird, uttering harsh choking sounds, just as though its crop were too full. The nests of this species, which I observed in Ondonga, were built on palm trees; the eggs have a buffy ground-colour, and are thickly sprinkled with spots, some of which are reddish and others brown, giving the entire egg more or less of a pinking hue." Mr. Ortlepp says that they roost together in large flocks in a clump of willows

near his place at Colesberg, and are very destructive in the corn and mealie fields.

Adult.—General colour dusky black, the gloss on the plumage having somewhat of a greyish brown shade; the back and wings glossed with purple, as also the under surface; quills externally dull greenish black; “bill, legs, and toes dark horn-colour; irides dark brown” (*Andersson*). Total length, 18 inches; culmen, 2·5; wing, 13·8; tail, 7·7; tarsus, 2·7 (*Sharpe*, *Cat. B.* iii. p. 12).

Young.—Dusky brown where the adult is glossy black, nearly all the gloss being absent in the young bird; quills and tail as in adult; bill horn-coloured at top (*Sharpe*, *l. c.*).

Fig. Le Vaill. Ois. d’Afr. II. pl. 52.

398. *CORVUS SCAPULATUS*, Daud.

White-bellied Crow.

The Bonte Kraai (*lit.* Parti-coloured Crow) is the commonest of the Corvidæ in the western country, and is distributed over the whole colony. It is common near Colesberg, according to Mr. Ortlepp, as well as in the Queenstown division, as we are informed by Mr. Barber. Mr. Guillemard considers it more plentiful in the Cape Colony than in any other part of South Africa which he visited; but we have received it from Zululand beyond Santa Lucia Bay. Mr. Frank Oates shot a specimen on the Seruli River in October. It also occurs in Damara Land and extends to Mossamedes and Benguela, and is distributed over the greater part of Africa. It is usually found about the high roads, seeking its food in the same manner as *C. albicollis*. In some districts, chiefly those where *H. capensis* is most common, it is rarely seen. It makes its nest in trees, or on rocks; and its eggs, sometimes six in number, are light verditer blue, profusely spotted, chiefly at the obtuse end, with brown: axis, 1" 6"; diam., 1".

Adult male.—Above glossy purplish black, with a shade of deep steel-blue under certain lights; the abdomen and under wing-coverts not quite so glossy; feathers of the throat rather lanceolate but lax in texture, the plumes of the lower throat white at base; hind neck, mantle, sides of neck, and entire breast from the fore neck to the abdomen pure white; under wing-coverts black, except in the innermost axillaries, which are white; bill and feet black; “iris hazel-brown” (*Andersson*). Total length, 18 inches; culmen, 2·4; wing, 13·9; tail, 7·9; tarsus, 2·5.

Adult female.—Similar to the male. Total length, 17·5 inches; culmen, 2·5; wing, 13·9; tail, 7·3; tarsus, 2·4.

Young.—Similar to the adults, but more dusky, especially on the throat and abdomen; the neck white and breast dull white, with dusky edgings to a great many of the feathers.

Fig. Le Vaill. Ois. d'Afr. II, pl. 53.

399. CORVULTUR ALBICOLLIS, *Lath.* White-necked Raven.
Corvus albicollis, Layard, B. S. Afr. p. 167.

This large Raven, which goes by the name in the colony of the "Ring-hals" (Ring-neck), is abundant throughout the colony. It was procured by Victorin at the Kuysna, and we have seen specimens from different localities. On his journey through the Matabele country, Mr. T. E. Buckley states that it was common, affecting the open places and neighbourhood of towns more than the bush country, and Dr. Exton procured it at Kanye. Beyond the places mentioned above, we have received specimens from Capt. Trevelyan at Kingwilliamstown, and it was met with by Mr. Rickard both at Port Elizabeth and East London.

It is very partial to the sea-side, where it preys largely on the rejectamenta of the waves, especially on the animal of the Paper Nautilus (*Argonauta argo*); and we are informed that it is rare to get one of these shells perfect, unless it should happen to be thrown up at the very feet of the seeker, so keen is the appetite of these birds for them. It also frequents mountains not far from the sea. It is frequently seen about Table Mountain, descending from thence to the shores of the bay in the morning and returning at night, but always flying at a great height over the town.

It is a constant visitor at the "outspan" places along the "hard-road," and on the road itself, where it examines the droppings of the animals that pass along it, and picks the bones of those that die. It will attack weakly lambs and young antelopes, and it is said to do much mischief in this manner. Of course, it shares with the Vultures in all their feasts, remaining to the last to pick up the small fragments that escape the notice of its larger confreres.

It breeds in the most lonely precipices, and its eggs are very hard to get even if the nest is discovered. Mr. Atmore sends eggs, however, which are of the usual crow-egg colour, pale green profusely mottled with dark brownish-green blotches, somewhat confluent at the obtuse end. Axis 1" 11''; diam, 1" 3'''. Mr. Harford also sent us an egg

from Natal, with the following note: "It was a great piece of luck my getting this nest, as they generally breed in such abominably out-of-the-way places. Mr. Ayres tells me he never has been able to get one. I got one on the ledge of a precipice on the 'Umhlalunan' River about three or four miles from us. I found it while out shooting, but it was of course too high to get at, so I brought a ladder to the spot, and after piling up stones in the river, and adding long pieces of bush-wood to the end of the ladder, we managed to get at it. I found three eggs in the nest, all varying in size and colour. The nest itself was formed of sticks on the outside and lined with wool, rags, goats' hair, &c., and smelt most disgusting—like the monkey cages in the Zoological Gardens."

Adult.—General colour above and below glossy black, without any admixture of brown, excepting a slight shade on the inner secondaries; head purplish brown-black; round the hinder neck a very broad white collar; throat and fore neck dull brown, contrasting with the rest of the under surface, from which it is separated by a concealed band of white, the feathers composing which are either edged with white or are pure white, sometimes with dark brown centres; "bill very dark brown, the tips of the mandibles of a white horn-colour; legs and toes brownish black; iris hazel-brown" (*Andersson*). Total length, 18 inches; culmen, 2·95; wing, 15·7; tail, 7·1; tarsus, 2·06.

Young.—More dusky brown than the adult, the lower feathers of the white neck-collar mesially streaked with brown; below with a very distinct white collar across the chest, all the feathers of which, however, are much mixed with brown.

Fig. Le Vaill, Ois. d'Afr. pl. 50.

Fam. STURNIDÆ.

400. *BUPHAGA AFRICANA*, L.

African Ox-pecker.

The present bird does not appear to enter within the limits of the Cape Colony, but Great Namaqua Land and the neighbourhood of the tropic seem to be its principal habitats. In its manners it resembles the Starlings, but from the peculiar structure of its bill for extracting "bots," and other parasitic insects feeding upon cattle, it is constantly found perching upon them, and clinging to them by means of its sharp and curved claws. We have no record of its capture in Natal, but in the Transvaal, according to Mr. Ayres, it is common from the Mariqua all along the Limpopo, but is not found

near Potchefstroom. Mr. T. E. Buckley procured specimens in Matabele Land, and Dr. Exton found it not uncommon throughout the latter country, frequenting the Rhinoceros, and being called by the hunters the "Rhinoceros Bird"—the Matabele name, according to the last named observer, is 'Umblanda.' The late Mr. Frank Oates procured it on the Semokwe River. Mr. Andersson says that he only observed this species in the middle districts of the Damara country. "It is generally met with in small flocks, which visit the cattle in search of the larvæ and 'ticks' with which their hides are often abundantly supplied; and indeed I never saw these birds, except when they were occupied in thus searching for insects, though Livingstone has recorded his having met with flocks of this species, and of its congener, *B. erythrorhyncha*, roosting on reeds in spots where neither tame nor wild animals were to be found." Mr. Monteiro states that it is common all over Angola, and Senor Anchieta has found it at Humbe on the River Cunene, as well as at Capangombe in Benguela. It is a well-known species from both North-eastern Africa and Senegambia.

Mr. Ayres writes:—"Is not this bird rightly named *Buphaga*? [During our stay in the bush Ox-peckers appeared in numbers about our oxen, and actually ate large holes in the fleshy part of their backs, often one or two inches deep, and two or three inches in diameter, thus creating bad sores. They do this little by little, and day by day; and though it is annoying to the ox, I cannot say that it seems to feel it much. The birds attack just that part of the back where the ox cannot swish them off with its tail or dislodge them with its horns. They especially infest those oxen which have lost their tails by inoculation for the lung disease. I had previously thought that these birds only ate the parasitical insects common to cattle and game. This species is a pest to the hunter, of whose approach it warns the Buffalo and Rhinoceros by its loud harsh note, which is perfectly understood by its huge friends. I have not seen any holes picked by these birds in the Buffalo or other game, but only in cattle."]

Mr. Andersson's note does not give the *Buphaga* the bad character assigned to it by Mr. Ayres, which, however, we have heard confirmed by many other South African travellers. He writes:—"The arrival of these birds is announced by a sharp cry; and the next moment they may be seen in a little flock descending fearlessly

on and amongst the cattle, which are at first alarmed, and run about in wild confusion just as they do when troubled with gadflies; but their apprehensions are soon dispelled and exchanged for sensations of evident pleasure as the Ox-peckers run over their backs, sides, and bellies, like Woodpeckers upon trees, except when an ox, by an occasional jerk or sudden twist, appears to indicate that the claws of the bird have caused something like pain by touching some spot where the skin of the animal happens to be tender."

Greyish-brown; rump, breast, and body beneath, pale fulvous; lateral tail-feathers ferruginous, shafts strong, and somewhat rigid; bill orange; tip red. Length, $9\frac{1}{2}$; wing, $4\frac{1}{2}$. The iris in the male is deep orange, and in the female orange-yellow. Mr. Andersson mentions a specimen in which the iris was greyish-green, and the bill dark horn-colour.

Fig. Le Vaill. Ois. d'Afr. pl. 97.

401. *BUPHAGA ERYTHORHYNCHA*, *Stanley*. Red-billed Ox-pecker.

Our friend the late Mr. Jules Verreaux was the first to affirm the occurrence of this bird in South Africa, having received it from Natal, where it was subsequently obtained by Mr. T. Ayres. Mr. R. S. Fellowes procured the species at S. Lucia Bay, where he found it not uncommon; its flight reminded him of that of the European Missel-thrush. Senor Anchieta has met with it at Katumbella in Benguela.

[Mr. Ayres has given the following note:—"These are amongst the useful birds of Natal; their food consists entirely of Acari or ticks, which they pick from the cattle. They run and climb all over an ox, much as a Woodpecker would about the stem of a tree. The cattle, for the most part, much enjoy the operation, and may be seen with tail partially extended, standing perfectly motionless whilst the birds are picking amongst the crevices of their ears, where the ticks generally adhere in the greatest numbers. These birds are mostly seen in small companies, varying from three to ten; their flight is rather heavy; their notes are harsh, but not loud. The head is carried with the bill pointed upwards."}]

Above, grey-brown; tail brown; the inner web of the external feathers rufescent; wing-feathers black; beneath, pale fulvous; throat grey; bill red. Length, $8\frac{3}{4}$; wing, $4'' 5''$. Irides reddish-orange with white outside ring.

The colour of the bill distinguishes this species from *B. africana*.
Fig. Ehrenb. Symb. Phys. taf. ix.

402. *DILOPHUS CARUNCULATUS*, *Gmel.*

Wattled Starling.

This well-known bird is found over the greater part of the African continent; in South Africa it frequents the same country as the Common Spree, with which it is often found mingled; though it not unfrequently flies in large flocks composed wholly of individuals of its own species.

Specimens with developed wattles are very scarce, and but one that we have ever seen had these appendages as enlarged as those figured by Le Vaillant (*l. c.*); this specimen is in the Grahams-town Museum. Perhaps in the country where it breeds it may acquire such during the nesting season. Mr. Schwartz, of Zoetendals Vley, informs us that he once found this species breeding in his neighbourhood. A large company formed their nests in a dense bush, reared their young, and departed. He never saw them nest at any other time. Mr. J. H. M. Weale found them breeding near Bedford in 1869, Dr. Exton in Mozelikatze's country. The truth is, it follows the swarms of locusts and seems to know when the young ones will be developed. They breed in companies. We found them in September, 1869, at the Berg River; their nests filled many small bushes; they were cup-shaped, but built close together, and added to from time to time till they became almost a dense mass which filled the bush. The eggs, four or five in number, were of the very faintest blue, some of them minutely spotted with black.

Mr. T. C. Rickard writes:—"An immense flock arrived at East London; in a few days they broke up into smaller flocks and associated with *A. morio*. They were feeding on the locusts, which they took on the wing like a Fly-catcher, flying up a short distance and returning to the same nesting-place. The ground beneath the bushes on which they rested was strewn with the legs and wings of the insects."

Our observant correspondent, Mrs. Barber, makes the following remarks:—"Some years ago, when large flights of locusts laid their eggs in the valleys of the 'Konappe' and 'Chaka' Rivers, they were followed as usual by the small locust birds. It was spring-time, and these birds filled the thorn trees (*Acacia horrida*) with their nests; and some of the trees were so over-burdened with nests, which were

packed about, and around, and upon each other, that with the additional weight which a stormy wet day supplied, the trees gave way and fell to the earth, and an awful smash of eggs and young birds bore witness to the melancholy result. However, this ill wind proved to be a windfall for the ants, as they had a great feast upon the broken eggs and young ones. On another occasion these birds, for some reason or other, were too late in commencing their nests, and it so happened that before their young were fully fledged the locusts began to leave the neighbourhood, most of the 'voet gangers' had thrown off their working jackets and resumed the 'imago' state. It was easy work for the birds to follow them at first and bring back a sufficient supply of food to their nests, but as the locusts day after day winged their flight towards the interior, they found the task a difficult one; still for some days they succeeded in keeping their young alive, but the winged swarms of locusts travelled so fast that the birds were beaten in this great struggle for life, and were compelled to abandon their nests, leaving the half-fledged young ones to their sad fate; and to save themselves from a similar one, flew after the locust swarms that were leaving the colony. It seems unnatural for any animal to desert its young, and I have frequently seen birds risk their lives for the sake of their nests, but in the above-mentioned case, no blame nor want of natural affection could be attached to the locust birds—they did all that they possibly could under the circumstances—for, excepting the locust swarms, no other source remained by which so great a multitude could be supplied with food.*

"In the Transvaal," writes Mr. Ayres, "they are only found at Potchefstroom during the winter months, from April to November, when they occur both singly and also in companies ranging in number from three up to a hundred or more." Mr. T. E. Buckley shot a male in Bamangwato on the 28th of August, 1873, which was then beginning to get the bare throat; it was also obtained by the late Mr. Frank Oates on the Tati River, and as high as the Ramaqueban. It extends all along the east coast of the continent into North-eastern Africa.

In South-west Africa the Wattled Starlings appear in Damara

* We have heard of a similar incident occurring with the other locust bird, *Glarcola nordmanni*, when a whole hill-side covered with nests containing young birds was deserted.

and Great Namaqua Land about the beginning of the rainy season, mostly leaving again upon the return of the dry, but Mr. Andersson suspected that a few pairs occasionally remained and bred, as young birds are to be found throughout the year. He gives the food as consisting of worms, berries, and insects, chiefly small *coleoptera*. Mr. Frank Oates also found beetles and sand in the stomach of one specimen which he shot, and beetles and grasshoppers in another. It has been procured by Senor Anchieta at Humbe on the Cunene River, and on the River Coroca.

General colour, cinereous; shoulder and upper part of wings, white; rest of wing and tail black, or dark brown, with green reflections. Mr. Ayres gives the soft parts as follows:—"Iris very light brown; bill pale on the upper, and pink on the lower mandible; the bare skin about the eye (which in some examples extends over the occiput), light yellow; wattles about the head and chin, black; tarsi and feet pale." The female differs in not having the naked head, the latter being of the same colour as the back. Length, 8" 6"; wing, 4" 6"; tail, 2" 10'".

Fig. Le Vaill. Ois. d'Afr. pls. 93, 94.

403. LAMPROTORNIS MEVESI, *Wahlb.* Meves' Glossy Starling.

The members of the genus *Lamprotornis* differ from those of *Lamprocolius* in their elongated tails.

Meves' Glossy Starling was discovered by the late Professor Wahlberg in Damara Land, where also Mr. Andersson procured it at Ovaquenyama in June and July, 1867. Senor Anchieta has met with it at Humbe, and the late Mr. Frank Oates obtained a male bird on the Nata River during his journey to the Victoria Falls on the 5th of December, 1874.

General colour purplish and violet, including the throat and breast, the lower breast and abdomen coppery with violet reflections; lower back, rump, and upper tail-coverts coppery, slightly shot with reddish violet; wing-coverts like the back; quills blackish, externally purplish or violet blue; tail-feathers violet blue, shot with purple and plainly barred under certain lights; tail and legs black; iris hazel (*Andersson*). Total length, 14 inches; culmen, 0.5; wing, 6.15; tail, 8.8; tarsus, 1.4.

405. LAMPROTORNIS PURPUREUS, *Bocage*. Bocage's Glossy Starling.

This specimen was discovered by Senor Anchieta in Mossamedes

and it seems to be entirely confined to South-western Africa. The localities where Anchieta met with it were the Rio Chimba, Quilengues, and Capangombe, where it was called by the natives "Melombeanganza." The reddish purple colour on the throat and head distinguish this bird from *L. mevesi*.

The following is a translation of the original description given by Professor Barboza du Bocage: Of small size; head, neck, mantle, scapulars and lesser wing-coverts, throat and breast, brilliant violet purple, the feathers marked with an apical spot of golden copper; lower back, rump, and abdomen, golden copper; the primary quills blackish, with scarcely any steel-blue gloss; the secondaries more or less violet purple, and barred with dusky; tail long, violet purple on the upper surface with transverse dusky bands; bill and feet black, iris brown. Total length 14 inches; culmen, 1.0; wing, 6.0; tail, 8.3; tarsus, 1.55.

Fig. Bocage, Orn. Angola, pl. vii.

405. LAMPROTORNIS AUSTRALIS, *Smith*. Burchell's Glossy Starling.
Juida australis, Layard, B. S. Afr. p. 170.

This fine bird was discovered by the expedition under Sir A. Smith, in lat. 25° south. It was rarely seen to leave high trees, but to seek its food, which consisted of fruit and insects, exclusively upon them. We have received it from Mr. Arnott at Colesberg, and Mr. Ayres obtained it near the River Limpopo, where it was also met with by Mr. Frank Oates. Mr. Andersson states that it abounds in the Lake regions, and in the Damara country he found it abundant at Schmelen's Hope on the upper sources of the Swakop River. He observes: "It is found singly or in pairs, and passes most of its time on large trees, but occasionally descends to the ground in search of insects, which, with berries, constitute its chief food. It is, however, somewhat omnivorous in its habits; and I have observed its stomach to contain much sand. It is a very shy bird, but very lively, jerking its body and tail (the latter of which it can raise quite perpendicularly), and uttering all the while harsh clamorous notes." Anchieta states that it is one of the commonest birds at Humbe.

Plumage a bright resplendent green; ears violet-purple, with a half collar of the same colour on the back of the neck; belly green-blue, with a steel gloss; tail graduated, the outermost feather of

each side three inches shorter than the two centre ones. Length, 13'' 6''; wing, 7'' 6''; tail, 6'' 9''.

Fig. Smith, Zool. S. Afr. pl. 47.

406. LAMPROCOLIUS PHENICOPTERUS, *Swains.*

Red-shouldered Glossy Starling.

Juida phœnicoptera, Layard, B. S. Afr. p. 171.

Abundant throughout the eastern parts of the colony. Le Vaillant first met with it on the borders of the Gamtoos River in vast flocks. He says they are migratory, only visiting us during the dry season. They subsist on berries and grubs of all kinds, as is the habits of other Starlings, and breed in trees, or on the ground, laying five or six blueish-green eggs. Mr. Atmore says it never comes to the westward of the Gamtoos River. He saw it abundantly at Uitenhage, and all over the eastern frontier. Mr. Rickard notes it from Port Elizabeth and East London. We much doubt its ever breeding on the ground from all we could gather; we believe it nests in hollow trees and old woodpeckers' holes. It also sometimes constructs its nest in farm-buildings, in scaffolding holes, and such-like places.

Mr. Ayres has given the following note on the species in Natal:—
 “These birds are generally to be found from three to a dozen together, sometimes more, excepting in the spring, when they paired off. They build in holes in the trunks of trees, generally at a good height from the ground. I have known a pair of these birds take possession of a Woodpecker's nest, destroying the eggs, and laying their own instead, which the Woodpeckers seemed rather tamely to submit to. They feed almost entirely on fruits and berries, and are destructive to our mulberries and other small fruits. They sometimes hop about and feed on the ground, somewhat like the Thrush and Blackbird in England.” Mr. F. A. Barratt writes:—“This bird I met with in several parts of the Transvaal and Free State. They congregate in vast flocks, and keep up a harsh chattering noise. I have also shot them near Pretoria, Rustenberg, Potchefstroom, and near Bloemfontein; and I noticed them on my farm on the Chalumna, British Kaffraria, where they frequented the barns and buildings, continually flying to and fro, like English starlings.” Mr. T. E. Buckley shot the bird on the Limpopo and at Tati, at both of which

places it was procured by Mr. Frank Oates, who also fell in with it on the Mariko River. Mr. Andersson observes: "This bird is found most abundantly throughout Damara and Great Namaqua Land, in the valleys of the Okavango and of the Teoughe, and in the Lake regions. Like our European Starling, which it very much resembles in manners and habits, it frequently congregates in large flocks; it is comparatively tame and easy to approach, and is often met with near villages. Its food is very various, consisting of berries, seeds, and insects, and it is very destructive to fruit-gardens; its flesh is not unpalatable. This species forms its nest in the hollows of trees, lining the cavity well with feathers. The eggs are four in number, of a long oval shape, but tapering much more at one end than at the other; they are of a pale bluish-green, spotted all over with small dots of light brown.

Professor Barboza du Bocage is of opinion that the species from Damara Land and Benguela is distinct from the ordinary *L. phænicopterus* and should be recognized as *L. bispecularis* of Strickland and Sclater. We may not have seen the species intended by Bocage, but, as far as our own observations go, we think Mr. Gurney is right in considering the Damara birds to be the same as the ordinary Cape Glossy Starling.

Mr. Monteiro procured it in Benguela, and says it is common all over Angola. The *L. decoratus* of Hartlaub we believe to be the same as *L. phænicopterus*, and *Juida aurata* of our first edition (p. 171) is also the same bird.

Sea-green, glossed with blue on the head, rump, tail, and thighs, and with violet on the ears; shoulder covers greenish-blue, margined by a flame-coloured and violet band; *inner webs of the primaries with a central notch*. Length, 9" 6"; wing, 5" 4"; tail, 4" 2".

Mr. Andersson gives the soft parts as follows:—"The iris is bright reddish-orange, the bill, legs, and toes more or less black."

Fig. Le Vaill. Ois. d'Afr. pl. 89.

407. *LAMPROCOLIUS SYCOBITUS*, *Peters.* Peters' Glossy Starling.

Although very closely allied to *L. phænicopterus* the present species differs in being a much smaller bird and in having the colour of the head of a brilliant metallic oily-green colour, almost coppery in hue, and in wanting the steel-blue gloss on the nape and crown. Mr. Ayres, too, who procured it in the Mashoona country during

Mr. Jameson's expedition, states that the note is different. It occurs in the Zambesi region, and extends up the east coast of Africa. Senor Anchieta has also procured it at Humbe on the Cunene River, as well as at Huilla and Gambos. Professor Bocage has likewise included the North-east African *L. chalybeus* as being found in Benguela, but in his latest work he has referred the specimen to *L. sycobius*.

Total length, 8·4 inches ; culmen, 0·95 ; wing, 4·9 ; tail, 3·5 ; tarsus, 1·25.

408. LAMPROCOLIUS ACUTICAUDUS, *Bocage*. Sharp-tailed Glossy Thrush.

This is another of Senor Anchieta's discoveries in Southern Angola, where he found it at Huilla and Caconda. It is closely allied to *L. phœnicopterus*, but differs in the form of its tail, the dark ashy grey colour of the under surface of the quills, and other minor particulars.

The following description is translated from Professor Barboza du Bocage :—

Brilliant greenish-gold ; the ear-coverts steel-blue ; a scapular spot of violet-purple with a coppery gloss : median wing-coverts marked at the tip with a small satiny black spot ; under wing-coverts black spotted with violet ; primary quills and secondaries blackish above, brilliant green at the tip and on the outer web, underneath ashy ; the tail elongated and graduated, uniform with the back on the upper surface, and conspicuously banded under certain lights, blackish on the under surface ; bill slender and black, as also the feet ; iris orange-yellow. Total length, 9·9 inches ; wing, 5·05 ; tail, 4·25 ; bill, 0·85 ; tarsus, 1·15.

Fig. Bocage, Orn. Angola, pl. vi.

409. LAMPROCOLIUS NITENS, *L.*

Angolan Glossy Starling.

This West African species just strays within our limits in South-western Africa ; having been met with by Senor Anchieta at Capangombe in Benguela.

Brilliant metallic green ; some of the lesser wing-coverts having a rather large violet-blue spot ; quills and tail-feathers blackish underneath ; under wing-coverts tinged externally and at the tip with

violet-blue; bill and feet black. Total length, 8" 10"; bill from gape, 11½"; tail, 2·11" (*Hartlaub*).

410. LAMPROCOLIUS MELANOGASTER, *Swains*.

Black-bellied Glossy Starling.

Juida melanogaster, Layard, B. S. Afr. pl. 173.

This is entirely a bird of the eastern districts, though Victorin records it from the Knysna. Captain Trevelyan sent it from King-williamstown, and Mr. Rickard procured it at East London. We have received it from Pietermaritzburg, and Captain Shelley met with it at Durban; Mr. Ayres says that in Natal it is a gregarious species, inhabiting bush-land, the food consisting of small fruits, the notes for the most part being loud and harsh. It appears to be widely distributed in Eastern Africa, occurring throughout the Zanzibar districts as far as Unyamesi.

Shining green, glossed with purple on the ears, scapulars, rump, and upper tail-covers; belly and flanks black, the latter glossed with copper; quills black, with obscure purplish edges; tail black, glossed with fine purple; no black spots on wing as in *L. phænicopterus*. Length, 8"; wing, 4" 5"; tail, 3" 5".

Mr. Ayres states that the bill is black, the tarsi and feet black, and iris darkish yellow.

411. PIOLIDAUGES VERREAUXII, *Bocage*. Verreaux's Glossy Thrush.

Juida leucogaster, Layard, B. S. Afr. p. 174.

This beautiful bird does not appear to extend into the Cape Colony, but we have seen specimens from Natal, where Mr. Ayres says it is gregarious, but not nearly so plentiful as most other species of Glossy Starling; Captain Shelley met with it both at Durban and Pinetown. It occurs in the Transvaal, having been met with by Mr. F. A. Barratt near Rustenberg, and by Mr. T. E. Buckley on the Gooqui River in Bamangwato. Mr. Frank Oates shot it near the Umvungu River, and it extends far up the east coast into the Zanzibar district. Mr. Andersson says it is common in Damara Land and to the northward, but only as a migratory bird, arriving at the approach of the rainy season, and gradually leaving as the country dries up, though he observed a few individuals remaining long after the general emigration was over; and these, he thought, might probably stay throughout the year.

The exquisitely coloured males arrived first and seemed to associate but little with the sombre females, from which they differ so marvellously in appearance. Anchieta has recorded the present species from several parts of Mossamedes and Benguela, and has also found it in Angola proper.

From Natal Mr. Ayres writes :—" Small fruits form their principal diet, although they sometimes feed on flies and the winged females of the white ant, rising and taking them on the wing, similar to the Flycatchers. In fact, almost every bird and beast that I know will occasionally feed on these insects, which in the spring of the year swarm out by millions, when hawks, dogs, cats, toads, &c., &c., all feast alike." Mr. Oates found the stomach containing " remains of insects, and a number of large white berries, and sticky yellow matter with the berries, the latter said to grow on trees, and to be used for bird-lime. In another bird the stomach contained a few remains of small insects, but principally a quantity of vegetable matter like fine grass."

The male of this bird is easily recognized by its beautiful puce colour above, and white belly. The irides are said by Mr. Andersson to be light chrome yellow, bill black, the legs brownish, and the toes the same but browner. The female has the upper parts dark brown, mottled with reddish brown, chiefly on the head; under parts white marked with longitudinal dark brown. Total length, 6 inches; wing, 3.9; tail, 2.5.

This species differs from the common *P. leucogaster*, from Western and North-eastern Africa, by the white on the outer tail-feather.

Fig. Bocage, Orn. Angola, pl. v.

412. SPREO BICOLOR, *Gm.*

Common Spreo.

Juida bicolor, Layard, B. S. Afr. p. 172.

The Common Spreo is found throughout the colony, frequenting places about which cattle are accustomed to graze, for the purpose of feeding on the insects which congregate upon their dung. They also constantly perch on the cattle, to rid them of the parasites with which they are infested.

They assemble during our winter season in small flocks, flying thickly together, and uttering loud and repeated chirps. At the breeding season they separate into pairs, and retire to rocks or houses to build, forming their nests of sticks, small roots, and fibres, in holes and crevices, and laying four or five lovely light-blue eggs,

sometimes faintly spotted with brown at obtuse end: axis, 1' 2''; diam., 10''.

They also breed in the sides of the gullies so frequent in the surface of the country, and called *sluitjes*, digging holes in the clay. When walking about over the newly-ploughed land, hunting for grubs, they have much the manner of the European Starling, and would be immediately recognized by even a casual observer as being allied to them.

Victorin does not appear to have met with it at the Knysna, but mentions it as occurring in the Karroo. Mr. Rickard says it is common at Port Elizabeth, but is not found at East London. Captain Shelley found it in Mossel Bay, and in Natal Mr. T. E. Buckley procured it at Newcastle. Mr. Ayres fell in with the species on the Vaal River, and also states that he found them on the Bushman's River in Upper Natal, and in increasing numbers (when the locality was favourable) all along the road to Potchefstroom in the Transvaal, where they are very plentiful.

Mr. Ayres gives the following note on the species in Natal:—
“These birds excavate holes for their nests in the perpendicular banks of the Vaal River, two or three feet from the surface of the ground, and from three to four feet deep, horizontally. The same holes appear to be used for successive seasons, being merely pierced further each year. The nest is composed of coarse grass, lined with wool, hair, and feathers; the eggs are from two to six in number.”

General colour, brown, changing into shot-green on the neck and tail; lower part of belly and vent, white; base of lower mandible, yellow. Length, 11"; wing, 6"; tail, 4" 2''.

Fig. Le Vaill. Ois. d'Afr. pl. 88.

413. *AMYDRUS CAFFER* (L.) Pale-winged Glossy Starling.
Juida fulvipennis, Layard, B. S. Afr. p. 173.

Le Vaillant states that this species inhabits the Great and Little Namaqua Lands. We have received specimens from Colesberg and the Free State, and Mr. Atmore found it at Aasvogelberg in the Prince Albert division. We also found it plentiful at Nel's Poort, flying about in small parties of from five to fifteen or twenty in number. Although *A. morio* likewise inhabits that neighbourhood in smaller numbers, I never found the two species mixed together in one flock, and they can at once be distinguished by the square

shape of the tail and the pale colour of the under side of the wing while in flight.

Eggs sent by Mr. H. Jackson are a light verditer, speckled throughout with minute brown specks. Axis, 1" 4''' ; diam. 9''' . They nest in holes of banks and inaccessible precipices. Mr. Anderson states that it is a tolerably common bird in Damara Land, and in the adjacent countries to the north and east, as well as in Great and Little Namaqua Lands. It is gregarious in its habits, congregating in small flocks, and is partial to rocky localities ; it sometimes flies at a considerable height, and frequents the water morning and evening. It feeds on seeds, berries, insects, etc. Mr. Monteiro found the present species very abundant near the coast from Novo Redondo to Mossamedes, and Anchieta procured a pair on the Rio Coroca.

Black, glossed with purple ; greater quills externally rufous, internally fulvous ; the shafts half white and half black ; " bill, legs, and toes black ; irides bright yellow " (*Andersson*). Length, 10" ; wing, 5" 6''' ; tail square, 4" 8''' .

Fig. Le Vaill. Ois. d'Afr. pl. 91.

414. *AMYDRUS MORIO, L.*

Cape Glossy Starling.

Juida morio, Layard, B. S. Afr. p. 173.

The " Red-wing Spree " is, equally with *S. bicolor*, a resident in all parts of the colony. It is partially migratory, appearing in certain places at certain seasons, its visits being determined by the prevalence of some favourite food. Of this the farmer-gardener and wine-grower are but too cognizant. Woe to the crop of ripe luscious figs that are left undefended : but few of them will find their way to market ; but few would be the grapes that would reach the wine-press, was not the vineyard guarded by vigilant bipeds with loaded guns : the red-wing Spree, aided by Finches, Sparrows, &c., would soon pick the crop. They do not, however, confine themselves to the neighbourhood of gardens, being extremely partial to the sea-coast, hopping about the rocks, even within the influence of the drenching spray, in search of small crustaceous or bruised shells ; nor do we think a bit of putrid fish would, in default of more cleanly fare, be rejected.

They breed among precipitous rocks, placing their nests in crevices, and laying four or five large blue eggs, speckled with brown. We have seen eggs quite pure blue : axis, 1" 5''' ; diam., 10''' .

Victorin notes the present species from the Karroo and the Knysna, and Mr. Rickard found it both at Port Elizabeth and East London. Mr. Ayres states that they are found in Natal, but not during the breeding season, and it extends into the Transvaal, where Mr. Ayres procured it in the Lydenburg district; and Mr. F. A. Barratt records its occurrence in the Orange Free State.

Mr. Ayres gives the following note on the species in Natal:—
 “Small fruits form their principal food, such as mulberries, of which they are very fond. Two of these birds perched on a tree, not long since, close to my house, one evidently a young one; the old bird, after swallowing a number of small berries, went to the younger and proceeded to feed it, by disgorging the berries one by one and giving them to the young, precisely as Pigeons do. Their note is a loud and rather prolonged whistle; they are not seen here at all times of the year.”

General colour, dark steel-blue; tail brownish; wings deep rufous, the large feathers more or less tipped with brown-black. Length, 13''' ; wing, 6'' 3'' ; tail, 6''.

Fig. Le Vaill. Ois. d'Afr. pl. 173.

Fam. PLOCEIDÆ.

415. *SYCOBROTUS BICOLOR*, *Vicill.* The Black-backed Weaver-Bird.
Sycobius bicolor, Layard, B. S. Afr. p. 183.

This species is found in the eastern districts of the colony, the most westerly point reached by it being Van Stadden's River, near Port Elizabeth, where we obtained it in March, 1870, in the wooded kloofs through which that river flows. Mr. Rickard tells us that he received several specimens from Kraggakamma, near Port Elizabeth. Proceeding eastward, we saw it sparingly near Grahamstown, the Kowie, Kat Berg, and Keish Kamma, and Dr. Atherston tells us that it is found all along the east coast. Captain Trevelyan has sent us several specimens from the neighbourhood of Kingwilliamstown, and states that it is not uncommon in the Peri bush. In Natal, Mr. Ayres found them frequenting the dense bush either singly or in pairs; he writes:—“Their notes are harsh and very unmusical, their ordinary song resembling the squeaking of a wheel wanting grease. They are fond of climbing and hanging about thick creepers and the foliage of trees in search of insects, much as some of the Barbets do, which birds they seem to me somewhat to

resemble. The nest is hung from the tip of some bough in the thick bush ; it is built in the form of a retort, with the neck hanging downwards, and is composed of the tendrils of vines.”]

It extends right up to the Zambesi, where it was obtained during the Livingstone expedition. Captain Shelley, who procured the species near Durban, says that “it inhabits the thickest parts of the bush, and being of an inquiring mind, frequently approaches an intruder within a few yards, still keeping concealed among the thick foliage, though its note is often heard as it creeps through the network of boughs.” Mr. Woodward observes : “It is very different in its habits to other Weavers ; it always remains in pairs, and builds its nest in the thickest parts of the woods ; the nest is large and roughly put together, but in shape like to that of the Yellow Weaver Bird (*H. ocularius*) ; it looks very pretty hanging from the topmost boughs of a high tree. The eggs are white, speckled with red ; it is a cheerful bird and quite enlivens the bush with its peculiar song, which sounds not unlike the creaking of a rusty hinge, from which we sometimes call it the ‘Hinge-bird.’”

General colour above sooty black, including the wings and the tail, sides of the face and neck ; the chin is dirty white tinged with pale yellow and mottled with brown ; the remainder of the under surface is bright yellow ; “bill very pale horn grey shaded with black on the culmen towards the tip ; legs lilac pink ; irides dark brown” (G. E. Shelley).

Fig. Jard. and Selby, Ill. Orn. new ser. pl. x.

416. HYPHANTURGUS OLIVACEUS, *Hahn*.

Olive and Yellow Weaver Bird.

Hyphantornis aurifrons, and *H. capensis*, Layard, B. S. Afr. p. 179.

According to Sir Andrew Smith, this Weaver Bird is generally diffused over the more southern districts of South Africa, in flocks of from ten to fifteen individuals, building on trees that overhang rivers and marshes. The nests are constructed of coarse grass, somewhat kidney-shaped, with the entrance towards the upper end and directed downwards. The following note was published by the author in the first edition of the present work:—“I have found this species to build indiscriminately over the driest spots, or over water. At this moment a large colony is established in some fir-trees opposite the house of a friend of mine,

at the outskirts of the town, on the way to 'Green-Point,' close to the main road, and the constant stream of traffic. I should not describe the entrance of the nest as Dr. Smith has done; but should rather say it was on the lowest or under side, opening downwards. The eggs are four or five in number, and of a beautiful spotless verditer: axis, 11''; diam., 8''. I have kept these birds for a considerable time in a large cage, and have known several in the possession of others. They become very tame, and will readily answer to the call. If they are supplied with cotton, or thread, they will weave it most industriously into the bars of the cage, forming a dense mass, which it is impossible to unravel. This work they perform entirely with their bills, clinging the while to the side of the cage with their powerful claws. They are most mischievous, cunning birds, and have more than once unfastened the bolts of my cage-door and got out; such, however, is their attachment to each other (I have two now before me in my cage), that they have never left the room, though the windows, on each occasion, have been wide open. A party have several times endeavoured to form a colony in the Governor's garden, but for some reason failed. This year (1861) a pair began to repair an old nest, in May, and I saw the male and several of his companions in full breeding dress. Cold, rainy, windy weather, however, blew away the structure, and though I hear the churring cry of the birds about, I see no signs of building up to the time I write (July 24)."

We have received specimens from Captain Trevelyan at King-williamstown, and Mr. Rickard has procured it at Port Elizabeth, and states that it is very plentiful at East London. Mr. Oates met with the species in the Transvaal, and Mr. F. A. Barratt notes it from the neighbourhood of Potchefstroom and the surrounding districts. With regard to the species in Natal the following note has been published by Mr. Ayres:—"These Weavers are exceedingly fond of sucking the nectar from the flowers of the Cape-Broom, a thorny tree which bears a bright scarlet blossom before the leaves appear, and is common all along the coast, where it blooms in the very early spring. They also feed on insects; their flight is heavy and undulating. They are sometimes solitary, and at other times to be seen in companies. These birds are more numerous in the Transvaal than in Natal, and breed there side by side with *Euplectes sundevalli*, and apparently in equal numbers.

Their nest is also composed of the same material as is used in the nest of that species; it is woven to two or more reeds, and consists of the leaves of the reeds torn into strips. The nest is in the shape of a retort with the neck cut off, the opening being downwards; and there is a sort of bar across the entrance, which prevents the eggs from rolling out; it is lined with the soft flowering heads of grass, which form a very warm bed for the young birds."]

The large size of the present species distinguishes it from most of the South African Weaver Birds, as also does the fact of its having no black on the head and throat. Some specimens are much finer than others, and have been called *H. aurifrons* by naturalists, but we consider them to be nothing more than fine old males of the common species.

Front, chin, throat, and breast saffron-yellow; top of head, sides of neck, and vent gamboge-yellow; nape, back, and rump lemon-yellow; back of neck and shoulders greenish-yellow; the middle of each feather pale olive-brown; wing feathers dark purplish-brown, edged with sulphur-yellow; tail olive-brown, tinted with yellow; bill liver-brown. Length, 7"; wing, 3' 6"; tail, 2' 6".

Fig. Smith, Ill. Zool. S. Afr. pl. 66.

417. *HYPHANTURGUS OCULARIUS*, *Smith*. Smith's Weaver Bird.
Hyphantornis ocularius, *Layard*, B. S. Afr. p. 182.

Sir A. Smith states that he found this species sparingly spread over South Africa, more especially in the vicinity of the south-east coast. He says that it does not congregate, but suspends a nest constructed of delicate fibres of bark, closely interwoven into the shape of a retort from the branches of trees. Eggs three, bluish-white spotted with dusky brown. A nest precisely answering the above description was forwarded to us by Colonel Armstrong of Bathurst, and several specimens were procured near Grahamstown by Mr. T. C. Atmore, who also got it at Eland's Post; Mr. Rickard has found it at East London. In Natal it probably remains about Durban and Pinetown the whole year, for Captain Shelley has specimens collected by Mr. T. L. Ayres in February, May, June, and July. Mr. T. E. Buckley procured it in Swazi Land in July, 1876, and Mr. Ayres has also obtained it in the Transvaal. Senor Anchieta also met with it at Humbe on the Cunene River, as well as at Capangombe and Pungo-Andongo.

Male.—General colour of under parts golden-yellow; forehead deep orange; back, rump, and shoulders greenish-yellow; chin, throat, and a transverse stripe enclosing the eye, deep-black bordered by a deep orange shade; bill black. In the female the chin and throat are not black, and all the colours less vivid. Length, 7''; wing, 3'' 3''; tail, 3'' 1''; irides yellow; bill narrow and curved.

Fig. Smith, Ill. Zool. S. Afr. pl. 30, fig. 2.

418. *HYPHANTORNIS CINCTA*, Cass.

Cassin's Weaver Bird.

This species is not uncommon in Benguela, according to Mr. Monteiro; and Senor Anchieta found it very plentiful in the neighbourhood of Novo-Redondo. It is a bird of large size, having the sides of the head and the throat black, and is nearly allied to the common *H. textor* of Western Africa. It has the mantle, however, of a bright yellow evenly mottled with black, which brings it very near to *H. nigriceps*, but it may be told from the latter species by the chestnut on the sides of the lower throat and crop.

Fig. Cass. Journ. Acad. Philad. v, pl. xxiii, fig. 2.

419. *HYPHANTORNIS NIGRICEPS*, Layard.

Black-headed Weaver Bird.

This species was originally forwarded to us by Dr. Moffat from Kuruman, and a specimen is in the British Museum from Natal. It is known to come also from Mozambique, and is apparently more plentiful along the coast of Eastern Africa and in the Zanzibar districts. Like *H. cincta* it has the entire head black, and the mantle bright yellow evenly mottled with black, but it has no chestnut on the sides of the lower throat and crop, these parts being yellow.

Mr. T. Ayres, who met with the present species when in company with Mr. Jameson, on the Umvuli River, writes:—"On the 1st of October we found a nest suspended over the water of one of the small rivers which run into the Umvuli on the north side; it contained two very pretty blue eggs. Subsequently a whole colony hung their nests over a pool of water close to our camp, but we left before the birds began to lay; this was in the middle of October. We later on found many nests hanging from the reeds on a small stream running into the Quaequae River. These nests much

resemble those of *H. mariquensis*, but are hung from the ends of the reeds instead of being placed between two upright reeds as is generally the case with *H. mariquensis*. The habits of the two species are precisely similar and the eggs likewise vary much in colouring; some are blue-white, others are white speckled with brown." A single specimen has been procured by Senor Anchieta at Capangombe and Caconda in Benguela.

Under parts bright yellow; upper parts the same, variegated with black: this effect is caused by the bases of the feathers being black, and the edges yellow; wing and tail-feathers dark-brown, the former with yellow margins to the outer webs, and the latter tinted with yellow; collar round the neck bright pure yellow; head, chin, and throat black. Length, 6'' 3'''; wing, 3'' 3'''; tail, 2'' 3''.

420. *HYPHANTORNIS SPILONOTUS*, *Fig.* Spotted-backed Weaver Bird.

Sir A. Smith describes this species as inhabiting the districts upon the south-east coast, but not found to the westward of Kaffirland, frequenting rivers, and suspending their kidney-shaped nests of woven grass over the water. We have received the species from Kuruman, and several have been shot at Oatlands, close to Grahams-town. Eggs, according to Dr. Smith, blue; but Mr. Ayres (*Ibis*, 1860, p. 212) says that in Natal they vary much in colour, being green, blue, white, and speckled white and brown.

Captain Trevelyan has met with it near Kingwilliamstown, and Mr. Rickard has procured it near East London. It extends to the northward, as Mr. Andersson has recorded it from the Lake country, though he is not certain of its occurrence in Damara or Great Namaqua Land.

The present bird belongs to the section of the Weaver Birds which have the sides of the head and the throat black, but the crown is yellow, the mantle being bright yellow, evenly spotted with black.

General colour of head, breast, belly, vent, and rump, bright gamboge-yellow: back liver-brown, and yellowish-green variegated; sides of head, chin, and front of throat black; wing-feathers brown, edged with yellow; tail greenish-brown; bill black; feet flesh-colour. Length, 7''; wing, 3'' 6'''; tail, 2'' 7''.

Fig. Smith, *Ill. Zool. S. Afr.* pl. 66, fig. 1.

421. *HYPHANTORNIS TEMPORALIS*, *Bocage*. Temporal Weaver Bird.

Recently described by Prof. Bocage from an example procured by Anchieta at Caconda in Benguela. We do not know the species, which is characterized by Prof. Bocage as being similar to *H. guerini*, but with the head and abdomen yellower.

Total Length, 6 inches; bill, 0·65; wing, 3·4; tail, 2·05 tarsus, 0·9.

422. *HYPHANTORNIS SUBAUREUS*, *Smith*.

Canary-coloured Weaver Bird.

This may be considered one of the rarest of the South African Weavers, as it does not occur within the limits of the colony. Sir Andrew Smith only met with a few specimens and those in the neighbourhood of Algoa Bay. Captain Shelley has received it from the vicinity of Durban, and Mr. T. E. Buckley procured a female in Swazi Land in June, 1876. Mr. Ayres has likewise met with it in the Transvaal.

Front, crown, sides of the head, and throat bright saffron-yellow; nape, back and sides of neck, back and shoulders between sulphur and gamboge-yellow; vent light chrome-yellow; bill liver-brown. Length, 6'' 10''; wing, 3'' 5''; tail, 2'' 9''.

Mr. Buckley found the soft parts as follows:—"iris light hazel; upper mandible horn colour, the under one lighter; legs dark brown." The species may be distinguished by the absence of black upon the head and face, the mantle being uniform olive-yellow; the under surface of the wings is golden yellow, the inner webs of the quills being broadly edged with that colour.

Fig. Smith, Ill. Zool. S. Afr. pl. 30, fig. 1.

423. *HYPHANTORNIS XANTHOPS*, *Hartl*. Golden-faced Weaver Bird.

This species may be shortly described as being very similar to *H. subaureus*, but differing from that species in having the throat faintly tinged with rufous, and having the under surface of the wings browner, with the inner webs of the quills narrowly edged with buff. It was procured by Mr. Jameson on the Umvuli River on the 11th of September, where, however, it was not very common, feeding among the blossoms of the "sausage tree." The iris is light tawny-yellow, the bill black, and the tarsi and feet pale brown.

Senor Anchieta has met with this species in several parts of Benguela, at Capangombe, at Caconda, and at Quillengucs.

424. *HYPHANTORNIS VITELLINUS*, *Licht.* Lichtenstein's Weaver Bird.

This is a small species with the sides of the head and the chin black; the mantle is olive yellow slightly mottled with brown centres to the feathers. It is distinguished by only having the upper half of the throat black. It is an inhabitant of north-eastern and of western Africa, but was found on the Zambesi by the Livingstone expedition.

425. *HYPHANTORNIS VELATUS*, *Vieill.* Black-fronted Weaver Bird.
Hyphantornis mariquensis, Layard, B. S. Afr. p. 182.

Although of moderate size, like *H. vitellinus*, the present bird is distinguished by having the entire throat black: it has also the forehead black, but this black colour is strictly confined to the forehead itself. We have adopted the name of *velatus* of Vieillot, and it is the *H. mariquensis* of Sir Andrew Smith's "Illustrations" where the species is represented in the undress livery in which, strange to say, it sometimes breeds, as we have been assured by Messrs. Ortlepp, Moffatt, and Dr. Exton, all reliable observers. We have received the species from Kuruman and Colesberg, and we also found it abundantly at Nel's Poort, nesting on the trees overhanging the rivers and water-courses. Their nests are shaped just like those of *H. capensis*, and suspended in the same manner. The eggs are subject to great variation: some are green, spotted with reddish-brown; others are cream-coloured, minutely *spotted* with reddish-brown or light-purple, or heavily *blotched* with the same. We have taken eggs with green and cream-coloured grounds out of the same nest: axis, 11''' ; diam., 7'''.

Mrs. Barber writes from "The Highlands," near Grahamstown: "I send herewith the nest of a kind of finch (a yellow bird, with a black head). They are common, and most likely you know both the bird and its nest, though I do not suppose that you know the material that the nest is made of; for in our youthful, bird-nesting days it puzzled us amazingly, until at length we found out the secret, and then I do assure you we were very proud of it, and gave ourselves much credit for finding out what no one had been able to tell us, which was, that the nest of this bird was made of the fibres of the leaves of a species of *Sansevieria*, a plant belonging to the natural

order *Asphodeleæ*; but as our *Flora* has not yet been published up to that order, I cannot give you its specific name with any degree of certainty. It is not the tall aloe, like one that grows in our forests; but the dwarf, thick-leaved, stemless *Sansevieria*, with the red edges to its leaves. The whole leaf is full of strong fibres, but from its tough nature the birds are only enabled to strip off the two marginal threads; and to construct one of these nests many thousands of *Sansevieria* leaves are deprived of their red-edged fibres; and in the neighbourhood of one or two of these nests you will not find a perfect leaf on any of these plants."

"In Natal," writes Mr. Ayres, "these birds are gregarious, and are troublesome to all cereal crops, as they live almost entirely upon grain and grass-seeds. They build their nests invariably amongst reeds which grow in swamps and shallow water. Whilst building, they have a curious habit of hanging by their feet from their nests, and, with wings extended, drooping and fluttering, they sway themselves slowly from side to side; this has a very pretty effect when a number of nests are close together, and all in about the same stage of building." The same gentleman gives a long note on their breeding in the Transvaal, as follows:—"In the beginning of August, 1871, I noticed that a pair of these birds had commenced building, hanging their nest on the pendulous twigs of a weeping-willow right over one of the secluded back streets of the town of Potchefstroom, at a height of perhaps twenty feet from the ground, the tree being large and one of a row. At this period the cock bird had not assumed the yellow plumage, or the slightest symptom of it that I could see, but was in appearance similar to the female. The building of the nest proceeded very slowly, and by the beginning of September it was not more than one-fourth completed, the pair of birds still remaining in the same plumage; but at this stage the nest was pulled down by some boys, and of course the birds left the place. At the same date (the beginning of September) I explored the reeds at the river and found many nests of this species in various early stages, and saw several cock birds in full yellow plumage. About the middle of September I again went to the river and found a good many nests among the reeds, but none finished or containing eggs; the nests are almost always hung between two reeds, sometimes where the water is knee-deep, at others where it is waist-deep, and sometimes where they

can only be reached by swimming; for the river, though narrow, is very deep, and the reeds either shoot up from the bottom, or form a sort of overhanging bank not easy of approach. On the 20th October I again visited the spot, but of the nests which I then examined I only found one containing eggs; I saw several cock birds in full plumage, and it is noticeable that the cock birds are more often to be seen at the nests than the hens. On the 1st November I obtained three nests, with eggs, from the same locality, but could not get the birds belonging to them; and though, as far as I could judge, the males were in full plumage, I was never certain which birds belonged to the nests which I took. I think, however, that Mr. Layard's correspondents are right considering 'that many of these birds do not assume the yellow plumage in summer, and that they breed, or at all events commence building, before assuming the breeding dress.'"

Mr. T. E. Buckley procured the species on the Limpopo River, and Dr. Exton found it breeding at Kanye in the Matabele country, where, he says, that the birds use grass for their nests as they cannot get the *Sansevieria*. The late Mr. Oates procured it on the Scruli River in October, 1873, and Mr. Jameson met with them not uncommonly about the Inshlangeen River in November, and in December he found them breeding at Palatswie Pan; while Mr. T. Ayres procured nests with eggs on the banks of the Makara, a tributary of the Moloppo River, where their neatly constructed nests were hanging on the bushes fringing the stream. Mr. Andersson states that the species is common in Damara Land, and the parts adjacent. Senor Anchieta has recorded it from Humbe on the Cunene River, and from Quillengues in Benguela. It should be noted that the specimens from Damara Land are smaller and brighter than Transvaal skins, but we think they are only to be considered a brightly-coloured race.

Male.—Top of head, breast, and under parts bright-yellow, darkest on the head; forehead, side of the head, beyond the eye, chin, and throat black, the colour ending in a wedge-shaped mark on the chest; back greenish; wings and tail brown, with a tint of yellow. The female is a dull-green, mottled, and wants the black of the face and throat. Length, 6"; wing, 3" 6"; tail, 2" 6".

Fig. Gurney, Ibis, 1868, pl. 10.

426. *HYPHANTORNIS CABANISI*, *Peters*. Cabanis' Weaver Bird.

This species belongs to the black-throated section of *Hyphantornis*, but has only two-thirds of the crown black, this colour not extending over the crown as far as the length of the culmen. It was described by Professor Peters from specimens procured by himself at Inham-bane, and it is characterized by him as a small race of *H. capitalis* (= *H. velatus*). It is known also from Mozambique, and extends into the Zanzibar districts.

427. *HYPHANTORNIS NIGRIFRONS*, *Cab.* Black-fronted Weaver Bird.

A specimen of this Weaver Bird was in the editor's collection from Natal, and is now in the British Museum, and Captain Shelley has a female in his collection from Durban. It would appear, however, to be more plentifully distributed in the interior, Mr. T. E. Buckley having met with it in Swazi Land, and again in the Matabele country at Tati, and in Bamangwato. The late Mr. Frank Oates procured specimens at Inyati, and again at Ishokwani, near the Semokwe River. It is likewise found further up in eastern Africa. Of its nesting habits and general economy nothing has as yet been published; Mr. Frank Oates found insects in the stomach of one that he killed, and states that in a female bird the bill and legs were pinkish, the upper mandible being tinged with dusky, and the iris pale reddish hazel. In one male bird he found the iris yellowish white, while in another one it was straw-colour.

The present species has the forehead black, extending over three-quarters of the crown of the head, the black portion measuring more than the length of the culmen.

428. *HYPHANTORNIS CAPITALIS*, *Lath.* Rufous-chested Weaver Bird.

In the British Museum are specimens of a Weaver Bird which are certainly referable to this species; they were collected by Sir Andrew Smith somewhere in South Africa, but we have not received the species, as far as we know, from any of our correspondents. Sir Andrew Smith's specimens are evidently the bird called by Latham the "Capital Tanager," the characters of which appear to be a completely black head, black face and throat; the latter succeeded by a strong rufous shade on the breast, while on the hind neck there is a collar of bright yellow, which separates the black head from the rest of the upper surface. We shall be glad of further

information as to the present species, and its distribution in South Africa.

429. *HYPHANTORNIS INTERMEDIA*, Rüpp. Rüppell's Weaver Bird.

Two adult males from Benguela and another from Quillengues are recorded by Prof. Bocage, as having been obtained in South-western Africa by Senor Anchieta; the species also occurs in Angola Proper.

Not having an example of the species before us we quote the description given by Prof. Bocage:—

Adult male.—A black hood covering the head, from the forehead to behind the eyes, the cheeks, ear coverts and throat, where it terminates in a rounded border; hinder part of head, breast, and flanks tinged with maroon-rufous; base of the nape, sides of the neck and lower surface jonquil yellow; back greenish yellow, marked with slightly characterized brown streaks in the centre of the feathers; rump and upper tail-coverts more marked with yellow; lesser wing-coverts of the same colour as the back with brown streaks, the other coverts and the quills of a dark brown, bordered with yellow; tail-feathers olivaceous brown with paler edges and tints of yellow; bill black; feet brownish; iris yellow. Total length, 5 inches; bill, 0.55; wing, 2.75; tail, 1.95; tarsus, 0.8.

Fig. Heugl. Orn. N. O. Afr. taf. xviii, fig. a (head).

430. *HYPHANTORNIS XANTHOPTERUS*, Finsch and Hartl. Yellow-winged Weaver Bird.

This species was discovered during the Livingstone expedition to the Zambesi, and was met with by Dr. Kirk in the Shirè Valley.

The following description was given by Drs. Finsch and Hartlaub (l.c.):—Head intense golden yellow; lores, cheeks, and throat bright ferruginous; back dull yellow; greater wing-coverts and secondary quills dusky black broadly margined with yellow; primaries golden yellow with a broad ending of dusky black; tail pale dusky brown margined with yellow; the whole of the belly very deep yellow; bill black; feet fleshy. Total length, 6"; bill, 7½''; wing, 2'' 9''; tail, 1'' 9''; tarsus, 10''.

431. *SHARPIA ANGOLENSIS*, Bocage. Sharpe's Weaver Bird.

Senor Anchieta has discovered this species at Caconda in Benguela, and it was described by Professor Barboza du Bocage, who states that although generically distinct from *Hyphantornis* it somewhat

resembles the slender-billed members of the latter genus, and it must be placed in the neighbourhood of the last named form and *Malimbus*.

The following is a translation of the original description:—Above dusky olivaceous; the back, rump and upper tail-coverts citron yellow; wing-coverts duller, and dusky brown in colour; the median series with a broad ending of white; the greater coverts edged with white on the outer web, underneath white; the breast and abdomen yellowish; quills dusky, the outer web narrowly fringed with grey; tail dusky; bill dusky horn colour, the mandible paler at the base; feet pale dusky; iris red. Total length, 5·5 inches; bill, 0·65; wing, 3·35; tail, 1·95; tarsus, 0·75.

432. *MALIMBUS RUBRICEPS*, *Sunder.* Red-headed Weaver Bird.

This handsome Weaver Bird was discovered by the late Professor Wahlberg on the Limpopo, and besides one specimen in the British Museum, formerly in the collection of the editor, we have only seen two other specimens obtained by Mr. F. H. Guillemard in the Waterberg district of the Transvaal. During Mr. Jameson's expedition it was procured on the Tatin River;* Mr. Ayres writes as follows:—“This is by no means a common bird. I found it breeding at the Tatin; it makes a rough retort shaped nest which hangs mouth downwards from the outer twigs of rather tall trees. Sometimes a new nest is hung on to the tube of last year's structure. Mr. Jameson found a nest to the north of the Umvuli in October, with two blue eggs in it, and at Tatin we pulled down one of the double nests, and Mr. Jameson on trying to put his hand up to the tube very nearly got bitten by a snake, which was lying in the nest and had swallowed the old bird as well as her blue eggs. It is evident therefore that nests of this shape do not keep out snakes.” Senor Anchieta has procured the present bird in Benguela at Quillengues and Capangombe as well as at Humbc.

We transcribe the following diagnosis given by Mr. Elliot in his review of the genus *Malimbus* (*Ibis*. 1876, p. 461):—Entire head, neck, throat, and breast bright scarlet; back and wings ashy brown, outer edges of secondaries and primaries bright yellow; centre of the mantle washed with pale vermilion; rump pale ash; tail ashy brown, the edges of the outer webs bright yellow; entire under

* Captain Shelley informs us that he considers Mr. Jameson's bird different from *M. rubiceps*.

parts pure white; bill pale horn colour; total length, $5\frac{1}{2}$ inches; culmen, $\frac{1}{2}$; wing, $3\frac{1}{4}$; tail, $2\frac{1}{4}$.

M. Guillemard has published the following note on the species:—
 “In the male, the entire head, checks, chin, throat, and neck are a brilliant orange red, the lowest feathers of which at the nape are slightly tipped with black. Whole of under surface dirty white; back brown, with a slight surface tinge of greenish yellow; wings brown, the outer webs of primaries and secondaries being edged with canary yellow, as are also the outer webs of the tail feathers, though faintly; iris reddish brown; legs brown; bill yellowish. Female similar, except that the brilliant head of the male bird becomes in her a dirty greenish yellow. Length, 5 inches; wings, $3\frac{1}{4}$ inches; tail, 2 inches. The nest, composed of dried leaves, small sticks and grass, was a curious structure, inasmuch as the dependent mouth was bell-shaped and larger than the top of the nest in which the eggs were laid. The latter, two in number, I have unfortunately lost. They were of an entire blue colour. The nest, taken in the month of December, was built at the end of a mimosa branch, and was some distance from any water.

Fig. Elliot, *Ibis*. 1876, pl. xiii, fig. 2.

433. TEXTOR ERYTHORHYNCHUS, *Smith*.

Red-billed Black Weaver Bird.

This species is easily recognized by its red bill, and it is distinguished from the other species of the genus *Textor* by having the basal half of the under surface of the primaries white. It is not found in the Cape Colony, and Sir Andrew Smith procured it after passing the 25th deg. of south latitude, frequenting herds of buffaloes, and perching on their backs in search of the parasitical insects which infest their hides. We have received it from Kalahari desert through the late Mr. Moffatt. “In the Transvaal,” writes Mr. Ayres, “this finch inhabits the bush and is not, so far as I know, ever found in the open country. We met with but few of them, and then always in company with the little blue Hoopoe (*Irrisor cyanomelas*) in twos and threes. The stomach of the bird sent contained insects; but berries, seeds, and fruits were not to be had at that season, our trip being in mid-winter.” Mr. T. E. Buckley met with the species in Bamangwato, and the late Mr. Frank Oates procured several specimens at Tati, and also near the first Makalaka Kraal on the Zambesi road. This gentleman shot a specimen out of a

flock of long-tailed Whydah birds (*Chera progne*), and found seeds and insects in its stomach. During Mr. Jameson's expedition it was met with at Kooroomoorooi Pan, and Mr. Ayres writes :—"These birds are exceedingly local, for I have only met with them at the present spot and on the Crocodile River close to its junction with the Marico. The nest is placed high up in a large tree and is composed of long twigs and coarse grass and measures about three feet in diameter. It is so roughly put together that one can see through it excepting close to the centre. The birds roost in these nests which are probably used year after year. They feed upon seeds, berries, and insects." Mr. Andersson gives the following note :—"This large finch-like bird is rather common in Damara Land and also in the Lake regions, where it is known to the natives by the name of 'Isaba Gushoa.' It is a noisy species, gregarious in its habits, breeding in colonies, and constructing many nests in the same tree : it seems to prefer the giraffe-acacia for the purpose of nidification ; and it is curious that when these birds have used a tree for this purpose it usually withers in a short time after the building of the nest is completed ; but whether birds instinctively select such trees as have a tendency to decay, I am unable to say. The collective nests consist externally of an immense mass of dry twigs and sticks, in which are to be found from four to six separate nests or holes of an oval form, composed of grass only, but united to each other by intricate masses of sticks, defying the ingress of any intruder except a small snake. In each of these separate holes are laid three or four eggs, exactly resembling sparrows' eggs, but much larger. I obtained no less than forty of these eggs (all much incubated) on January 29th, from two low trees standing close together, at Amatoni, in latitude 18° south ; and on the following day the birds were busy in repairing one of the collective nests, which had been injured during the collection of the eggs which it contained. I believe these nests are annually added to ; for, so far as I have been able to see, the same nest is retained for several consecutive seasons. This species is said by Dr. Smith to be a frequent attendant on the parasites which infest the hide of that quadruped : I have never observed this in Damara Land, which may be owing to the buffalo being a scarce animal in that country. The irides in this species are brown." The present species has also been found by Senor Anchieta, at Humbo on the Cunene River and at Quillengues, Gambos and Caconda.

General colour of adult male black ; the first half of each wing-feather white ; bill orange-red or coral-red ; legs and toes orange or coral-red ; iris dark hazel. The young bird has some whitish patches on the neck and breast. Length, 9' 6''' ; wing, 5'' ; tail, 4''.

Fig. Smith, Ill. Zool. S. Afr. pl. 64.

434. PLOCEPASSER MAHALI, *Smith*. White-browed Weaver Bird.

P. mahali, and *P. pileatus*, Layard, B. S. Afr. p. 187.

Sir A. Smith discovered this species to the north of the Orange River, where he found it congregating in large flocks, and we have received specimens from Kuruman, and also from Mr. Ortlepp at Colesberg. He writes :—" Soon after crossing the Orange River at Rhama they became plentiful. Several flocks build in the same tree, generally on one side only. The nests are kidney-shaped, with two entrances from below, with a band of grass between them on which are laid the eggs. The grass used is pretty thick at the one end which is allowed to bristle out, as the weaving can only be done with the ear and a small portion of the stem. I noticed several nests of the common Sparrow (*P. arcuata*) made of the same sort of grass and presenting the same bristling appearance. They are active birds constantly on the move from tree to tree. When on the ground they utter a short "chick chick," which is anything but pleasant to the ear, although when on the perch their note is changed into a short song something like that of *Crithagra selbyi*." We have received it from Mr. T. C. Atmore, from Griqua Land, and in the Transvaal, writes Mr. Ayres :—" these birds are common throughout the bush, but are not seen in open country ; they are gregarious, and have a chattering note, which gives the idea of sociability. Several build together in the same tree. We found plenty of old nests on our late journey to the Limpopo ; they were very rough structures, made up of grass, with the long ends sticking out in every direction, and formed like retorts, with two short necks hanging down, and with so small a flat surface inside for the eggs to lie on, that I cannot understand how it is they do not always roll out at one end or the other, especially as the nest is built or hung on the outer twigs of the spreading Mimosas, and is very liable to be shaken by the wind." Mr. T. E. Buckley procured it in Matabele Land, and at Shashai, and Mr. Ayres has published a note on the

bird as observed by him during Mr. Jameson's expedition into the interior:—"This is a very common species in many parts of the Bamangwato country and from thence to the southward. There are many nests on the trees in a kloof near Mangwato, and on a still day their loud but not unpleasant notes resound amongst the rocks. Occasionally two cock birds will fight with such eager ferocity that clutching one another they fall struggling to the ground, and even when thus picked up they will still continue to peck at each other. The nest is retort shaped with two necks, very rough outwardly and composed of wiry grass stalks, inwardly lined with feathers. The eggs rest on a sort of platform between the two necks of the nests and are three in number, of a pinkish white much marked in indistinct stripes of pinkish brown, more especially at the obtuse end. The eggs measure 1 inch by 0.6." Mr. Andersson observes:—"Damara Land proper would seem to be the stronghold of this species; but I have also found it abundant at Lake N'gami and in the neighbourhood of the Okavango, and it likewise occurs, though less frequently, in Great Namaqua Land. It is gregarious in its habits and may occasionally be seen in large flocks; it usually frequents the wildest and most desolate spots, far away from either fountain or stream. It feeds chiefly on seeds and insects, which it seeks for on the ground, and, if disturbed, usually takes refuge in the nearest tree till the supposed danger is passed, when it resumes its previous occupation. At the beginning of the rainy season this bird occasionally, though rarely, sings so melodiously that I have seldom heard anything more exquisite. Several pairs of these birds build on the same tree, constructing large rambling nests of coarse grass near the extremities of the boughs; each nest contains two or, rarely, three eggs; and I have observed that all the *old* nests have two entrances. The bill, legs, and toes in this species are yellowish red. Senor Anchieta has met with it at Capangombe, Maconjo, and Biballa, as well as at Quillengues and Caconda.

Upper part of head, and stripe on each side of neck black-brown; stripe over the eye white, widening considerably to the back of the head; side of head brown; side of neck and back light-brown; rump, vent, chin, and throat pure white; breast and belly dull-white; wings with two white stripes across the shoulders. Length, 6'' 6''' ; wing, 4'' ; tail, 2'' 9'''.

Fig. Smith, Ill. Zool. S. Afr. pl. 65.

435. *AMBLYSPIZA ALBIFRONS*, Vigors. White-fronted Weaver Bird.
Pyrenestes frontalis, Layard, B. S. Afr. p. 191.

Sir Andrew Smith states that the present species inhabits the forests on the eastern frontier and in Natal, feeding upon berries and small fruits. On the 13th September, 1870, Mr. J. C. Rickard wrote to us from East London: "I have just obtained a nice specimen of *P. frontalis*, I think, but I could not ascertain the sex by dissection. It has the white forehead, as in Smith's plate, but the plumage has not so much of that warm brown tint as there shown. Nearly all the feathers are narrowly edged with greyish-white, giving it a sealed appearance. The bill is also darker in colour; the lower mandible lighter than the upper; the culmen runs well up on the forehead, dividing the white into two distinct patches. In the stomach was a quantity of hard substance like broken cherry stones, evidently the remains of wild plum stones."

From Mr. Rickard's description we should fancy this must have been a young bird bred somewhere in the neighbourhood. Captain Trevelyan tells us that it is rare near Kingwilliamstown, and he only procured one specimen during his stay in British Kaffraria. Mr. F. A. Barratt found the species in the Macamac goldfields, but it appears to be entirely confined to South Africa, and does not extend beyond the Zambesi.

General colour, orange-coloured brown, with the feathers on each side of the upper mandible white, and a speculum of the same colour on the wings, formed by all the quill-feathers being white at their base. Length, 7" 4"; wing, 3" 9"; tail, 3".

Fig. Smith, Ill. Zool. S. Afr. pl. 61.

436. *PHILETÆRUS SOCIUS*, Lath. Sociable Weaver Bird.

This bird is most abundant in the interior. Sir A. Smith looks upon Latakoo as its metropolis; but we have heard of it in great numbers all over Damara Land, and even as low down as Namaqua Land. Being the builder of the huge nests so often mentioned by travellers, it is well known. Eggs three or four, bluish-white, mottled at the large end with small brown dots. Feeds on seeds and insects.

The following note is given by Mr. Ayres in his paper on the birds of the Transvaal:—"I first met with this curious bird near the Vaal River, where there were several colonies amongst the large camel-thorn trees. Their huge nests were very conspicuous at a

considerable distance ; I first saw them in July, 1869 (midwinter), when the birds, in flocks of from thirty to forty, were still inhabiting their nests, in which they appear to sleep all the year round, adding to them each summer as the colony increases. I visited a nest early one morning and found it apparently deserted ; but on throwing a stone or two at it, I heard a gentle chattering, and presently out flew a bird, and then another, till the whole family were out. I found them afterwards feeding on the ground at some little distance ; on rising they uttered the same chattering note, and continued it during their flight. The nests are very irregular structures, varying in size from a wheelbarrowful to a large cartload of coarse sticks and grass, the mass forming a very thick and weatherproof roof, in the substance of which the separate chambers are formed. The number of these varies according to the extent of the colony. The apertures of the chambers face downwards, and are barely large enough to admit a man's hand. There is no connection between the chambers ; and each of them is warmly lined with feathers. In February, being again in the district inhabited by these birds, I cut a nest or two down and found the young birds mostly flown. One chamber only contained callow young and a single unhatched egg, greyish-white, indistinctly mottled with sepia-brown. There were several nests on one tree, each three or four feet in diameter."

Mr. F. H. Guillemard writes as follows :—"The country north of the Diamond Fields seems to be the chief habitat of the Social Grosbeak, *Philæterus socius*. Whether this bird has retreated before the march of civilization I do not know, but it certainly seems as if it were less common now in districts where former travellers, like Harris, once found it abundant. Its huge nests, so often described by interior travellers, do not need a further allusion here. I fancy they last for a great number of years, although they are continually being repaired by their active little inhabitants. It is curious that even the initiated eye is constantly being deceived by these peculiar dome-topped structures ; at a distance they closely resemble native huts, except that the latter are less conspicuous, and occasionally so exactly match the colour of the ground that I have more than once found myself close to a kraal without having been previously in the least aware of its proximity. Like many other creatures living in communities, the Social Grosbeak, far from being as amiable as it is supposed to be, is anything but averse to a quarrel, and I have often

seen them fight till the combatants were surrounded by quite a little cloud of feathers."

Mr. Andersson gives the following note:—"Great Namaqua Land is the headquarters of this species, and the Orange River is its southern limit; in Damara Land proper it is of somewhat rare occurrence. It congregates in large flocks; and when breeding, many pairs incubate their eggs under the same roof, which is composed by these birds of whole cartloads of grass piled on a branch of some camel-thorn tree in one enormous mass of an irregular umbrella-shape, looking like a miniature haystack, and almost solid, but with the under surface, which is nearly flat, honeycombed all over with little cavities, which serve not only as places for incubation, but also as a refuge against rain and wind. The eggs of this species are three or four in number, of a drab colour, closely speckled with minute spots of purple grey; the eggs, however, vary in the intensity of their ground-colour, and also in the degree to which they are spotted, as well as in their shape, which is in some cases very round, and in others more elongated."

Flanks with a blackish patch, the feathers of which are margined with whitish; chin black; plumage above drab brown; the margins of all the feathers, and the whole of the under parts, pale isabella. Length, 5"; wing, 3"; tail, 2". "The irides are dark brown; the bill pale livid horn-colour; the legs and toes light brownish horn-colour" (*Andersson*).

Fig. Smith, Ill. Zool. S. Afr. pl. 8.

437. SPOROPIPES SQUAMIFRONS (*Smith*). Scutellated Weaver Bird.
Estrellda squamifrons, Layard, B. S. Afr. p. 169.

Sir Andrew Smith states that this species is frequently met with to the northward of Latakoo, but rarely to the southward. We have received it from Kuruman and Colesberg. In the Transvaal Mr. Ayres writes:—"These curious little birds are gregarious, but not common in the districts I visited; I found them on the Limpopo, but never in the open country. When seen they were actively hopping about the low thorn bushes; and in March last, I found them building amongst similar bushes about the Hartz River. The nest is placed amongst the thorny twigs of the bush, a few feet from the ground, and is composed outwardly of thin grass stalks, the ends roughly protruding in all directions; it is thickly and very

warmly lined with the soft silky down of a species of *Asclepia*, and is of much the same shape as the nest of *Estrelida astrild*, but with a more prolonged entrance, which gives the nest the appearance of a retort placed horizontally in the bush, with the neck inclining slightly downwards. The eggs are five in number, of a greenish-white, much blotched with umber-brown, especially towards the thicker end, and sometimes much marked with brown lines."

Mr. Frank Oates procured a specimen on the Semokwo River, and Mr. Jameson found the species breeding on the Palatswie Pan in December. According to Mr. Andersson, "this species is widely and commonly diffused over the middle and southern portion of Damara Land; it is also pretty common in Great Namaqua Land, in the Lake regions, and at the River Okavango. It is a gregarious species, and is comparatively tame, often taking up its abode close to man. It feeds on grass-seeds and insects, which it chiefly seeks on the ground amongst the grass, resorting in small flocks to open localities thinly covered with dwarf vegetation."

Mr. Monteiro states that it was only observed by him in the rocky barren districts to the south of Benguela; and Senor Anchieta has procured it at Humbe on the Cunene River.

General colour above, light liver brown; feathers of wings and tail darker, edged with white; top of head and moustache black; the feathers of the first being edged with white, giving a scaly appearance; under parts dusky white; "the irides are dark brown; the bill yellow horn-colour, darkest above; the legs and toes yellow brown (*Andersson*). Length, 2' 6"; wing, 2' 5"; tail, 1' 9".

Fig. Smith, Ill. Zool. S. Afr. pl. 95.

438. VIDUA VERREAUXII, *Cass.*

Verreaux's Widow Bird.

This is a South African representative of *Vidua paradisica*, from which it only differs in being a little smaller, and having the back of the neck slightly paler. Captain Bulger procured the species at Windvogelberg, and Mr. F. A. Barratt had specimens in his collection from the vicinity of Rustenberg. Mr. Oates obtained a male at Tati, and Dr. Kirk on the Zambesi and Shirè Rivers. Mr. Andersson writes:—"This species occurs in Damara Land in the wet season, but is even scarcer than *Vidua principalis* in that country, though not unfrequent at Lake N'gami." Senor Anchieta has met

with it in Mossamedes, where it bears the name of "Kilatambo," as well as at Quillongues.

Head, throat, back, wings, upper and under tail-coverts, and tail black; neck, and remainder of the body buff, shaded with chestnut on the sides of the body, back of the neck, and centre of the chest. This species is easily distinguished by having the four elongated centre tail-feathers broader than the others, and may further be distinguished by the black bill. Length, 11 inches; culmen, 0.4; wing, 2.9; tail, 8.1; tarsus, 0.65.

Figs. Buff. Pl. Enl. 194, figs. 1, 2.

439. VIDUA REGIA (*L.*) Shaft-tailed Widow Bird.

We have received this bird from Mr. Arnot at Colesberg, and Mr. F. A. Barratt met with it near Rustenberg. Mr. T. E. Buckley procured a male on the Limpopo River in November, and the late Mr. Frank Oates obtained a series at Tati. Mr. F. H. Guillemard once met with it in the Marico district, and Mr. T. Ayres states that during Mr. Jameson's expedition several of these species were seen chasing each other about near Selenia Pan, and were also fairly abundant near Kanye and in the Matabele country. They affect well-wooded country with open patches of grass land. Mr. Andersson states that it visits Damara Land and the adjacent parts during the wet season, and is then by no means uncommon. Anchieta has only met with it once in Benguela.

Sides of head, under parts of body, and round the neck, rufous; hind part of neck spotted with black; plumage above, lower part of thighs, and vent, black; four middle tail-feathers nearly 10" long, and webbed only for about two inches at the end, the rest simple shafts; other feathers even, short, and black; bill and legs red.

Female.—Brown, and without the long-tail feathers. Length, 5"; tail (without long feathers), 2"; wing, 2" 10". The peculiar shafted tail-feathers distinguish this species.

Fig. Vieill. Ois. Chant, pls. 34, 35.

440. VIDUA PRINCIPALIS (*L.*) Common Widow Bird.

These birds are found in small flocks throughout the colony. The male only assumes the long tail-feathers during the breeding season. In the winter he closely resembles the female, who is clad in a sober livery of mottled brown and black on the upper parts, whitish on

the centre of the belly, and rusty on the flanks ; on the head are six dark black-brown stripes, divided by brown stripes, those which pass through the eye immaculate, the others dotted with dark-brown. Victorin procured this species at the Knysna from September to November, and Mr. Rickard says it is very common at East London, and he also met with it at Port Elizabeth ; thence it extends throughout Natal into the Transvaal. Mr. Ayres writes :—" This Finch is not uncommon south of Mangwato, usually in pairs and is also found though more sparingly in the Rustenberg and Origstadt districts of the Transvaal. During the breeding season when the wonderful tail of the cock-bird is fully developed, he will sometimes rise until nearly out of sight, when he suddenly descends with much velocity and if approached makes off with ease and swiftness." Mr. Andersson remarks that it is " rather a scarce species, much more so than *V. regia* ; it only occurs during the rainy season, and is generally seen in pairs or in very small flocks. Its food consists of the seeds of grass." Senor Anchieta has procured it at Caconda and Quillengues. It is also found distributed over the African continent. With regard to its habits in confinement the author published the following note in his first edition :—" They feed on grass seeds, and are only to be found in open grassy country ; they rarely perch on trees, though a pair in my aviary always roost on the perches, the female having taken possession of the highest in the whole cage. The female amuses me by the way in which she scratches on the sandy cage-bottom. How she does it I cannot tell, her motions are so quick ; but she apparently springs forward and spurs backwards, and the sand and seed fly in showers at each repetition of the manoeuvre. I have frequently observed the hovering motion described by Mr. Ayres (*Ibis*, Vol. 2, p. 212), but attributed it to a design of the male to take care of his long tail." It is called by the colonists " Koning-Roodebec," or King of the Red-bills.

General colour, deep glossy black : this colour covers the crown and the back ; collar pure white ; wings and scapulars the same ; lower parts of back and rump white ; on the wings a large patch of white ; ears, side of head, and under parts pure white ; but the black colour of the back advances on to sides of breast, so as to form a half collar, open in front ; tail-feathers externally black, internally white, this latter colour predominantly on the outermost feathers ; four middle tail-feathers greatly elongated, two convex and two (one

within the other) concave. Bill, brilliant rose-red. Length, 10''; wing, 2'' 9''; tail, 8''. The male often has a black chin, and is as often without this mark, which may be a sign of old age. The young is a plain brown bird and was described as *Estrella carmelita* by Dr. Hartlaub (Ibis, 1868, p. 46).

Fig. Swains. B. W. Afr. i, pl. 12.

441. VIDUA ARDENS (*Bodd.*) Red-collared Widow Bird.

This is a bird of the eastern portion of South Africa; Mr. Rickard has found them at East London, and we fell in with them at Alice and on the Blinkwater. Captain Trevelyan says that it is common near Kingwilliamstown. Mr. T. C. Atmore sent several specimens from Eland's Port, where it was common; our friend Captain Harford observed it in Natal, where also Mr. T. Ayres has procured it. Captain Shelley also met with it at Pinetown, and Mr. T. E. Buckley obtained it in full breeding plumage on the Drakensberg Mountains in December. Mr. F. A. Barratt states that he shot the species between Potchefstroom and Rustenberg, and also near Pretoria. He has seen it at the Macamac Goldfields, but did not notice it further south than the Rhinoster River. Dr. Kirk likewise procured specimens at Chibisa on the Zambesi and on the Shirè River. It also extends to the west coast, having been obtained by Dr. Schütt at Malange in Angola.

Mr. Guillemard writes:—" *Vidua ardens* is not uncommon on the rivers of the north-western Transvaal, and may be met with even as low as Rustenberg. It is fond of haunting large reed beds, from which it does not seem ever to wander far; indeed, it is so shy that one is rarely able to get a shot at it. At a distance they much resemble *Chæra prognæ*, from which they are only to be distinguished by their smaller size. In summer plumage the bill and feet are jet black, and, besides the tipping of the under tail coverts with grey, there is occasionally a grey feather or two about the head.

Captain Harford informs us that in Natal they fly in flocks, five or six males with about fifty females. This we also observed when we fell in with them in the swampy grass lands and fields of Kaffir corn at Alice. The females usually hid themselves in the sea of herbage, diving to the bottom in a moment, while the males, after occasionally doing battle with each other, or hovering with the peculiar jerking, flapping motion, common to this genus and *Chæra*, over some of the

females concealed in the grass, would betake themselves to some elevated head of corn or rush, and thence survey the field. We feel convinced that all the species of the genus *Vidua*, and also *Cheraprogne*, that we have encountered in South Africa are polygamous. This may also account for what Mr. Atmore and others tell us of the breeding of several females of *Estrellda astrild* in the same nest.

Mule.—In full breeding plumage, generally velvet-black, with a broad half collar beneath of brilliant scarlet; wings, thighs, under tail-coverts, and rump striped with grey, that colour being on the edges of the feathers; tail elongated. Total length, 10'' 6''; tail, 7''; wing, 3''; tarsus, 11''. Male in non-breeding dress variegated black on a ochrey-white ground; under parts ochrey-white, not so dark as that of the back; wings and tail-feathers black, the former edged with whitish; a faint trace of the red collar is visible on the throat.

Fig. Buff. Pl. Enl. 647.

442. SPERMESTES CUCULLATA, *Swains.* Hooded Weaver Finch.

The chief habitat of this species is the west coast of Africa. Professor Peters, however, procured it at Inhambane. Mr. Ayres has found it in Natal, and it appeared in a considerable flock at Table Farm near Grahamstown. It is a common West African species, and has been found by Senor Anchieta at Dombo and Caconda in Benguela.

General colour above, greenish brown; head, neck, and breast deep brown with a purple-bronze gloss; shoulder coverts black, with a green gloss; under parts white, with bronze patches on sides of flanks and wavy lines on the under tail coverts; tail nearly black with a slight green gloss. Length, 3'' 3''; wing, 1'' 11''; tail, 1'' 4''.

Fig. Reichb. Singv. taf. xiii., figs. 114, 115.

443. SPERMESTES RUFODORSALIS, *Peters.*

Rufous-backed Weaver Finch.

This pretty little species was described by Dr. Peters from Inhambane, but is more generally seen in collections from the Zanzibar district.

Head, neck, breast and tail black; hind-neck, mantle, wing-coverts, and tips of secondaries rufous; quills dusky, partly black on the outer margin, spotted or banded with white, and internally

whitish; rump, flanks, and thighs black banded with white; abdomen and under-wing coverts white; bill bluish-white; feet black. Total length, 3" 4''' ; bill, 4''' ; wing, 1" 9''' ; tarsus, 5''' (Hartl. and Finsch).

Fig. Blanc. Spec. Zool. Mozamb. Fasc. xviii., taf. iv., fig. 1.

444. ORTYGOSPIZA POLYZONA (*Temm.*) Little barred-breasted Finch.

A large series of this little Finch was collected by Mr. T. C. Atmore at Eland's Post, and we have received it from Colesberg from Mr. Ortlepp. Mr. T. Atmore says that "it is very common on the flats in the Free State, and small as it is, its scent is so strong that pointers will stand to them. In rising they utter a sharp chirrup, and then fall suddenly to the ground." Mr. Ayres has procured it in Natal, and Mr. Frank Oates shot two out of a flock in the desolate country near Newcastle, in June, 1873; Mr. Ayres has likewise met with it in the Transvaal, and he observed it in the Matabelo country in December. In Natal Mr. Ayres writes, "these Finches are only found here during the autumn and winter months, from May to August or thereabouts; they are generally, but not invariably, gregarious; they seem always to settle on the ground amongst grass or weeds, and not on the stalks of the grass or on bushes; their flight is rapid; on rising, they utter a chattering note with a peculiar metallic sound. The seeds of grass and weeds form, I think, their entire diet."

Above, fuscous-grey; below, banded black and white; chin and eyebrows white; throat and front black; chest and sides grey, banded black and white; centre of chest rufous; vent white; tail tipped with white; bill, lower mandible black, upper red. Length, 3" 6''' ; wing, 1" ; tail, 1" 9'''.

Fig. Temm. Pl. Col. 221, fig. 3.

445. HYPOCHERA ULTRAMARINA (*Gmel.*) Ultramarine Finch.

Amadina nitens, Layard, B. S. Afr. p. 201.

Mr. Ayres procured this species in Natal, and Mr. F. A. Barratt met with it near Rustenberg; it was also obtained by Dr. Kirk on the Zambesi, and Mr. Andersson's last collection contained a single example from Ondonga.

Shining bluish-black; wings and tail rather fuscous, with pale

edges; under-wing white; bill red. Length, 4" 6''' ; wing, 2" 4''' ; tail, 1" 2'''.

Fig. Vieill. Ois. Chant. pl. 21.

446. QUELEA QUELEA (*Linn*). Latham's Weaver Bird.
Ploceus lathamii, Layard, B. S. Afr. p. 186.

This species, which was called *Loxia lathamii* by Sir Andrew Smith, was found by him inhabiting the country near to and beyond Kurrichane. It extends into the Transvaal, where Mr. Ayres says that it is "tolerably common in Potchefstroom and the neighbourhood in summer, associating freely with the flights of *Pyromelana oryx*, which swarms here. It feeds with them on the open grassy plains and corn-fields, principally on small grass-seeds which they pick up from the ground." Mr. Jameson met with a small flight of these Finches at Kooroomoorooi Pan on the 2nd of January. Mr. Andersson says that it "is a very common species in Damara Land, where it congregates in immense flocks after the breeding season; and it is also common in the Lake regions." Senor Anchieta has found it at Humbe and at Capangombe.

Above, brown: interscapulars and wing-coverts edged, and tipped with pale rufous or rusty white; chin, middle of belly, and vent, white; breast and sides of belly rusty-white, faintly clouded with brown. Length, 4'.

Mr. Andersson observes:—"The iris is brown, the ring round the eyes reddish-orange; the bill scarlet, merging into vermilion at the base and at the corner of the mouth; the legs and toes are flesh-coloured."

Fig. Vieill. Ois. Chant. pls. 22, 23, 24.

447. CHERA PROGNE (*Bodd*). Long-tailed Widow Bird.

We have only procured this species from the eastern side of the colony; it is said to be very common in Kaffraria, and Captain Trevelyan tells us it is very common near Kingwilliamstown. Mr. Arnott has also sent several specimens from Colesberg. According to Mr. Rickard it is common both at Port Elizabeth and East London. We have seen numbers of specimens from Natal and the Transvaal, and Mr. F. A. Barratt has published his experiences of the distribution of the species as follows:—"I first met with this graceful bird in the district of Kingwilliamstown; thence I found it on my

journey through Queenstown, Allival North, Basuto Land, Orange Free State, through the Transvaal, Potchefstroom, Pretoria, Lydenburg, up to the Goldfields, near the Drakensberg Mountains, and at Rustenberg. Its favourite resorts are swampy ground, vleys, and the long reeds about ponds. After a sharp shower of rain, or in a strong wind, they are scarcely able to fly, and can easily be knocked down; when flying they very gracefully arch the tail. They leave their nuptial district in the Transvaal about the end of April or the beginning of May."

It extends to South-western Africa, having been obtained at Caconda in Benguela by Senor Anchieta.

We are informed that in the breeding season, when the male has assumed his nuptial livery and long tail-feathers, his flight is so laboured that the children constantly run them down. They are quite unable to fly against the wind, and in rainy weather can hardly be got to move out of the thick bushes in which, knowing their helplessness, they conceal themselves. The Kafir children stretch bird-limed lines across the fields of millet and Kafir corn, and snare great numbers of the males by their tails becoming entangled in the lines. We are told that they breed among rushes and reeds, like *Pyromelana oryx*.

Mr. Henry Bowker writes:—"This bird seldom interferes with our corn-lands, and is mostly found on the open flats: it builds its nest in long grass close to the ground, and the points of the grasses are drawn over and tied together at the top like the framework of a native hut. The tail of the male in the breeding season is not an inconvenience to him. He never, in fact, seems to enjoy himself so much as during a high wind, in which he shows off to advantage, spreading his tail out like a fan. I should say the average is ten or fifteen females to one male."

The following observations are from the author's note-book:—"Riding once between Table Farm and Grahamstown with Dr. Atherstone, I saw what I took to be a black silk neckerchief drifting down to us in the strong wind from a house on a hill some 300 yards from our road. I called the attention of my companion to it, when, with a laugh, he told me it was a male Kafir fink. The deception was complete! as he came near, I saw he was drifting at a prodigious rate; his wings flapping round and round like mill sails, and his tail spread in a compact mass. He appeared quite

capable of guiding himself, for he took care never to let me get within shot of him, though I tried hard; but I shall never forget that queer black object. Harford says the Zulus set a high value on their tails. Doubtless they are used to decorate the heads of the warriors, as represented by Angas and other painters of Zulu battle-fields."

Mr. Ayres gives the following account of their breeding habits:— "The nest of this species is placed close to the ground, in a tuft of long grass, to the blades and stalks of which it is roughly woven or joined; it is rather a rough structure, composed of fine grass and lined with the seed-ends; the opening is at the side. The eggs are almost invariably four in number." It is called by the colonists "Kaffir Fink," and Captain Harford says that the Zulu name is "Isa-Kabuli."

Male.— General colour, glossy black; shoulders fulvous and brilliant crimson; tail enormously developed. *Female*, or young male: general colour, pale yellowish-brown, the centre of each feather being darker, approaching in some instances to black, give the bird a mottled appearance; wing-feathers black, with pale, yellowish-brown edges; tail-feathers umber-brown, with light edges; shoulders showing a bright orange patch. Length, 21"; wing, 6"; tail, 16'.

Fig. Buff. Pl. Enl. 635.

448. *PENTHETRIA ALBONOTATA*, Cass. White-spotted Widow Bird.
Vidua albonotata, Layard, B. S. Afr. p. 189.

Said by the late M. Jules Verreaux to have occurred in Natal. Wahlberg met with it in the Transvaal, and a specimen of his collecting is now in the British Museum; and the late Mr. Frank Oates procured it at Tamasetsie, in December, 1874, and again between the Pantamatenka River and the Zambesi, January 11th, while Dr. Kirk found it on the Shirè River. It extends across to the west coast, where it is found in Angola and the Congo region. Senor Anchieta has also procured it at Caconda in Benguela.

General colour, shining black; shoulders yellow; base of the tail-feathers white; wing-feathers tipped with white. Length, 6" 6"; wings, 3'.

The iris is said by Mr. Oates to be hazel, the legs black, and the bill bluish or bluish-violet.

449. PENTHETRIA AXILLARIS, *Smith*. Red-shouldered Widow Bird.
Vidua axillaris, Layard, B. S. Afr. p. 189.

Sir Andrew Smith procured but one specimen of this bird, the male here described. When shot it was perched upon some bushes growing out of some marshy ground in Kafirland. Mr. T. Ayres obtained it in Natal, whence we have seen a number of specimens in Captain Shelley's collection, obtained by Mr. Gordge in the neighbourhood of Durban. Captain Harford sends us a fine male with the eggs, the nest having been found close to the ground, in the standing grass, and being in shape like the Roodebec's (*Estrelda astrild*). The eggs are light verditer, rather thickly spotted and blotched with brown of various shades. Axis 10''; diam. 7''.

Mr. Rickard found this species breeding near East London in October and November; they were very shy in their habits.

General colour, velvet-black; shoulders reddish-orange, with brilliant crimson epaulettes; feathers of wings and tail black, with a greenish gloss, the former narrowly edged with pale-brown on the outer side. Length, 6'' 6''' ; wing, 3'' 6''' ; tail, 3'' 2'''.

The male in non-breeding plumage is variegated dark brown on a whitish-grey ground; wing and tail-feathers almost black; the soulder patches unchanged; under parts almost white, faintly streaked with brown; bill very plain horn-coloured.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 17.

450. PENTHETRIA BOCAGII (*Sharpe*).
Orange-shouldered Widow Bird.

This species replaces the foregoing in South-western Africa, where it was discovered by Senor Anchieta in Benguela.

It may be briefly described as very similar to *P. axillaris*, but differing in having the shoulder patch orange instead of red.

451. PENTHETRIA HARTLAUBI, *Bocage*. Hartlaub's Widow Bird.

Of this Widow Bird, which Professor Barboza du Bocage described in 1878, Senor Anchieta has sent a few specimens from Caconda in Benguela. According to Professor Bocage it is the largest member of the genus *Penthetria*, but the bright orange colour of the shoulder-spot distinguishes it at a glance, though at first sight it recalls *Chera progne*.

The following translation of the original description is appended:—

Of large size, and entirely black; the lesser wing-coverts bright orange-yellow, the median series pale fawn-brown, the greater series black margined with fulvous; the under wing-coverts partly fawn-yellow, partly black; tail long and graduated; bill leaden, with the cutting edges whitish; iris dusky. Total length, 10·6 inches; bill, 0·75; wing, 4·35; tail, 6·3; tarsus, 1·05.

452. PYROMELANA ORYX (*Linn.*)

Red Bishop Bird.

Ploceus oryx, Layard, B. S. Afr. p. 185.

The "Red Caffre Fink," though not an uncommon bird, is certainly a very local one; that is, though distributed over the whole colony, it seems to be confined to narrow limits. About Cape Town, I only know of one place where it is to be found, and that is the swampy ground near the Royal Observatory. It breeds in September among the reeds growing in the river, supporting its nest on three or four stems, like its congener, *P. capensis*. In the winter time it congregates in flocks, and does much damage to the grain fields in the neighbourhood of its nesting-place, but never strays away from that locality. Nest like that of *P. capensis*. Eggs four or five; pure light blue; axis, 10''; diam., 7''. Builds in thousands about the swamps and river running out of Zoetendals Vley, also in the Boschjeveldt between Swellendam and Robertson (W. Atmore), but is not found about Grahamstown, according to Dr. Atherstone. Captain Trevelyan informs us that it is tolerably numerous at Peeltown, about six miles from Kingwilliamstown, but is very local; and we received it from Mr. T. C. Atmore at Eland's Post. Mr. Ayres has found it in Natal, where he only saw it on the reedy banks of rivers near the coast, while Mr. Woodward observes that in that colony he found it only in the up-country districts, where it assembles in small flocks, suspending its nest, which is found of grass of a very fine texture, from the flags along the river. Mr. T. E. Buckley met with it in the Drakensberg, and also in the Transvaal, where Mr. Ayres has also found them breeding in large companies in many reedy vlees and pools, and also in great abundance in the swamps; they assemble in immense flocks both in winter and summer, but during the latter season the flocks appear to consist almost entirely of males in their gaudy red and black plumage. Mr. F. A. Barratt observes:—"The 'Red Caffre Fink' breeds in reeds near gardens, and is plentiful about Bloemfontein, in the Free State, thence to the

Vaal River, Kronstadt, near Rustenberg, Pretoria, and Potchefstroom. It is a very local bird; and I found it in only a few places along the Vaal near the diamond-fields; but I did not observe it flying everywhere, like *Chera progne*." Mr. Frank Oates obtained a specimen at Hope Fountain, near Gubuleweyo, about the beginning of December, 1873, and Dr. Kirk found it on the Zambesi. Mr. Andersson found the species abundant at Lake N'gami and in Ondonga, and though rarer in Damara and Great Namaqua Land, it occurs in those countries also; it likewise extends into Benguela (*Anchieta*).

A small race of the present species known to naturalists as *Pyromelana sundevalli* occurs in many parts of South Africa, sometimes by itself in distinct localities, and sometimes mingling with the larger race. We have not thought it necessary to separate these two Bishop Birds specifically.

Male.—In breeding plumage: upper parts brilliant scarlet; lower parts, with the exception of throat and vent, which are scarlet, deep velvety black; forehead, cheeks, and chin black; wings and tail brown. Length, 5''; wing, 2'' 9''; tail, 1'' 10''. Female and male in non-breeding plumage, brown, the centre of each feather with a dark stripe. Mr. T. E. Buckley says that the bill is black, the legs light brown, and the iris hazel.

Fig. Shaw's Nat. Misc. pl. 240.

453. PYROMELANA CAPENSIS, *Linn.* Black and Yellow Bishop Bird.
Ploceus capensis, Layard, B. S. Afr. p. 184.

As in the case of *P. oryx* there is both a large and a small race of the present bird found in South Africa, and the latter is generally known as *P. xanthomelas* (Rüpp.), but as they both occur in various parts of South Africa, and have not a distinctive range, we can only consider them as races of the same species. It is a very common bird throughout the colony, affecting indiscriminately the solitary vley (morass) in the midst of the veldt (open, uncultivated country), or the homestead of the farmer. During the breeding season it is seen about reeds, among which it breeds, placing its nest with great art, so as to include in its structure three or four of the firmest and most upright stems, which support it like pillars. The male generally perches on the topmost twigs of the bushes mingled with the reeds, or on the heads of the reeds them-

selves ; and his brilliant yellow rump, contrasting with his otherwise intensely black plumage, render him peculiarly conspicuous. The female resembles the male in the winter dress, being a light brown, with a dark stripe down each feather.

Victorin found the small form at the Knysna and in the Karroo. Colonel Bulger met with it near Windvogelberg, and we have received it from Mr. T. C. Atmore at Eland's Post. Captain Trevelyan says that it is not a common bird about Kingwilliamstown, but he found it plentiful near Grahamstown. Mr. F. A. Barratt states that it was common in the Free State and in the Transvaal, and he found it breeding near Kronstadt in the Free State, and also about Potchefstroom and elsewhere in the Transvaal. At the same time it must be remarked that Mr. Ayres has only procured a single bird during his residence in the latter country, and we think there must be some mistake in Mr. Barratt's identification. In Natal Mr. Ayres says that they frequent more particularly the hills fifteen or twenty miles inland; they are found in small companies in the open fields, and feed principally on grass seeds. Mr. T. E. Buckley shot the species on the Drakensberg, and again in the Matabele country ; both his specimens belong to the smaller form. Mr. Oates met with it on the Kaar Kloof Heights near Pietermaritzberg as well as at Inyati, the Semokwe River, and at Hope Fountain, near Gubuleweyo ; and it was also procured in the Umvuli River by Mr. Jameson, and on the Zambesi River by Dr. Kirk. Mr. Andersson gives the following note :—“This is a comparatively scarce bird in Damara and Great Namaqua Land, but is very abundant at Lake N'gami ; it sometimes occurs in large flocks in the open country, and is also found in small communities in the neighbourhood of water and in humid situations, where it breeds, constructing its nest of strong grasses and suspending it between the stalks of two or three reeds.” Senor Anchieta has met with the small race at Caconda.

The following note on the species appeared in the author's first edition :—“Having kept several in cages, I am enabled to describe the moult which takes place. The first thing which changes is the bill : the black commences to show at the tip of the lower mandible, which gradually darkens, from its usual horn-colour, to the deepest black ; before this is accomplished the upper mandible has begun to blacken, and a few black feathers are visible round the neck ; the breast next shows a change, and a feather or two on the back

darkens, and thus by degrees the whole bird changes to its splendid black. This transformation commences about July, and is complete in September, which is the nesting season. The moult back again begins in the same manner. This species lives well in cages. I had one which had been about six years in confinement, and effected his escape after all, from the warping of his cage-bottom, owing to its being exposed to the sun after my pet had enjoyed his bath. He would come to the cage-bars whenever my wife approached them, his long legs drawn out to their full extent, his bright black eye glittering even in the midst of his deep black plumage, watching for his morsel of bread. On his being addressed as '*Fink*,' he instantly replied, stretching his neck to the utmost, and uttering the most piercing, discordant shriek. We used to laugh, and say he would some day dislocate his neck in his attempts to sing, in rivalry to the canaries. After his bath, or when enraged, which was pretty often, he would erect the feathers of the back at right angles to his body, and then looked beautiful, the light shining through the brilliant yellow, setting it off to great advantage. The nest is constructed of grasses, and is domed, with an entrance near the centre. The eggs, four or five in number, are very pale verditer, thickly marked everywhere with dark, greenish-brown blotches and spots: axis, 10''; diam., 7''."

General colour of male in breeding plumage, deep black; the feathers of the head and neck short, and so closely set as to resemble the richest velvet; rump and shoulders brilliant yellow; wings brown. Length, 5 $\frac{3}{4}$ ''; wing, 3'' 3''; tail, 2'' 3''. "The iris in this species is dark brown; the legs and toes straw-brown; the upper mandible of the bill dark horn colour, the lower, in some specimens, of the same colour as the upper, in others of a yellowish-white horn colour" (Andersson).

Fig. Buff. Pl. Enl. 629, fig. 1.

454. PYROMELANA TAHA (*Smith*).

Taha Bishop Bird.

Ploceus taha, Layard, B. S. Afr. p. 184.

According to Sir Andrew Smith, this species does not extend south of the 26th degree, and is said to breed in the reeds which skirt the rivers north of that line; they congregate in large flocks and are very destructive to cornfields. Captain Harford sent it from Natal, and we have seen many other specimens obtained alive near

Durban. Captain Shelley met with it near Pinetown, and Mr. F. A. Barratt writes:—"I found this bird flying about the reeds which skirt the ditches, &c. I shot my first specimen near the Modder River, near Bloemfontein. It is very plentiful at Potchefstroom, about the skirts of the vleys or swamps adjoining the town. I have got them all the way up from the Modder River to Potchefstroom, near Bloemfontein, Rustenberg, Pretoria, Nazareth, and I think I saw a few near the goldfields."

Mr. Ayres observes:—"During the winter months these birds are found congregating with *E. sundevalli*, and in equal numbers; but in the summer they are not found with their winter associates, and the greater number of them leave us, though some are occasionally met with in the rusty and reedy vleys, where they probably breed. The males are at this season exceedingly beautiful; I can only compare them to butterflies; they puff out all their feathers and appear like balls of black and yellow floating slowly about over the grass, evidently courting their less gaudy loves hidden hard by among the long rushes." Mr. Andersson has published the following note:—"I do not recollect having met with this bird in Great Namaqua Land or in southern Damara Land; but it breeds in great abundance in Ondonga, and I have also seen specimens from Lake N'gami. It is found in flocks amongst trees, as well as on the reedy banks of rivers and in marshes, where it suspends its nest amongst the tall stalks of reeds and coarse grasses. The nest is composed of fine grass woven somewhat closely together; the eggs are six or seven in number, white, but sprinkled all over with minute brown specks."

Male.—In summer plumage black; the crown of the head, back, rump, vent, and a narrow oblique stripe on each side of the breast, immediately in front of the shoulders, bright yellow; wings and tail grey brown; thighs pale yellow, speckled with brown.

Female.—In winter plumage, above, pale yellowish-brown; head and neck freely dashed with longitudinal brownish-black stripes; back and rump the same; under parts greyish-white; throat and breast tinged with sienna yellow, and with the flanks variegated by longitudinal brown streaks. Length, 4" 9''; wing, 2" 7''; tail, 1" 1.'' Iris dusky; tarsi and feet dusky brown; the male has the bill black in summer, but in winter dusky pale, darkest along the ridge (*Ayres*).

Fig. Smith, Ill. Zool. S. Afr. pl. 7.

455. FOUDIA EMINENTISSIMA (*Bp.*). Splendid Weaver Bird.

This species has only been found on the Zambesi, where it was met with by Dr. Kirk during the Livingstone expedition.

General colour olive brown with dusky streaks on the back and mantle; head scarlet all round; on the rump a few scarlet feathers; wing-coverts and quills edged with olive brown, with whitish marks at the ends of the median and greater coverts as well as the inner secondaries; under surface of body pale ochreous buff tinged with scarlet on the centre of the breast. Total length, 5·2 inches; culmen, 0·7; wing, 3·15; tail, 2·0; tarsus, 0·85 (*Spec. juv. in Mus. Brit. ex Zambesi*).

456. AMADINA ERYTHROCEPHALA (*Linn.*). Red-headed Weaver Finch.

Sir A. Smith found this species only in the neighbourhood of Latakoo, feeding in the native gardens and congregated together in considerable numbers. We have received it from Kuruman and Colesberg. Mr. Ortlepp writes that in the latter neighbourhood it is rare, and at Priel it was common in large flocks; he found a "colony in a large 'wait-a-bit' thorn; a cart-load of grass stuck in a fork with two or three dozen apertures bored in below." Mr. T. C. Atmore also forwarded us specimens from Griqua Land. Mr. Ayres has procured it in the Transvaal, and Dr. Exton has forwarded us a specimen from the neighbourhood of Bloemfontein. The late Mr. Oates shot a specimen at Tati, and Captain Shelley has in his collection a series obtained by Dr. Bradshaw in the Makalaka country. "This pretty bird," writes Mr. Andersson, "occurs in Great Namaqua Land and at Lake N'gami, also in Damara Land, where, however, it is far from common, except in places, being, in fact, quite a local species. I found it congregated in large flocks on the Omaruru River at the end of October; and it was also pretty numerous at Objimbinque, where it nested under the eaves of my house and in the adjacent trees in company with the South African Sparrow (*Passer arcuatus*), which it exactly resembles in its manners and habits; and I have found the nests of these two species on the same tree, and even on the same bough, as well as side by side under my eaves. The present species forms its nest of small sticks, slender roots, &c., and lines it with wool, feathers, or other soft and warm material. The young are fledged in June and July. It seeks

its food upon the ground, usually in small flocks, and, when disturbed, takes refuge in the nearest tree or hedge; it occasionally utters a kind of chirping twitter." It has been found by Senor Anchieta in Benguela.

Above brown; beneath grey-brown, with a tinge of red, and barred with dark-brown, which imparts to it a scaled appearance; top and sides of head, and chin deep shining pink; tail-feathers brown, all, with the exception of the two centre ones, tipped with white, two exterior margined exteriorly with the same; upper tail verts barred with brown. The female resembles the male, but wants the crimson head. Length, 5'' 6''; wing, 3''; tail, 2'' 3''.

"The bill is pale yellowish brown, the legs and toes bright straw-yellow" (Andersson). A female shot by Mr. Frank Oates had the iris pale hazel; the skin round the eye red; the bill dusky blue; and the legs dirty flesh colour.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 146.

457. *PYTELIA MELBA* (Linn.) Southern Red-faced Finch.
Estrelida melba, Layard, Cat. B. S. Afr. p. 199.

This is entirely a bird of the interior, and we believe that it has not yet been found in Natal. Professor Peters obtained it at Delagoa Bay, and in the Transvaal it was shot by Mr. Ayres on the Limpopo River. Mr. T. E. Buckley procured it in Bamangwato and in the Matabele country; the late Mr. Frank Oates having met with it at Tati in September and October. Mr. T. Ayres writes:—"They frequent the low mimosa bushes mostly in pairs, and although not uncommon on the Crocodile River and in the Rustenberg district, we did not meet with them to the north of the Tatin River." Mr. Andersson observes:—"This Finch is found sparingly in Damara and Great Namaqua Land, and usually occurs in pairs; its favourite resort is low bush and old abandoned village fences, whence the Damaras call it the 'Kraal bird.' Its food consists of seed and insects." It was met with by Mr. Monteiro in Benguela, where also it has been found by Senor Anchieta.

Male.—Forehead, chin, and throat scarlet; back of head and neck ashy; back and chest golden-green, the latter spotted at the junction of the belly with white; vent white; rump and centre tail feathers dull scarlet; outer tail feathers black-brown. *Female.*—

Ashy, barred on the hinder parts with white; vent white; rump dull scarlet. Length, 4'' 9''; wing, 2½''; tail, 2''.

According to Mr. Andersson, the iris is orange-brown, the legs and toes purplish.

Fig. Vieill. Ois. Chant. pl. 25.

458. *PYTELIA HARTLAUBI* (*Bianc.*). Hartlaub's Waxbill.

Discovered by Bianconi in Mozambique, and procured by Professor Peters at Inhambane. The following description is taken from the work on the birds of Eastern Africa by Drs. Finsch and Hartlaub. Above dusky green, with the wings brown with a greenish margin; breast and abdomen blackish, sprinkled with rounded white spots, each feather marked with two spots.

Fig. Bianconi, Spec. Zool. Mozamb. fasc. xviii, taf. 4, fig. 2.

459. *ESTRELLA SUBFLAVA* (*Vieill.*). Sanguineous Waxbill.

Mr. Ayres found a flight of these tiny Finches feeding in some cultivated grounds near Maritzburg in July, and they were then the first he had seen of the species; he afterwards met with them in the Transvaal.

Above light brown; beneath varied with yellow and orange; flanks with transverse brown lines; eyebrows and rump crimson tail blackish; two lateral feathers on each side edged with white. Length, 3'' 3''; wing, 1'' 8''.

Fig. Temm. Pl. Col. 221, fig. 2.

460. *ESTRELLA DUFRESNEI* (*Vieill.*). Dufresne's Waxbill.

Heidelberg, Swellendam, and the Kugela are the only places whence we have received this pretty species in the western province. Mr. Atmore says that it is common at George wherever there is cultivation; it is restless in its habits and migratory, appearing in autumn. Mr. Rickard records it from Uitenhage and East London, and it is also found near Grahamstown. Mr. Ayres has met with it in Natal, where, however, he does not consider it a very plentiful species, seldom more than eight or ten being seen together. He observes:—"When feeding, they hop about on the ground and pick up the ripe grass seeds which have fallen. They build a nest somewhat similar to the red-billed species, but instead

of being close to the ground, they place it in the upper twigs of some low bush six or eight feet high."

Male.—Top of head and back of neck ashy; back and shoulders green; wings rufous; rump red; tail black; ears, chin, and upper part of throat deep black; lower part of the latter white; chest ashy white; belly and vent yellowish white; bill, upper mandible black, lower scarlet. Female wants the black on the head and throat, and all her colours are less vivid. Length, 3' 9''; tail, 1' 8''.*

Fig. Temm. Pl. Col. 221, fig. 1.

461. ESTRELDA INCANA, *Sundev.* South African Grey Waxbill.

Discovered by the late Professor Wahlberg during his travels in south-east Africa. Captain Shelley found it in Natal, and writes:—"Although it is far from common at Durban, on the 8th of March I took one of their nests containing two pure white eggs. It was placed in a creeper overhanging the footpath, and was easily reached from the ground; in structure it was very similar to that of *Estrela astrild*, though smaller and less compact, though made of the same materials." We were informed by Mr. Fellowes that it is common in the Umgene and Zulu countries, and Professor Peters obtained it in Inhambane.

Ash coloured, with red rump; throat whitish; chin, stripe between eye, and bill black; tail black, graduated; vent dark fuscous; bill and legs black. Length 3' 9''; wing, 1' 9''; tail, 1' 9''.

462. ESTRELDA ASTRILD (*Linn.*),. Common Waxbill.

These elegant little birds congregate in prodigious flocks throughout the colony, frequenting the fields of grain, ploughed lands, and vineyards. They are not unfrequently found close to habitations, and their little shrill, piping notes may be heard even in towns.

The "Roodebec" is found in all parts of the colony, and extends into Natal. Mr. F. A. Barratt states:—"I recognized this little bird nearly all over the country, Orange Free State, Diamond Fields, Potchefstroom, Pretoria, Lydenberg Goldfields; and I have seen

* Professor Barboza du Bocage records a Finch from Biballa (*Anchieta*) which he thinks may be *Estrela quar'inta* of Bonaparte. It is very similar to *E. dufresnei*, but undulated above and has the abdomen and vent bright yellow.

it in the Kaffir gardens a few miles further north. I also met with it at Rustenberg. They congregate in large flocks, and are said by the Boers and farmers to do considerable damage to the grain crops." Mr. Frank Oates procured it at Tati in the Matabele country, where also it was observed by Mr. Ayres during Mr. Jameson's recent expedition. Mr. Andersson observes:—"This pretty little species is common in the southern districts of Damara Land and in some parts of Great Namaqua Land, as well as at Lake N'gami. It lives in flocks, and is generally found upon the ground, where it seeks its food, which consists of seeds, insects, &c." Mr. Monteiro found this bird very abundant in Angola, particularly to the south, where it is gregarious and seen in flocks of hundreds of individuals.

We extract the following note of the author from the first edition of the work:—"They breed in communities, and it is said that several inhabit the same nest, laying and sitting in it promiscuously, and sometimes three or four together. The nest is a large structure, composed of straw, grasses, feathers, wool, paper, rags, &c. It is often as large as a stable bucket, round, and with an entrance in the side. The interior is a mass of feathers; and the eggs, from eight to fourteen in number, are pure white, oval, and about 7'' long, by 4'' broad.

"These birds live well in confinement, and add much to the appearance of an aviary, by their sprightliness, and the beauty of their plumage when many are together. It is no uncommon thing to see a dozen or more on one perch, sitting close up to each other, for company's sake. I have four which have separated themselves into two pairs, though agreeing all well together. The birds of each pair are always together, cleaning and caressing each other. When I put in the bathing vessels, they crowd into them in defiance of all the bigger and stronger birds; and it is no unusual thing to see two canaries, or one canary, the 'king of the roodebecs,' and three or four 'roodebecs,' all in the vessel at once, splashing, ducking, and jostling one another in the narrow bounds to which their cage restricts them."

Mr. Atmore writes, December, 12th, 1867:—"You know what a funny wisp of a nest it makes and how carefully concealed, but how such small birds carry such large bents of grass is a puzzle. The inside is very warm and comfortable, and what may be called the

frame-work of the nest is very nicely contrived so that all the ear-ends of the grasses are woven together to form the pipe where the entrance is. This nest was in a thicket of brambles and fern about six inches from the ground. Even after the bird flew out, it required a good search before I could find it. There were twelve eggs in it (whether more than one lays in a nest I can't say, but only one flew out), they were in all stages of incubation—two not set, and four or five had the young birds so large I could not blow them." This species of Finch, observes Mr. Ayres, "is by far the most common in Natal; during the winter months immense flights of them may be seen. They are fond of frequenting cultivated ground, especially that on which weeds have been allowed to grow and seed, where they find abundance of food. I have seen them occasionally take the young queens of the white ant, rising in the air and taking them on the wing; but they appear to have much difficulty in catching them, possibly from the smallness of their mouth. They build close to the ground, amongst thick and tall grass. I found several nests of these birds all built upon the ground, generally in some convenient indentation sheltered by a clump of grass. The little elongated entrance of the nest is placed rather forwards, with the end of it touching the ground. On the top of the nest there is a sort of chamber, in which, the Caffres assure me, the male bird roosts at night during the incubation of the female."

Upper parts brown, minutely waved with darker brown lines; under parts, lighter brown, also waved with brown lines; over the whole of these parts, in certain lights, there is spread a lovely rose colour, changing into purple; bill, stripe through the eye, and down the centre of the breast, and stomach brilliant scarlet; vent intense black; tail graduated, brown; legs black. Length, 4'' 9'''; wing, 2''; tail, 2'' 2''.

According to Mr. Andersson the iris is brown, the bill bright red, the legs and feet liver-brown.

463. *ESTRELLA NITIDULA*, *Hartl.*

White-dotted Waxbill.

Discovered by Mr. Ayres in Natal, where he says it is very rare, and he knows nothing of its habits.

General colour olive green; rump and upper tail-coverts yellowish

green; an orange mark in front of the eye; body spotted with white dots, surrounded with black. Length, 3' 2''; wing, 1' 9''; tail, 1' 2''.

464. ESTRELLA ERYTHRONOTA (*Vieill.*). Black-checked Waxbill.

Found by Sir Andrew Smith inhabiting the country to the north and east of Kurrichane. Mr. Ayres has only found the species on the Limpopo, in companies among the low scrub which abounds there in some parts. Mr. Oates procured it at Tati. Mr. Andersson writes:—"This species is generally distributed over Damara and Great Namaqua Land, and is also found at Lake N'gami. It resembles its congeners in manners and habits."

Top of head, neck, and interscapulars tinted with crimson; back, rump, and upper tail-coverts crimson; hinder part of breast and belly dull crimson; sides of head, chin, under tail-coverts, and tail black; quills ashy brown; wing-coverts and scapulars grey, closely banded with brown. Length, 4' 6''.

The iris is bright wine-coloured red; the legs and toes black, as is also the bill, except near the base, where it is whitish-blue" (Andersson).

Fig. Vieill. Ois. Chant. pl. 14.

465. UREGINTHUS CYANOGASTER (*Daud.*). Blue-breasted Waxbill.

Estrella benghala, Layard, B. S. Afr. p. 199.

We consider that the southern bird is distinct from *U. phœnicotis*, Swainson, inasmuch as we have never seen the male with the conspicuous red spot on the ears which is always seen in the species from Western and North-eastern Africa.

The present species was procured by Sir Andrew Smith between Kurrichane and the tropic of Capricorn. Mr. F. A. Barratt shot it near Rustenberg, and Mr. Ayres has procured it from the Limpopo; he likewise found it in some numbers among the bush on the banks of the Tugela in Natal. Mr. Buckley met with it in the Transvaal and the Matabele country; and the late Mr. Frank Oates collected several specimens at Tati. Further north it appears to be common, for Mr. Ayres says that during Mr. Jameson's expedition they found it one of the most plentiful of the small Finches, and very widely distributed. Mr. Andersson has the following note:—"This

pretty little Finch is common at Lake N'gami and in the neighbourhood of the Okavango River; but I do not think that it is found either in Damara or Great Namaqua Land. I have heard occasionally of immense gatherings of these birds; but usually they are found in small flocks seeking on the ground for their food, which consists almost entirely of the seeds of grasses. On the 2nd of February, 1867, I found in Ondonga a nest of this species in a palm bush about six feet from the ground; it was constructed of grass, and had no internal lining; the eggs were five in number."

Senor Anchieta has met with the species at Biballa, where it is called "Kaxexe."

Above grey-brown; rump, tail, and under parts, with the exception of the centre of the body, which is white, verditer-blue. Length, 4'' 6''; wing, 1'' 11''; tail, 1'' 10''.

466. *URÆGINTHUS GRANATINUS* (Linn.). Grenadier Waxbill.

Estrelida granatina, Layard, B. S. Afr. p. 199.

Sir Andrew Smith found this species between the Kiegariep and Kurrichane, and we have received it from Mr. T. C. Atmore from Griqua Land. Writing from the Transvaal, Mr. Ayres says:—"The first of these pretty birds which I met with I shot in the Mariqua district, amongst some very thick cover; and I afterwards found them plentiful all along the Limpopo: they are generally in pairs, but sometimes three or four may be seen together. All the *Estrelide* are pretty nearly alike in their general movements, and eat similar food."

Mr. Frank Oates obtained the species at Tati, and Mr. T. E. Buckley also procured it in the Matabele country. Mr. Ayres states that it was not uncommon along the Limpopo, but he fancies that it does not range beyond the Tatin River.

Mr. Andersson observes:—"This species is not uncommon in Damara Land, but is more abundant further north, and also at Lake N'gami. It congregates in small flocks and feeds on little seeds, which it seeks upon the ground."

Chestnut; cheeks a well-defined and beautiful violet; front and rump blue; throat, vent, and tail black; bill red. Length, 6''; wings, 2'' 2''; tail, 3''.

According to Mr. Andersson, the iris is red, and the naked ring round the eye is usually red also, but sometimes of a greyish drab;

the bill purplish, but red at the extremity; the legs are purplish grey."

. *Fig.* Vieill. Ois. Chant. pl. 17.

467. LAGONOSTICTA RUBRICATA (*Licht.*).

South African Ruddy Waxbill.

Estrellda rubricata, Layard, B. S. Afr. p. 197.

This little species is common about Grahamstown, and we have received the nest and eggs from Mrs. Barber, taken at Highlands; the eggs are pure white; axis, 7''; diameter, 5½''. In Natal, writes Mr. Ayres:—"These Finches are generally found in pairs, and never congregate like *Estrellda astrild*. Their food consists of grass-seeds; they frequent rough high grass, hedgerows, and low underwood at the edges of the dense bush. Their nest is generally placed a foot or two from the ground, supported amongst coarse grass; in shape it much resembles that of *Estrellda astrild*, but is built of coarser materials and lined with feathers; the eggs are of a pure white, and from four to six in number."

Captain Shelley procured specimens near Pinetown, and it has also been obtained in the Transvaal by Mr. Ayres, who met with it in the Lydenberg district.

Above dark olive-brown; rump vinaceous; beneath the same, changing into brown in the centre of the belly; vent and tail black; spot between the bill and the eye the same colour as the lower parts; sides of chest ornamented with minute white dots; under tail-coverts black; bill black. Length, 4''; wing, 2''; tail, 1'' 9''.

Fig. Vieill. Ois. Chant. pl. 9.

468. LAGONOSTICTA JAMESONI, *Shelley*. Jameson's Ruddy Waxbill.

This species is described by Captain Shelley as very closely allied to *L. rubricata*, but the red portions of the plumage are paler and of a pinker hue; the white spots on the sides of the chest are scarcely visible; the sides of the head are rosy pink, like the chest; the upper parts are tinted with the latter colour, most strongly so on the sides of the crown and back of the neck. The present bird was discovered during Mr. Jameson's travels in the Mashoona country, and Mr. Ayres gives the following note:—"We met with but very few of these Finches; near the Umvuli we found them

amongst the rough cover on the banks of the river feeding on grass seeds, and at the Tatin they were always in pairs."

469. *LAGONOSTICTA MINIMA* (Vieill.). Little Ruddy Waxbill.
Estrelda minima, Layard, B. S. Afr. p. 197.

This species is spread over the greater part of the African continent, and in South Africa occurs in the Transvaal, where, according to Mr. Ayres, it "is found in small companies, but cannot be called plentiful. The females far exceed the males in number. The note is soft but guttural."

The late Mr. Frank Oates procured specimens on the Crocodile River, and he further notes it from the Tatin River, where he says:—"We met with a small party feeding amongst the short grass near the edge of some shrub, into which they immediately flew on being disturbed."

Mr. Andersson's collection contained a single specimen from Ovaquengama in Damara Land, and he also procured a male at Ondonga, in November, 1866.

Pale-red; the lower part of the back pale brown, with a ruddy tint; wings pale brown; scapulars and lesser wing-coverts ruddy; rump more red; vent pale brown; tail feathers fuscous; the webs near their base ruddy.

The male bird, according to Ayres, has the bill rosy lilac, with culmen and gongs nearly black, and the iris red. In the female the bill was violet pink, with the culmen nearly black, tarsi and feet dusky brown. Mr. Oates gives the colour of the iris in the male as lake, and in the female as very pale hazel.

Fig. Vieill. Ois. Chant. pl. 10.

470. *HYPARGUS MARGARITATUS* (Strickl.). Verreaux's Spotted Waxbill.
Estrelda margaritata, Layard, B. S. Afr. p. 198.

Hartlaub says from "South Africa." Mr. Strickland, whose description we copy, says his specimen "was purchased at Cape Town, and was said to have been brought from Madagascar." Mr. J. Verreaux, however, assures us that his specimens, whence the figure in Des Murs' "Iconographie" was taken, were killed by himself with a samputan (or blow-pipe) in his garden in Staalplein in Cape Town. It has not occurred since to our knowledge.

Upper parts rich ferruginous-brown, except the quills, which are dusky within; upper tail-coverts and outer margins of rectices dull

vinous-red, and their inner webs and apical portions black; the circuit of the eyes, cheeks, throat, and breast pale claret-red; rest of lower parts deep black, spotted next the chest and on the sides with large pearl-like spots, the colour of peach-blossom, of which two are placed transversely and subterminally on each feather. Length, 4" 9''; wing, 2" 1''; tail, 2".

Fig. Des Murs, Icon. Orn. pl. 64.

471. *HYPARGUS NIVEIGUTTATUS* (*Peters*). Peters' Spotted Finch.

Discovered by Professor Peters in Inhambane. The following description is translated from the "Vögel Ost-Afrikas" of Drs. Hartlaub and Finsch:—Back and wings fulvescent brown; head ashy; sides of the head, eyebrows, chin and throat intense crimson; the rump red; tail feathers black, of a beautiful rosy colour towards the base; under tail-coverts and abdomen black, the latter with rounded spots of pure white; under wing-coverts whitish; bill and feet black.

472. *ALARIO ALARIO* (*Linn.*). Mountain Canary.

Amadina alario, Layard, B. S. Afr. p. 200.

This is the Berg-Canarie of the colonists. We have received it from the Knysna, Malmesbury, Swellendam, and Colesberg, and Mr. Rickard has procured it at Port Elizabeth; he writes:—"I fancy this is the species much prized by the lads in Port Elizabeth, who called it the 'Namaqua;' it only appears at long intervals, but in considerable numbers when it does occur; they sing well and become very tame."

It is not uncommon in the neighbourhood of Nel's Poort (Beaufort), ranging in small flocks among the thorn-bushes, and feeding on grass seeds. It often intermingles with flocks of the common *A. astrild*. Its song is very sweet and sustained, for which reason it is kept in confinement, which it endures very well. It seems to vary somewhat in the distribution of its colours: but that described below is the general character. Its eggs, sent by Mr. Jackson and others, rather resemble those of the Cape Canary, being white tinged with green, more or less spotted, blotched, and streaked, chiefly at the obtuse end, with various shades of brown. Axis, 8½''; diameter, 6''.

Mr. Andersson says:—"I only met with this pretty Finch in

Great Namaqua Land, where it occurred in small flocks at the water."

Male.—Upper parts rufous; under parts white; tail rufous; head, neck, and throat black: this colour extends from the throat, and divides into two broad lines on each side of the breast; quill-feathers of wing black; shoulders and coverts rufous; a white colour extends from the back of the throat round to the back of the neck; bill black. The female is generally of a dull brown colour, lightest on the under parts. Length, 5"; wing, 2" 8"; tail, 2" 2".

Fig. Buff. Pl. Enl. 204.

Fam. FRINGILLIDÆ.

478. *PASSER ARCUATUS* (*Gm.*).

Cape Sparrow.

This bird has a curious distribution in the colony. It is common all over the western part of the Western Province. Mr. W. Atmore tells us that they are "scarce in the Longe Kloof and at George, while at the Knysna there are none at all. They abound where there are most mimosas." We found none at Port Elizabeth (though Mr. Rickard says they are to be met with on the Amsterdam Flats), nor were any to be seen at Van Staden's River or Uitenhage. One pair were noticed at the half-way house between the former place and Grahamstown; at the latter place they were very scarce, none at Highlands, and a single colony at Table Farm. Mr. Ayres records it from the Transvaal, but does not give anything peculiar respecting its distribution in that state; he says that it was very plentiful at Spalding's on Hart's River in February, "where many of the low thorny bushes hold one or two of their nests, which are made of sticks roughly put together and thickly lined with wool, which is the easiest soft material for them to procure." Mr. Andersson observes: "This Sparrow is very abundant all over Damara and Great Namaqua Land, and extends as far south as the Cape, where, however, it seems to be a trifle larger than in Damara Land; it takes up its abode near to man, and in all its habits exactly resembles the House Sparrow of Europe. It makes a large rambling nest of grass and sticks, lined with feathers, down, &c., and placed either on a tree or bush or under the eaves of thatched roofs; the

eggs vary wonderfully in size and colour. The male bird is rather larger than the female." A single specimen has been procured by Senor Anchieta in Benguela, in 1867: native name *Kimbolio*.

The "Mossie," like its cousin, the English bird, is essentially a "cit." In the country you certainly find him, but never away from human habitations. He seems to think man only builds houses for him to dwell in; only grows corn for him to eat; only plants trees for him to roost in. The airs he gives himself are amusing; and you feel inclined to forgive his peculations out of sheer admiration for the boldness with which he executes the theft. With the earliest dawn he is up and doing, and his chirrup arouses you from your slumbers; but as he has not got to dress, and you have, he is off to visit your farm-produce before you are. As he has wings, he visits all your property (not to count your neighbours'), and levies toll where he likes; and you find him in the evening, when you reach home, tired and footsore, there before you, and with unabated vigour fighting for the snugest and warmest berth under the eaves, or the cosiest branch upon your pet oak-tree. Well, don't be hard on him! He will in his season rid you of thousands of caterpillars and grubs; and if your "eldest hope" is old enough to begin to shoot, he will do no great harm in thinning their numbers in the autumn, and manufacturing puddings for his brothers and sisters with the bodies of the slain. Sparrows build in holes in walls, or in trees, indiscriminately. If they select the former, they accumulate a lot of sticks as a groundwork, and fill up with straw and feathers. If they build in trees, they construct a large ball of straw, and line it with feathers. Their eggs, three to five in number, are light verditer, with brown blotches; but they vary much in shape and colour.

Male.—Top of head, cheeks, chin, throat, and breast black; back of head and neck brown; back, rump, and shoulders rufous; wing and tail feathers brown, with light margins; a white stripe extends from over the eye, round the back of the cheeks, and nearly unites on the throat; under parts dirty white.

Female.—Less brightly coloured. Length, 6" 6"; wing, 3" 4"; tail, 2" 7". "The bill is black in the male, and livid brown in the female; the legs and toes are olive-brown, darker in the male than in the female; the iris is a very dark brown" (*Andersson*).

Fig. Buff. Pl. Enl. 230, fig. 1.

474. *PASSER DIFFUSUS*, *Smith*. Southern Grey-headed Sparrow.
Passer diffusus and *P. simplex*, Layard, B. S. Afr. pp. 204, 205.

The Grey-headed Sparrows are peculiar to Africa, where there appear to be three species, or races, viz., the present one from South Africa, *P. simplex*, of West Africa, and *P. swainsoni* from the North-eastern part of the continent. Sir Andrew Smith found it inhabiting the country between the Orange River and the tropic. Mr. Ayres has found it in the Transvaal during his visit to the bush, though but sparsely; he says that "it feeds upon grass seeds, and that its note resembles the 'chissick' of the English Sparrow." Mr. Frank Oates procured it on the Crocodile River in July, in cultivated fields.

Mr. Andersson says that he "met with this species very sparingly in Damara Land, but found it pretty common on approaching the River Okavango; it frequents the water in the morning and evening, and feeds on seeds and berries. In Angola it is, as stated by Professor Barboza du Bocage, widely spread, as he cites specimens procured by Senor Anchieta and other collectors at Cabinda on the Loango coast, Loanda, Ambaca, and Humbe, and also at Catumbella. At Humbe the bird is called, according to Senor Anchieta, *Embolio* and *Ximbolio*.

Head and neck dull rusty-grey; interscapulars brown, washed with grey; wing coverts, back, and rump, dark chestnut-brown, some of the coverts tipped with white, which form one or two oblique bands on the wings; chin, throat, breast, and flanks pale grey-brown; belly and vent rusty white; quills and tail dark brown. Length, 5'' 9''.

"In some specimens of this bird the bill is quite black, in others pale greyish-brown, with yellow near the base of the lower mandible; the legs and toes are pale greyish-brown" (Andersson).

475. *PASSER MOTITENSIS*, *Smith*. Greater South African Sparrow.

Sir Andrew Smith only procured two specimens of this fine Sparrow, "both about sixty miles north of the Orange River. When they were killed they were on the ground actively employed picking up seeds which had fallen from the shrubs among which they were moving." The late Mr. Frank Oates met with it at Tati, and again on the Palatswe River. Mr. Andersson writes: "This

species is found at Lake N'gami; and I also met with it at Objimbinque, at Omapju, and near Otaiorapa. I first met with its nest at Omapju, on January 5th, 1867; it was placed on the top of a thorn-bush, about seven feet from the ground; and I subsequently found several other nests during the same month. The nest is large, and is composed of coarse grass outside, and fine grass within, and has an additional lining of feathers and other soft and warm materials; it is furnished with a long entrance, sometimes a foot or more in length, which ends in a deep and wide hollow. The eggs are from three to six; but the most frequent number is four; they are larger than the eggs of *P. arcuatus*, and are invariably covered with a glutinous matter which it is difficult to remove, even with the help of water."

Top of head and back of neck grey; eyebrows, sides of neck, and back, chestnut; the latter dashed with dark brown; streak through the eye; chin, and throat, black; cheeks, breast, and belly, rusty white; wing and tail-feathers light brownish-red. Length, 7"; wing, 3" 5"; tail, 3". "Iris dark brown, bill liver-brown; legs and toes resembling the bill in colour, but paler" (Andersson).

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 114.

476. PETRONIA PETRONELLA (*Licht.*)

Southern Yellow-throated Sparrow.

Mr. T. C. Atmore found this species in some abundance at Eland's Post, where, he tells us, they are fond of poking about *Euphorbia* trees. Mr. Jameson obtained specimens during his excursion into the interior, and Mr. T. Ayres has given the following note of its habits: "These Sparrows are not uncommon about the Umvuli, frequenting the high trees and feeding much as the Tomtits do, hanging about the outer twigs and eating the young buds, &c.; as, however, food of all kinds is scarce for birds, this may not be a usual habit. They are now mostly in pairs, and their loud sparrow-like note often repeated in the early morning attracts one's attention to them." Mr. Andersson only met with it near the Okavango River, where he obtained a few specimens. More recently Senor Anchieta has procured a pair at Caconda, where it was called "Sue-sue."

General colour brown and sparrow-like, with a white eyebrow extending from the front of the eye almost to the back of the

head, widening as it extends. Chin pale, almost white, followed by a bright yellow spot on the gorget. Length, 6"; wing, 3" 9"; tail, 2" 11". Irides hazel.

477. *POLIOSPIZA GULARIS* (Smith). Streaky-headed Grosbeak.
Fringilla gularis and *F. striaticeps*, Layard, B. S. Afr. pp. 202, 203.

Victorin procured this species at the Knysna, and we have received it from Mr. W. Atmore at Swellendam, while Mr. T. C. Atmore collected it at Eland's Post. According to Sir Andrew Smith it inhabits the colony and the country as far as Latakoo. Mr. Frank Oates procured a specimen between Pretoria and Bamangwato. Mr. Andersson only observed it in Great Namaqua Land, and there very sparingly. Mr. Ayres has met with it in Natal, and writes as follows: "I found two pairs of these birds about ten miles inland. One pair had built a nest in a low tree on the top of a very exposed hill; the other pair had built in the valley below, and had young ones in the month of December. The nests were open, but compact, with much downy substance about them. The sexes resemble each other in size and plumage." Mr. W. Atmore, writing from Geneva Fontein, says: "Tobacco seed is the great attraction to this species; they feed also on chickweed and groundsel—do not congregate, but go in small lots of from two to eight individuals. I have not heard them utter a note. They mix with other 'Finkies.' Irides reddish-nankin." Eggs found by Mr. L. C. Layard precisely resembled those of *Crithagra sulphurata*, as did also the nest.

General colour above dark reddish brown, the centre of the feathers being darkest; head variegated with white streaks, which, coalescing over the eye, form themselves into an eyebrow; chin and throat white, mottled on the former with brown; under parts ruddy brown, the colour clearest on the belly and vent. Length, 5" 9"; wing, 2" 9"; tail, 2 $\frac{1}{8}$ ".

Mr. T. Ayres states that the bill is light dusky brown, with the under mandible pale towards the tip, the tarsi and feet dusky brown, and the iris hazel.

477. *POLIOSPIZA TRISTRIATA* (Rüpp.) Three-streaked Grosbeak.

This species represents the foregoing in North-eastern Africa, and has occurred also within our limits, having been found at

Caconda in Benguela by Senor Anchieta. We have not had an opportunity of examining a specimen from South-western Africa, and transcribe the description published by Professor Barboza du Bocage in his "Ornithologie d'Angolas."

Adult male.—Earthy brown above, [much paler below: the feathers of the crown marked in the centre with a blackish streak; a broad superciliary band, chin and middle of the throat pure white; sides of the head blackish brown; lower tail-coverts whitish; quills and tail-feathers brown, bordered with ashy grey; bill reddish brown, darker at the tip; feet livid; iris brown. Total length, 5 inches; culmen, 0·45; wing, 3·4; tail, 2·4; tarsus, 0·65.

Fig. Rüpp. Neue Wirb. taf. 35, fig. 2.

479. POLIOSPIZA CROCOPYGIA, *Sharpe*.

Damara Yellow-rumped Grosbeak.

At first sight this species might be taken for *Crithagra albigularis* of Smith, but it differs in the bright sulphur-coloured rump being common to both sexes, whereas in *C. albigularis* the female has the rump uniform with the back. It was discovered by the late Mr. C. J. Andersson, who observes: "This species is sparingly met with in Damara and Great Namaqua Land; it is generally seen about rocks in the immediate neighbourhood of water, to which it resorts in small flocks in the morning and evening to quench its thirst. Its food consists of seeds and berries."

Above, pale greyish brown, the middle of the feathers darker, giving a striped appearance on the head, and mottled on the back; lower part of the back, rump, and upper tail-coverts bright sulphur-yellow, the latter somewhat tinged with brown, owing to the basal portion of the feather being of this colour; wing-coverts, quills, and tail-feathers dusky brown, edged with paler whitish brown; a superciliary line and a small stripe under the eye white; throat white, marked irregularly down the side and in the middle with dusky brown spots; ear-coverts, upper part of the breast, and flanks pale greyish brown; abdomen and under tail-coverts pure white; "iris dark brown; the upper mandible very pale brown, and the lower still paler; the legs and toes slaty-brown" (*Andersson*). Total length, 5·3 inches; wing, 3·35; tail, 2·1; tarsus, 0·7.

The female is exactly like the male, but has the under wing-coverts not tinged with yellow.

480. CRITHAGRA ANGOLENSIS (*Gmel.*) Black-throated Seed-eater.

Sir Andrew Smith states that this species was found by him about and beyond Kurrichaine, and it was procured by Mr. Frank Oates at the first Makalaka Kraal, on the Zambesi road, in August. We have also seen specimens from Damara Land. Mr. Andersson writes: "I have met with this species both in Damara Land and further northward; it congregates in large flocks, and often associates with *C. chrysopyga*." It has been also found further to the northward on the West Coast, having been procured by Dr. Falkenstein in Chinchonxo in the Congo district.

Above grey-brown, the centre of the feathers dark brown; rump sulphur-yellow; chin and throat black; breast, belly, and vent, rusty white; wings brown, the tips of the quills and the inner edges of inner vanes, towards bases, white; the outer edges golden-green; tail slightly forked, dark brown, with the tips, and more or less of the inner vanes, white. Length, $4\frac{1}{2}$ ".

Fig. Edwards, Birds, pl. 129.

481. CRITHAGRA ICTERA (*Vicill.*) Golden-rumped Seed-eater.

Crithagra chrysopyga, Swains.: Layard, B. S. Afr. p. 219.

Mr. Ortlepp has sent us specimens of this bird in breeding plumage from Colesberg; he says that it sings sweetly. Mr. T. C. Atmore likewise procured it near Eland's Post and Grahamstown. Mr. Ayres, writing from the Transvaal, states that he met with a small company of five individuals amongst the low thorns in the Mariqua district. Mr. Frank Oates procured a specimen at Tati, and Mr. Jameson occasionally met with it in small flocks during his expedition to the Mashoona country. Mr. Andersson writes:—"This species is common in the neighbourhood of the Okavango, and is also found in Damara Land, extending to the south of that country. On January 5th, 1867, I found a nest of this Finch at Omapju; it was situated in a kamel-thorn bush, about four feet above the ground, and was composed of grass, lined with softer grass internally; it contained three eggs much incubated." Senior Anchieta has it from Biballa and Caconda: it is called *Kabilo* at the latter place and *Kianja* at the former.

Upper plumage, including the crown, ears, wings, and tail, olive-grey, with a dark stripe down each feather; a broad stripe of bright yellow is above each eye, meeting on the front; another below the

ear; upper tail-coverts, and the whole of the under plumage, from chin to vent, also yellow. Length, 4"; wing, 2" 4''; tail, 1" 5'''. According to Mr. Andersson, the iris is brown, the upper mandible flesh-coloured, the lower mandible and also the legs and toes of a dirty flesh colour.

Fig. Swains. B. of W. Afr. i, pl. 17.

492. *CRITHAGRA FLAVIVENTRIS* (*Shaw*). Yellow-bellied Seed-eater.

Shaw, the original describer of this species, states that it came from the Cape of Good Hope. We know nothing of the species ourselves, but Professor Barboza du Bocage records a specimen from Huilla, at which place Senor Anchieta met with it. The following is the description given by Professor Bocage:—

Adult male.—Upper parts olive-yellow, of a purer tint on the rump, marked on the head and on the back with a brown streak in the middle of each feather; forehead, cheeks, superciliary streaks, and under surface of body jonquil-yellow, the breast shaded with olive; lores, ear-coverts and a streak forming a moustache, olive; wing-coverts dark brown, broadly bordered with greenish yellow; quills and tail-feathers blackish, bordered externally with yellow; bill pale, the upper mandible reddish brown, rather darker; feet reddish brown; iris brown. Total length, 5.25 inches; bill, 0.4; wing, 3.05; tail, 2.25; tarsus, 0.7.

482. *CRITHAGRA ALBOGULARIS* (*Smith*). White-throated Seed-eater.

Crithagra selbyi, Layard, B. S. Afr. p. 219.

This species is called by the colonists "Dic-bee Saysie" and "Berg Saysie"; it is very abundant about Saldana Bay, Colesberg, and the Berg River. In the latter place we found them breeding in September, constructing a nest like that of *C. sulfurata*, and in similar situations. The eggs were similar, but seemed to be a little more pointed. Like all their congeners, they have a very sweet song. We are informed by Mr. Rickard that he procured several specimens near Port Elizabeth, but it does not seem to extend out of the colony, though it has been said by Dr. Hartlaub to have occurred in Mr. Monteiro's Benguela collection. Prof. Bocage, however, seems to doubt the correctness of the identification, as he has not given it a place in his work on the birds of Angola.

Cinereous grey, striped above, and immaculate beneath ; the stripes on the crown, and the spots on the back, dark brown ; wing and tail-feathers blackish brown, edged with light grey ; stripe above the eye, a small spot beneath it, and another divided into two, beneath the ears, white ; rump yellow ; middle of throat, belly, and vent white. Length, 6" ; wing, 3" ; 2".

484. *CRITHAGRA SULFURATA* (L.) Large Yellow Seed-eater.

This species is widely spread over the Cape Colony, being found in the vicinity of Cape Town itself. We have received it from Swellendam, from Mr. Cairncross, and it was found in the George district by Mr. Atmore. Victorin likewise procured it at the Knysna. It did not occur in Mr. Rickard's lists from Port Elizabeth and East London, but it extends its range into Natal, where, according to Mr. Ayres, it is a tolerably common bird. He says that they feed upon the hard nutty seeds of small berries, common to many of the shrubs in Natal ; the shell they appear easily to break, and then devour the kernel.

It is apparently not uncommon in the Swellendam district, extending as far westward as Caledon. It is also plentiful at Nel's Poort, where we took the eggs in some abundance. The nest is usually placed in a low bush, often only a few inches from the ground ; it is very compact, and cup-shaped ; the eggs, generally four in number, are white, slightly tinged with green, and dotted at the obtuse end, mostly in an annular form, with intensely dark or light purple spots, with here and there a wavy streak ; axis, 10" ; diam., 7". The colonists call this grosbeak " Geel Saysia."

General colour above greenish yellow, much variegated with dark brown ; a yellow band extends from the nostrils over each eye ; another shorter band extends downwards, commencing below the eye ; at the base of the lower mandible a small yellow spot ; chin and under parts bright yellow in some specimens, faintly streaked with rufous ; pectoral band greenish ; the outer edges of the wing and tail-feathers bright yellow ; rump rather free from the brown markings of the back. Length, 6" 2'" ; wing, 3" 2'" ; tail, 2' 5".

Fig. Jard. and Selby's Ill. Orn. pl. 109, fig. 1.

485. *CRITHAGRA CHLOROPSIS*, Cab. Von der Decken's Seed-eater.

This brightly-coloured species was discovered by the late Baron

Von der Decken in the Zanzibar country in East Africa. A single specimen, without record of exact locality, was contained in Mr. Andersson's collection from Damara Land, and is now in the British Museum.

Above olive-green, obscurely streaked with blackish; sinciput, cheeks, and entire under surface of body very bright yellow; quills and tail-feathers dusky margined with green; bill and feet dusky. Total length, $4\frac{1}{2}$ " ; bill, about 4" ; wing, 2" 5" ; tail, 1" 5" ; tarsus, 8" .

486. CRITHAGRA BUTYRACEA (L.) Common Seed-eater.

Crithagra butyracea and *C. olivacea*, Layard, B. S. Afr. p. 219.

The "Kleine Seisje," as it is called, is abundant throughout the colony, congregating during the autumn in large flocks, and doing extensive mischief to the grain crops. It sings very sweetly, and thrives well in confinement. The nest is a cup-shaped structure, placed in a low bush; the eggs, three to five in number, are precisely like those of *C. sulfurata*, only rather less spotted, and smaller; axis, 8" ; diam., 5" ; it breeds in September. It is common at Port Elizabeth, according to Mr. Rickard, and Mr. Ayres states that in the Transvaal it "is common at Potchefstroom, breeding amongst the hedgerows, and constructing a cup-shaped nest rather roughly built of twigs, intermingled with fine hair-like substances as a binding, and lined with cotton and fine wool, with here and there a feather. It begins to lay in September."

Male.—Plumage above, olive-green; quills the same, with whitish edges; from the forehead over the eyes, a yellow streak, and one of the same colour beneath, from the angle of the bill; under parts of body and rump yellow; tail yellowish green and slightly forked. Length, 5" 2" ; wing, 2" 10" ; tail, 2" 4" .

The female, which is the *C. strigilata* of Swainson, differs in plumage. Above, greyish olive, striped with dusty; rump and tail-coverts greenish yellow; sides of the head grey-brown, with two whitish stripes, one above the eyes, the other beneath the ears; body beneath with dusky stripes; belly white; inner wing-coverts yellow.

487. CRITHAGRA SCOTOPS, *Sund.* Sundevall's Seed-eater.

This pretty little species was discovered by Professor Wahlberg

in South-eastern Africa. We have seen specimens obtained by Mr. Andersson at the Knysna, where also Victorin procured it. Mr. T. C. Atmore also met with it in the forests near Eland's Post.

General colour yellowish green, with brown centres to the feathers of all the upper parts, except the rump; under parts less marked, except on the flanks; belly and vent immaculate; forehead and chin almost black; a narrow eyebrow extending from each nostril over the eye, and a half collar above the neck, bright yellow; tail and primary quills brown, faintly edged with green. Length, 5''; wing, 2'' 10''; tail, 2''.

488. *SERINUS CANICOLLIS*, Swains.

Cape Canary.

Fingilla canicollis, Layard, B. S. Afr. p. 201.

The Cape Canary is a common bird throughout the colony, congregating in flocks on the open and ploughed lands, and feeding on grains and seeds of all kinds. It sings very sweetly, and breeds in captivity with the tame Canary, the mule bird being very handsome—and, we are told, again producing with either the yellow bird or one of its own species. The nest of the Cape Canary is generally constructed in a low thick bush, and is of a cup-shape, formed of hair, moss, and feathers. The eggs, three to four in number, are white, streaked and spotted at the obtuse end with purplish brown: axis, 9''; diam., $6\frac{1}{2}$ '''. Mr. Rickard records it from East London and Port Elizabeth, being most plentiful at the latter place.

Forehead, back, and under parts greenish yellow, mottled with brown on the two first; nuchal collar and flanks grey; vent albescent or pale yellow; wings and tail dark brown; the outer webs narrowly margined with yellow; the inner webs of the latter broadly margined with brown-yellow. Length, 5'' 3''; wing, 3''; tail 2'' 2''.

489. *SERINUS TOTTUS* (Gmel.)

Brown Canary.

The "Pietje Canarie," as it is called by the Dutch colonists, is found in similar situations to the Cape Canary. It is said that the cock will breed with the hen Yellow Canary in captivity; but that the hen Pietje Canary will not breed with the male of the yellow species. This may be from an unwillingness of the wild hen to

build in a cage. It is very common at East London according to Mr. Rickard.

Head greenish brown; rump yellowish green, mottled with brown; eyebrows yellow; under parts greenish yellow, the yellow predominating on the chin and down the centre of the belly; wing and tail-feathers blackish brown, tipped with white; tail-coverts grey. Length, 5'' 3'''; wing, 2'' 9'''; tail, 2'' 2'''. Irides reddish brown.

Fam. EMBERIZIDÆ.

490. FRINGILLARIA CAPENSIS (L.) Cape Bunting.

Fringillaria capensis and *F. vittata*, Layard, B. of S. Afr. pp. 206, 207.

This Bunting is universally distributed throughout the colony, but apparently becomes gradually less plentiful in the Eastern districts, as Mr. Rickard says it is not very abundant near Port Elizabeth. Mr. T. C. Atmore has forwarded it to us from Eland's Post.

The "Streepkopje" has very much the habits of the European Hedge Sparrow. It frequents low bushes and rocks, creeping about the former, and running up the latter, and sitting on their summits, opening and shutting its wings, and uttering a little short, piping note. It breeds about bushes and rocks, placing its nest in crevices or among roots, or even on the ground; the eggs are white, profusely speckled with minute rufous and light purple markings: axis, 10'''; diam., 6'''. They are laid at the Berg River in September.

Above grey, striped with black; beneath cinereous grey; sides of the head with two white and two black stripes; wing-coverts rufous; quills and tail blackish; chin and under tail-coverts whitish. Length, 6''; wing, 2'' 9'''; tail, 2'' 6''.

Fig. Temm. Pl. Col. 664, fig. 1.

491. FRINGILLARIA IMPETUANI, *Smith*. Lark-like Bunting.

Common about Nel's Poort, flying in small flocks and feeding on small grass seeds and insects. It has a short lively song. Its nest is cup-shaped, constructed in a low bush. Eggs white spotted in a ring with obscure ill-defined cloudy blotches and pin-point dots of

purplish brown. Axis, 7" ; diam., $5\frac{1}{2}$ ". Captain Trevelyan has procured it near Kingwilliamstown, and Mr. Ayres obtained a single specimen in the Transvaal, in the bare open country. Mr. Andersson writes : " This species is common in Damara and Great Namaqua Land ; but as it frequently resorts to the ground in search of seeds and insects, it often escapes observation ; it is gregarious, and is partial to broken ground or its immediate vicinity, and also to the neighbourhood of water, which it appears to require pretty constantly."

Coloured like a lark ; above isabella, striped with brown ; beneath paler and immaculate ; above the eye, and beneath the ears, a pale stripe ; outer edge of the secondaries, and inner edge of all the quills, rufous ; a dark stripe behind the eye ; throat inclining to dusky white ; belly and vent almost white ; wings and tail brown. Length, $5\frac{3}{4}$ " ; wing, 2" $8\frac{1}{2}$ " ; tail, 2". Irides dark brown ; legs, toes, and upper mandible of a dusky flesh colour, the lower mandible livid horn colour (*Andersson*).

492. FRINGILLARIA TAHAPISI (*Smith*).

Rock Bunting.

Mr. Ortlepp sends this species from Colesberg, and Mr. T. C. Atmore from Eland's Post. We also ourselves saw a pair in the Blinkwater clinging to some low shrub on a high bank on the roadsides, but only succeeded in shooting the male. Mr. T. Ayres shot one specimen in November " at the upper drift of the Tugela, amongst the thorn bushes. There were three of them together, feeding amongst the short grass." Sir Andrew Smith states that it inhabits the country towards the sources of the Vaal River, and Mr. T. E. Buckley obtained a pair in the Transvaal, at the end of November, 1873. Mr. Jameson found it sparsely among the rocks at Kanye, in the Matabele country. Although not met with by Mr. Andersson, Senor Anchieta has procured two individuals in Angola, one at Biballa (native name, *Kangua*) and one at Caconda (native name, *Gungo*). It has also been found at Santo Antonio on the left bank of the Congo River by Messrs. Lucan and Petit.

Head and throat black, the former with seven longitudinal white stripes, one from base of mandible to centre of nape, and three on each side ; body above light brown, dashed with dark brown, beneath light cinnamon-brown ; tail dark brown, the outermost feather on

ach side tipped and edged with pale rufous. Length, 6"; wing, " 3"; tail, 2".

Fig. Rüpp. Neue Wirb. taf. 30, fig. 2.

43. FRINGILLARIA FLAVIVENTRIS (*Vieill.*) Golden-breasted Bunting.

Mr. W. Atmore procured this pretty species at Kykoe and Meiring's Poort, where he met with it "in small flocks of four or five individuals," probably family parties. Mr. Rickard tells us he only once fell in with it at East London, and Captain Trevelyan records it as scarce near Kingwilliamstown. Mr. T. C. Atmore obtained it near Grahamstown and Eland's Post. Mr. T. Ayres has found it in Natal, and observed it rather commonly in some parts adjoining the Limpopo River. Mr. T. E. Buckley obtained specimens in Bamangwato and the Matabele country, and Mr. Frank Oates procured specimens at Tati, and at the first Makalaka Kraal on the Zambesi road, at Inchlanguin, on the Semokwe River, and again between the Gokwe and Seruli Rivers. Mr. Ayres states that it is by no means uncommon in the Mashoona country. Mr. Andersson's note is as follows: "This very handsome bird is pretty common in northern Damara Land, and thence onward to the Okavango. I have usually met with it in well-wooded localities; and I obtained my specimens by quietly awaiting their arrival at some small piece of water, which they were sure to visit in the morning and evening, especially the former; they are fearless birds, and consequently easy to secure."

Head black, with seven white stripes, the centre one on the top of the head broadest and often tinged with rufous; plumage above varied with rufous and grey; beneath bright yellow, with a rufous pectoral bar; chin, vent, and tips of lateral tail feathers, pure white; rump grey. Length, 5" 6"; wing, 2" 8".

"The upper mandible is dark liver-brown, the under mandible salmon-yellow; the legs yellowish brown, and the toes also, but more dusky" (*Andersson*).

Fig. Rüppell, Atlas, pl. 25.

494. FRINGILLARIA CABANISI, *Reichen.* Cabanis' Bunting.

The present species was originally discovered by Dr. Reichenow in the Cameroons Mountains, and has since been obtained by Senor Anchieta at Caconda, in Benguela.

We have never seen a specimen of the bird itself, but Professor

Bocage states that, besides being larger than *F. flaviventris*, there are strongpoints of difference between the last-named bird and *F. cabanisi*. The following is the description given by Professor Bocage:—

Adult male.—Head above blackish, varied with ashy grey or white in the middle of the crown, and of a deep black on the sides; a narrow superciliary band produced on each side as far as the nape; back marked with large black streaks on a ground of ashy and maroon brown; rump and upper tail-coverts ashy, with the centre of some of the feathers brownish; two transverse white bands on the wing, one formed by the last row of the lesser wing-coverts, the other by the tips of the greater coverts; under surface of body less brilliant yellow than in *F. flaviventris*, with the chin and a band of each side of the throat, pure white; flanks and crissum pale ashy; under tail-coverts white; quills brown, fringed with ashy grey externally; tail-feathers blackish, tipped with white, the external one white externally as well; upper mandible blackish, the lower one reddish with the tip brown; iris brown. Total length 6·7 inches; bill, 0·5; wing, 3·35; tail, 2·9; tarsus, 0·65.

Fig. Reichen. Journ. f. Orn. 1875, taf. ii. figs. 2, 3.

Fam. ALAUDIDÆ.

494. *PYRRHULAUDA VERTICALIS*, *Smith*. Grey-backed Finch-Lark.

Sir Andrew Smith found this bird to the north and south of Kurrichaine. Mr. Ortlepp tells us that it is plentiful near Colesberg, and, when the breeding season is over, they are to be found on most of the extensive plains in the neighbourhood, in large flocks. Mr. Andersson writes as follows:—"This species is pretty commonly diffused over Damara and Great Namaqua Land, especially in the latter country; and I generally observed it abundant in the rainy season at Objimbinque, during my residence there. It congregates in large flocks, and is always found on the ground, unless disturbed, when it flies but a short distance before it again alights, scattering widely amongst the grass in search of its food, which consists almost entirely of seeds. Its flight is undulating; and occasionally an individual may be seen to soar above the rest, descending again very abruptly; it may sometimes be heard to utter a shrill chirping cry. The nest is constructed on the ground, under a tuft of grass."

Professor Barboza du Bocage has received two specimens from Angola, but without any indication of their exact locality.

Head, neck, and under parts, black-brown ; ears, top of head, nuchal collar, and spots in front of each wing, white ; back grey-brown ; tail slightly forked, the outermost feather of each side brown towards the base of the inner vane, elsewhere white. Length, 4" 9" ; wing, 3" 2" ; tail, 2" 3" .

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 25.

495. *PYRRHULAUDA SMITHII*, *Bp.*

Smith's Finch-Lark.

Pyrrhulauda leucotis, Layard, B. S. Afr. p. 210.

This species of Finch-Lark was also met with by Sir Andrew Smith near the Tropic of Capricorn, inhabiting plains thickly covered with dwarf shrubs. Mr. Ortlepp has forwarded it from Colesberg, and he tells us that they are found from the left bank of the Orange River, where they range in flocks of from five to ten individuals, feeding on grass seeds. Mr. T. C. Atmore forwarded a specimen from Griqua Land. Mr. T. Ayres writes from the Transvaal :—" We found these birds frequenting the open glades along the banks of the Limpopo in companies consisting of sometimes as many as fifty individuals. They were feeding on grass seeds after the manner of Finches." Mr. Andersson gives the following note :—" I have observed this species, though very sparingly, in Damara Land, and also to the northward, but not in Great Namaqua Land ; it is seen in small flocks, which frequent the ground in open localities covered with grass and scanty dwarf vegetation, among which they run with great rapidity, taking flight for a short distance only when disturbed."

Male.—Head, neck, shoulders, breast, and abdomen, black ; ears, half collar on back of neck, and a blotch on each side of the breast, hinder portion of flanks, and rump, white, the two latter tinged with brown ; back and shoulders chestnut ; tail unber-brown, except the outer feathers, which are rusty white. The female is dusky brown, with a speckled breast. Length, 5" ; wing, 3" 3" ; tail, 2" . Mr. Andersson states that the iris is dark brown, the legs and toes fleshy brown.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 26.

497. *PYRRHULAUDA AUSTRALIS*, *Smith.*

Dark-naped Finch-Lark.

Sir Andrew Smith states that the present species inhabits the

country along the Orange River, but extends further south than *P. verticalis*. Dr. Edwin Atherstone tells us that it is found near Kingwilliamstown, and in the country round Colesberg it is plentiful. We found it abundant in a limited tract of country near Nel's Poort, Beaufort. It seemed to keep in small parties of four or five individuals and feed on small grass seeds. It sometimes congregates in flocks of several hundreds and builds on the ground, under the shelter of a tuft of grass or some dwarf shrub. Mr. T. Ayres gives the following note on the species in the Transvaal:—"I found two nests of this bird, one in March, the other in April; each nest contained only two eggs, which, in one instance, were somewhat incubated. One of these nests I found at Mamusa, on the Hartz River, the other near Bloemhoff, on a tributary of the Vaal River. The nest of this species is placed on the ground under shelter of a clump of weed or grass. It is roughly constructed of coarse grass, slightly lined with fine roots; both the nests which I found were situated within twenty yards of water. The egg is white, much spotted with light sepia-brown." According to Mr. Andersson it is "not uncommon in Damara and Great Namaqua Land, where it occurs in small flocks during the rainy season. Its habits are similar to those of *P. verticalis*."

Head, above, black-brown; back ferruginous, dashed with dark brown, beneath black; quills and tail black-brown, the two centre feathers of the latter edged and tipped with light rufous. Length 5"; wing, 3' 2''; tail, 2' 2'''. Mr. Andersson states that the bill is light horn colour, darkest above; the legs and toes light flesh colour.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 24.

498. *CERTHILAUDA CAPENSIS* (Bodd.) Cape Long-billed Lark.
Certhilauda africana, Layard, B. S. Afr, p. 217.

In the Long-billed Larks the culmen or ridge of the upper mandible is equal to, and in most cases longer than, the middle toe and claw. Such is the case with the three long-billed genera of *Alaudidæ* found in South Africa, and the four genera here referred to are easily distinguished; for instance, any of the species of *Certhilauda* can be recognized at a glance by their long and perfectly straight hind claw.

The chief distinguishing character of the present species is the absence of white tips to the tail-feathers. It is common in most parts of the colony, as we have received it from all our correspondents. It frequents the sandy Cape Flats, the cornlands of Malmesbury, the uplands of Caledon, and the grassy plateaux of the Knysna. It never congregates in flocks, rarely more than two being found within a certain range. Its food consists of insects and seeds.

It constructs a cup-shaped nest of hair and grasses, lined with feathers, under the shelter of a bush or stone; the eggs, generally three in number, are dirty white, faintly and minutely specked with light brown: axis, 11''; diameter, 8''. Some specimens run much darker than others.

Mr. Gurney records a specimen from Natal in one of Mr. Ayres' early collections from that colony, but we have never seen a specimen from that country.

Adult.—Above brown, slightly washed with sandy colour, and streaked with dark brown centres to the feathers, many of which are tipped with whitish; hind neck greyish; wing-coverts darker brown, washed with sandy colour on the outer web, and tipped with whitish, the primary coverts narrowly tipped with the latter colour also; quills ashy brown, narrowly margined with sandy buff, the innermost secondaries with a broad whitish margin; rump and upper tail-coverts sandy rufous, with dark brown central streaks to the feathers; upper tail-coverts ashy brown, darker brown in the centre of the feathers; tail-feathers dark brown, narrowly margined with ashy fulvous, the two middle ones washed with greyish, the outermost margined and tipped with pale sandy buff; a very distinct eyebrow creamy white; feathers under the eye dusky white, those in front of the latter blackish; ear-coverts dull sandy colour; cheeks whitish, minutely spotted with black; chin white; rest of under surface buffy white, the breast slightly washed with sandy colour, the lower throat, fore neck, and breast plentifully marked with triangular spots of black, larger and more longitudinal on the lower breast and sides of the body; sides of the upper breast shaded with ashy; under wing-coverts sandy buff, the outermost minutely spotted with dark brown, the lower series ashy brown, like the inner lining of the wing, the inner webs being pale rufous near the base; under-retail-coverts white, broadly streaked down the centre

with black; "bill yellowish brown, shaded with umber-brown; legs and toes clear buff-orange, tinted with flesh-red; claws yellowish brown, shaded with umber-brown; iris dark brown" (*Sir A. Smith*). Total length, 7·4 inches; culmen, 10·5; wing, 3·9; tail, 3·0; tarsus, 1·15.

Female.—Coloured like the male (*Sir A. Smith*).

Fig. Le Vaill. Ois. d'Afr. iv. pl. 492.

499. *CERTHILAUDA RUFULA* (V.)

Rufous Long-billed Lark.

This species differs from the foregoing in having large white tips to the tail-feathers. It may be recognized by the generally rufous colour of the plumage, varied with narrow dark brown centres to the feathers, and by its rufous secondary quills which are margined with fulvous.

We have received specimens from Colesberg from Mr. Ortlepp, and from Griqua Land from Mr. T. C. Atmore. Mr. Ayres notes it from the Transvaal under the name of *C. garrula*, with which for a long time the present species was confounded. He states that it is found in the open country, and it breeds there also, as in 1871 the same gentleman records the finding of a nest at Mamusa, at some distance from the river. "It was placed under a tuft of grass, and was composed of rough grass outwardly, lined with roots of fine grass, and partially arched over with the rough grass of which the outer portion of the nest was constructed. It contained two eggs, one of which was larger than the other; and though I left the nest for two days after finding it, no other eggs were laid." Canon Tristram, who had this pair of eggs from Mr. Ayres, believes that one of them is that of one of the South African Cuckoos. Mr. Andersson states that he found this species in Great Namaqua Land, but not in Damara Land: it frequents very open localities covered with grass and bush, where it runs about with great swiftness.

Adult male.—Above bright sandy rufous, with narrow and indistinct brown centres to the feathers, many of which are also margined with buffy white in a more or less conspicuous manner; the head of the same rufous as the back, with slight fulvous margins and small dark brown centres to the feathers; lores and a very indistinct eyebrow buffy white; ear-coverts uniform bright sandy rufous; cheeks buffy white, with a few tiny spots of brown; quills

sandy brown, with white margins to the feathers, which are all dark brown in the centre, the greater coverts externally inclining to greyish; quills ashy brown, the primaries tipped with whitish, the secondaries darker, externally margined with sandy rufous inclining to buffy-white towards the tips of the feathers; rump and upper tail-coverts nearly uniform rufous, the long plumes of the latter dark brown in the centre and narrowly tipped with whitish; tail blackish, with a large spot of white at the tip of all the feathers except the two centre ones, which are rufous, more or less marked down the centre with greyish brown, all the feathers more or less rufous towards the base, this colour sometimes extending for half the feather; the external rectrix narrowly margined on the outer web with buffy-white; throat entirely white; rest of under surface of body bright sandy rufous, with a few more or less distinct white margins to some of the feathers on the breast minutely spotted with dark brown; under wing-coverts pale sandy rufous, those on the edge of the wing slightly mottled with brown; "iris hazel" (*Atmore*). Total length, 6.1 inches; culmen, 0.85; wing, 3.7; tail, 2.6; tarsus, 1.15.

Adult female.—Similar to the male in colour, but smaller, and having a much shorter bill. Total length, 5.5 inches; culmen, 0.75; wing, 3.5; tail, 2.1; tarsus, 1.05.

Young.—The young bird is principally distinguished by its spotted plumage, the white margins to the feathers of the upper surface being rather spots than terminal margins, and being further discriminated by small subterminal black spots. Around the hind neck is a distinct shade of fulvous, almost forming a collar and much plainer than in the adult bird; the margins to the wing-coverts very broadly and distinctly white; throat, lores, and a scarcely perceptible superciliary line white; rest of under surface pale sandy rufous, becoming gradually more fulvous on the abdomen; the breast slightly spotted with pale brown, the feathers margined with whitish.

In winter the young bird is very different, having very broad circular margins of white to all the feathers of the upper surface, with obscure brown central streaks, the under surface very pale and with scarcely any perceptible brown spots on the breast.

Fig. Vieill. Gal. Ois. ii, pl. clxi.

500. *CERTHILAUDA GARRULA*, *Smith*. Smith's Long-billed Lark.

This Lark is very similar to the foregoing, but is dark brown with a slight shade of rufous on the margins of the feathers, and the secondaries are ashy brown with very narrow whitish or rufous margins: the tail-feathers are also tipped with white spots.

It appears to be widely distributed. We obtained a few specimens at Nel's Poort, and observed it at the River Zonder End on Mr. Vigne's farm. We have also received it from Colesberg from Mr. Ortlepp, who met with it likewise at Port Elizabeth in June and August. Sir Andrew Smith found it inhabiting the northern parts of the colony. He writes: "It is very noisy, and generally found in small flocks. It moves rapidly, and when at rest is found either on the ground, or perched on ant-heaps or small shrubs. It constructs its nest in a hole or excavation in the ground; the foundation is small twigs; the inner part grass or hair. It lays four or five eggs, of an olive colour, with darker spots of olive brown." Several specimens were received from Mr. Atmore, who writes, 24th October, 1864: "I have just stumbled upon a nest of *C. garrula* with two eggs, hard set; they are brown spotted, much like those of the 'Kalkoentje,' but smaller. Nest open, and nicely secreted under a bush. The whole family keep together till pairing time; they run very swiftly on the ground. Eggs—three, four, or five. The male is very attentive to his sitting hen, spreads his wings, sets up his feathers, and sings."

A specimen collected by Wahlberg in the interior of Natal is in the British Museum.

Adult male (type of species).—Above very dark brown, with narrow margins of sandy fulvous, the hind neck inclining to ashy grey, the head rather darker than the back, and slightly streaked with rufous, the margins to the feathers being of this colour; wing-coverts dark brown, with sandy fulvous margins, the greater series paler brown, some of the coverts slightly margined with white; quills paler brown, margined with ashy fulvous and tipped with white, the secondaries washed on the outer web with ashy grey, and with rufous on the inner web, and tinged with the same at the tip, the lower surface of the wing ashy brown, the rufous margins very distinct on the inner secondaries; upper tail-coverts bright rufous, some of them margined with whitish; tail-feathers dark brown

tipped with white, and rufous at the base, like the upper tail-coverts, this colour extending further on the centre feathers, which are shaded with ashy but not tipped with white; forehead tinged with rufous; ear-coverts and a streak above the latter bright rufous, but not forming a distinct eyebrow; lores buffy whitish; cheeks and throat white, the former with a few specks of brown; rest of under surface bright sandy rufous; the under wing-coverts light isabelline, those on the outer edge of the wing more rufous; on the breast a few spots of dark brown, and on the sides of the upper breast a few streaks of the same: "upper mandible of the bill and the lower towards the point reddish brown, the latter towards the base reddish yellow lightened with flesh red; legs and toes intermediate between Dutch-orange and sienna yellow, and tinted with flesh red; claws of the same colour as the legs, shaded with brown; eyes a bright clear brown" (*Sir A. Smith*). Total length, 6·7 inches; culmen, 0·9; wing, 3·7; tail, 2·6; tarsus, 1·35.

Adult female.—Similar to the male, but much smaller, and having a shorter bill. Total length, 5 inches; culmen, 0·7; wing, 3·25; tail, 2·1; tarsus, 1·1.

Young.—Very like the adult, and of the same dark brown colour, but distinguished by very distinct white edgings to the dorsal feathers, wing-coverts, and secondary quill-feathers.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. cvi, fig. 1.

501. ALÆMON SEMITORQUATA (*Smith*). Grey-collared Lark.

Certhilauda semitorquata and *C. subcoronata*, Layard, B. S. Afr. pp. 216, 217.

The members of the genus *Alæmon* differ from the *Certhilaudæ* in having the hind claw short and curved, instead of long and straight: at the same time, they resemble the latter birds in their long bill, which is about the same length as the tarsus. Two species are known from South Africa, of which the present is to be distinguished by the isabelline colour of the under wing-coverts and base of the inner web of the quills.

But few specimens fell under Sir Andrew Smith's notice, and these were procured in the arid plains of the middle and eastern districts. We found it near Grahamstown, and have received a few specimens from Mr. Atmore, procured in the neighbourhood of Traka, in the Albert division, in August; also from Mr. Arnot,

killed near Colesberg, and from Mr. Ortlepp. Eggs sent by the latter gentleman are of clear pale cream coloured ground, spotted throughout with red, brown, and purple, rather inclining to form a ring near the thick end. Axis, 11''' ; diam., 8'''. The nest is a cup-shaped structure of dry grasses placed in a tuft of grass on the ground. It feeds on insects and small grass seeds, and inhabits flats and mountain slopes—soars frequently. Note, a loud but plaintive whistle, something resembling ē-ū.

We have received specimens from Mr. T. C. Atmore from Hope-town, Griqua Land, and the late Mr. Frank Oates procured a specimen in the Transvaal in December, and here also Mr. T. E. Buckley met with it in June, but he fancies it is not very common. He only obtained a single specimen, and observed only one or two more: his bird was shot on the side of a small hill among some stones: its flight was undulating. Mr. Andersson observes:—"These Larks are not uncommon in the middle and southern parts of Great Namaqua Land: and I have also observed a considerable number of them together between Wilson's Fountain and Tjobis in Damara Land. It feeds on insects, seeds, etc." Mr. Monteiro procured a specimen in Benguela.

The present species may be recognized by the diagnostic characters given above, but considerable difference is seen between the summer and winter plumages, which were tabulated in a paper on South African Larks, published by the Editor, and which are here reproduced:—

Summer plumage.

Upper surface clear vinous brown, with distinct black stripes.

Hind neck indistinctly ashy grey.

Lower back and rump same as rest of upper surface, and streaked in the same manner.

Upper tail-coverts dark brown, with rufescent margins.

Winter plumage.

Upper surface sandy isabelline, with fulvous margins to most of the dorsal feathers; head and interscapular region with small black shaft-stripes.

Hind neck decidedly ashy grey, contrasting with head.

Lower back and rump entirely uniform isabelline, with no shaft-streaks.

Upper tail-coverts light ash colour, paler than the tail, and margined with whitish.

Upper wing-coverts and quills dark brown, with broad rufous margins.

Ear-coverts deep rufous, with slight fulvous shaft-streaks.

Cheeks and throat white, with a few black spots.

Under surface of body isabelline, with vinous tinge on flanks, breast broadly streaked with black.

Under wing-coverts deep isabelline vinous.

The *male* is larger than the female, measuring 0·9—0·95 inch in the bill, as against 0·75—0·8 in the female, and has the wing 4·1—4·4 as against 3·7—3·75 in the hen bird.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. cvi, fig. 2.

Upper wing-coverts and quills brown, broadly margined with pale sandy, shading off into white on the margins.

Ear-coverts very pale sandy.

Cheeks and throat pure white, unspotted.

Under surface of body white, with a few triangular spots of dusky black on the breast.

Under wing-coverts very pale isabelline sand colour.

502. ALÆMON NIVOSA (*Swains.*)

Cape Lark.

Alauda codea, Smith: Layard, B. S. Afr. p. 209 (winter plumage).

Megalophonus lagepa (Smith): Layard, *t.c.*, p. 214 (summer plumage).

Megalophonus guttatus, Bp. Layard, *t.c.*, p. 45.

This species differs from the foregoing one in its smaller size, and ashy brown under wing-coverts and quill-linings. The difference in the winter and summer plumages has caused considerable confusion in its names, but we believe that *A. codea*, *M. lagepa*, and *M. guttatus* of our first edition are all referable to one and the same species.

Sir Andrew Smith states that it is generally, though sparingly, scattered over the Western Province, particularly in the Karroo. We have seen a specimen from the neighbourhood of Cape Town shot by Mr. Butler of the Cape Museum, and Mr. C. A. Fairbridge procured a single specimen on the Cape Flats, near Rondebosch. We found it plentiful at Nel's Poort, in the Karroo: it first appeared in the neighbourhood of Beaufort. A single nest fell under our

observation in December. The eggs, four in number, and of a mottled brown, were deposited in a cup-shaped nest, on the side of a low bush, at the edge of a foot-path. When we approached it the bird crept away to a little distance, then rose, flew a few yards, and perched on an ant-heap to watch us. As we were proceeding to kill a *Hyena*, which had been caught in one of our traps, we deferred taking the eggs until our return; but coming home by a different route, we had to leave them till next morning, when on proceeding to the spot we found the young excluded. The hen bird, on this and several subsequent occasions, executed the same manoeuvres to escape detection.

Mr. Atmore found it at Traka, and we procured several on the Berg River. Mr. Andersson states that he observed this species pretty frequently in Little Namaqua Land, but not to the north of the Orange River: it perches on bushes as well as on the ground.

Adult in summer plumage.—Above brownish cinnamon, streaked with black down the shafts of the feathers, these shaft-streaks disappearing on the rump; hind neck with a scarcely perceptible shade of greyish, slightly distinguishable on the sides; wing-coverts and quills dark brown, margined with cinnamon rufous, shading off into a fulvous edging on the extreme margin of the greater coverts and some of the secondaries, the innermost of which are more broadly edged: upper tail-coverts rufous, with distinct blackish shaft-streaks; tail dark brown, with pale edgings of fulvous brown, the two centre feathers broadly and the two outermost narrowly margined with cinnamon-rufous: lores and a distinct eyebrow creamy-buff; feathers in front of the eye blackish; under the eye another line of creamy-buff feathers; ear-coverts cinnamon; cheeks and throat dull white, varied with a few blackish spots; rest of under surface buffy-white, slightly rufescent on the sides of the body, the fore neck and breast thickly spotted with dark brown, the spots becoming narrower and more longitudinal on the sides of the breast and flanks; thighs rufous; under tail-coverts white, the shafts rufous, the longest plumes rufous, with black shafts and a whitish tip; under wing-coverts ashy brown, like the inner lining of the wing; "bill light reddish brown, the lower mandible pale buff-orange towards the base; legs and toes intermediate between broccoli and yellowish brown, and tinted with flesh red; claws light reddish brown; iris bright brown; eyebrow rusty white" (*Sir A.*

Smith). Total length, 7 inches; culmen, 0·7; wing, 3·65; tail, 3·8; tarsus, 1·05.

Winter plumage.—Entirely different from the summer dress. Above ashy grey, with a slight sandy-coloured tinge, the black central stripes broad but obscure, rather plainer on the middle of the back and scapularies, which are rather broadly margined with creamy white; wing-coverts dark greyish brown, with ashy margins to least series, the greater and median series broadly edged with whitish; quills dark brown, margined with ashy, the secondaries broadly edged with whitish; rump and upper tail-coverts rather more distinctly washed with sandy-colour than the back, the latter with dark brown shaft-stripes; tail-feathers dark brown, the centre feathers shaded with greyish and plainly margined with ashy white, the outermost feathers having also a slight edging of the same; eyebrow and streak below the eye white; feathers in front of the latter blackish; ear-coverts uniform ashy grey like the back, but without dark shaft-streaks; hinder part of the cheeks washed with ashy-grey; fore part of cheeks and throat white, with an indistinct moustachial line of blackish spots; sides of neck and under surface of body white, with triangular blackish spots from the lower throat to the breast, changing into longitudinal streaks on the sides of the breast and flanks and under tail-coverts; sides of the body inclining to greyish, as also the thighs; under wing-coverts and wing-lining entirely ashy brown. “Bill, legs, toes, and claws deep orange-coloured brown, shaded with brownish red, the lower mandible towards the base sienna yellow” (*Sir A. Smith*).

Fig. *Smith*, Ill. Zool. S. Afr. pl. 87, figs. 1, 2.

503. HETEROCORYS BREVIUNGUIS (*Sund.*) Short-clawed Lark.

Having the short and curved claw of an *Alæmon*, the present bird has the bill shorter and stouter than in that genus, the bill when measured from gape to tip being much shorter than the tarsus. The nostrils are bare and not hidden by bristly feathers.

This species seems to be very rare, as we have never seen a specimen in any recent collection. Sir Andrew Smith procured two individuals, which are now in the British Museum; but he does not appear to have named the species. The late Professor Wahlberg obtained it in the Transvaal, and the following description is taken from one of his specimens:—

Adult Male.—Above rufous fawn colour, the margins of the dorsal plumes paler and more fulvescent, with broad centres of blackish brown; the head slightly crested and coloured like the back, the hind neck more greyish and somewhat separating the head from the back by an indistinct collar; wing-coverts coloured like the back, dark brown, with broad fulvescent margins, causing a somewhat mealy appearance; quills brown margined with fulvous fawn-colour very broad on the secondaries, and paler in the outer edges; lower back, rump and upper tail-coverts bright rufous fawn colour with narrow blackish shaft-lines, broader on the last named; tail-feathers brown, bordered with fulvous, a little broader on the outermost feather and more rufous on the centre ones, which are shaded with ashy; lores and a distinct eyebrow fulvous white, tinged with fawn; ear-coverts rufous fawn, inclining to dark brown on their upper margin; checks fulvous white, with a few spots of dark brown; under surface of body isabelline buff, the throat unspotted; the flanks and chest washed with fawn-colour, the latter marked with a good many triangular spots of dark brown; under wing-coverts light fawn colour, the outermost spotted with brown, the greater series ashy brown like the inner lining of the wing, which is almost entirely of the latter colour, with a tinge of isabelline on the inner web; bill horn brown, inclining to yellowish horn colour at base. Total length, 6·8 inches; culmen, 0·8; wing, 4·0; tail, 3·1; tarsus, 1·1.

Fig. Sharpe, P. Z. S., 1874, pl. lxxvi, fig. 2.

504. *AMMOMANES FERRUGINEA* (*Lafr.*) Ferruginous Lark.
Alauda ferruginea, Layard, B. S. Afr. p. 208.

The chief difference between the genus *Ammomanes* and the preceding genus consists in the feathered nostrils. The other characters are the same, viz., the long first primary equal to the tarsus, the short and curved hind claw, and the shorter and stouter bill not equalling the tarsus in length.

Sir Andrew Smith found this Lark on the arid plains to the southward of the Orange River, and appears to have procured several specimens. Only one, however, is in the British Museum, the type of the species, of which the following is a description:—The species is distinguished by having no white tips to the tail-feathers, by its rufous ear-coverts and the inner lining of the wing being lead-coloured, with-

out any perceptible shade on the inner web of the primaries. Above uniformly deep vinous cinnamon, the head coloured like the back and showing no pronounced grey shade on the hind neck; least wing-coverts uniform with the back, inasmuch as the brown bases to the feathers are concealed; median and greater coverts dark brown, margined with cinnamon shading off into yellowish buff on the extreme edge of the feathers; quills light brown, with ashy fulvous edges, the secondaries more broadly margined with cinnamon shading into whitish on extreme edges, especially the innermost, where the cinnamon colour occupies the greater part of the feather, leaving the centre of it only longitudinally brown; rump vinous cinnamon, the upper tail-coverts rather inclining to brownish cinnamon, resembling the centre tail-feathers, which are longitudinally brownish down the centre, and by no means so bright cinnamon as the back; rest of the tail-feathers very dark brown, narrowly edged with cinnamon buff, a little more broadly on the penultimate feather, and very distinctly on the outermost where the rufescent margin occupies more than half of the outer web; lores and feathers under the eye dull white, as well an ill-defined eyebrow; ear-coverts uniformly cinnamon; cheeks, throat, and sides of neck whitish, the former slightly spotted with blackish, forming an indistinct moustache: rest of under surface creamy white, shading into ashy rufous on the flanks and thighs, the sides of the upper breast rufous; lower throat and breast very distinctly marked with blackish spots; those on the former triangular, gradually becoming more longitudinal on the breast, and disappearing on the sides of the body; many of the longitudinal streaks washed with rufous; under wing-coverts and inner lining of wing almost uniformly ashy or leaden brown, the innermost secondaries washed with rufous on inner web; some of the under wing-coverts with indistinct whitish edgings; under tail-coverts creamy-white washed with cinnamon towards the tips of the middle ones; "bill dark yellowish brown, passing towards the base of the lower mandible into dusky yellow; feet and claws light yellowish-brown; eyes dark brown" (*Sir A. Smith*). Total length, 7.5 inches; culmen, 0.7; wing, 4.1; tail, 3.2; tarsus, 1.2.

Sir Andrew Smith says that the female is "not quite so bright as the male, and the brown streaks on the breast are less distinct."

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. xxix.

505. *AMMOMANES ERYTHROCHLAMYS* (*Strickl.*)

Rufous-mantled Lark.

The present species differs from the preceding in the pale ashy lining of the quills, the inner webs of the primaries inclining to isabelline. It also has not the greyish flanks of *A. ferruginea*.

We have seen a number of specimens from Damara Land collected by Mr. Andersson, but they appear to be all in winter plumage. The only bird in summer plumage, that has come under our notice, was shot by Mr. T. Ayres in the Transvaal, in June, 1872. He writes:—"I shot the specimen sent, a female, amongst some rocks and stones in a low range of hills some three or four miles from Potchefstroom; it had a peculiar knack of hiding itself by creeping over and about bits of rock."

The following is a description of a Damara specimen:—

Adult male in winter plumage.—Above uniform pale fawn-colour, with indistinct shaft-stripes of dull rufous on some of the feathers of the head and back; wing-coverts pale fawn, like the back, but with pale yellowish buff margins to the feathers; quills pale brown, broadly margined with fawn colour, the secondaries more broadly, the innermost being coloured like the wing-coverts and margined in the same manner with yellowish buff; tail dark brown, narrowly margined with fulvous fawn colour, occupying the entire outer web of the last tail-feathers, and running round the tip and up the margin of the inner web of this and the penultimate feather; the two centre feathers bleached fawn colour, paler than the back; lores, feathers below and above the eye, forming an eyebrow, and cheeks white, the ear-coverts pale fawn colour like the back; under surface of body creamy white, washed with fawn colour on the sides of the body, the chest spotted with triangular markings of pale brown; thighs pale fawn; under tail-coverts creamy white; under wing-coverts buffy whitish, the greater series pale ashy brown, the outer plumes fawn coloured; inner lining of wing also pale ashy brown, inclining to pale fawn colour at base of inner web. Total length, 6·5 inches; culmen, 0·75; wing, 3·6; tail, 2·8; tarsus, 1·05.

The summer dress is different from the winter, and is of much rarer occurrence in collections than the latter; indeed we have only seen one example, the one figured by Mr. Ayres (*l. c.*). It differs in the following particulars:—

a. In being deeper cinnamon above, the quills and coverts all being edged with the same dark colour.

b. In having the tail broadly edged and tipped with cinnamon rufous, the outermost feathers not paler margined, the two centre ones being almost entirely cinnamon, with a broad streak of greyish black down the middle.

c. In having a greyish shade on the hind neck, which is not seen in the winter dress. The first primary in *A. ferruginea* is much bigger, and the distance between its tips and the tip of the second primary is 1.5 inch, whereas in *A. erythrochlamys* it measures 1.35—4 inches; but even this varies a good deal, and the best difference between the two species lies in the larger size and greyish flanks of *A. ferruginea*.

d. In having the lores, eyebrow, sides of face and underparts generally washed with yellowish, and

e. In having more numerous and more distinct brown spots on the chest.

Young.—Appears to differ from the adult only in having a few whitish tips to the feathers of the head and scapulars, the wing-coverts and quills being also much paler edged.

Fig. Ayres, Ibis, 1874, pl. iii, fig. 2.

506. AMMOMANES GRAYI (*Wahlb.*)

Gray's Lark.

The present species is smaller than either of the preceding birds, and has the ear-coverts whitish or slightly washed with isabelline; the tail is tipped with white spots on the inner webs of the feathers.

It appears to be confined to Damara Land. Mr. Andersson writes:—"This Lark is found on the barren plains in the neighbourhood of Walwich Bay, as well as some distance inland; but I have not observed it so far east as Objimbinque. It feeds on seeds and insects, and is comparatively tame, but where grass abounds it is difficult to procure. A few individuals are usually found together."

Adult male.—Above light sandy isabelline, not paler on the head, but slightly fulvescent on the hind neck; forehead, lores, and a tolerably defined eyebrow whitish; feathers in front of the eye dusky blackish; sides of face whitish, the hinder ear-coverts washed with isabelline; entire under surface of body whitish, slightly washed with isabelline on the breast, on each side of which is an indistinct blackish patch; under wing-coverts white, with a very

faint isabelline tinge; upper wing-coverts sandy isabelline like the back, with light whitish margins, mottled also by means of the grey bases to the feathers showing; quills greyish, slightly tipped with white and margined with sandy colour on the outer web, the primaries very narrowly bordered, but the secondaries very broadly, the innermost being entirely rufous sand colour, with broad longitudinal greyish centres, the inner lining of the wing greyish, inclining to white near the base of the inner web; tail dark brown tipped with white on the inner web, the centre feathers grey, with sandy coloured margins and tips, the basal third of the tail-feathers isabelline inclining to whitish, and extending farther up the outer web of the external feathers. Total length, 4·8 inches; culmen, 0·65; wing, 3·25; tail, 1·8; tarsus, 0·85.

Adult female.—Similar to the male, but rather smaller in the wing. Total length, 4·8 inches; culmen, 0·6; wing, 3·05; tail, 1·8; tarsus, 0·85.

Fig. Sharpe, P. Z. S., 1874, pl. lxxvi., fig. 2.

507. *SPIZOCORYS CONIROSTRIS* (*Sund.*)

Pink-billed Lark.

This pretty little Lark is one of the smallest known, and belongs to the short-billed division of the family, where the culmen is not so long as the middle toe and claw. The first primary is rudimentary, being not so long as the inner toe and claw. The wing is rounded, the distance between the tips of the primaries and the tips of the secondaries not exceeding the length of the hind claw.

It was discovered in the Transvaal by the late Professor Wahlberg, and was again found in that country by Mr. Ayres in June, 1872, who shot a specimen on the flats about two miles from Potchefstroom.

We have also seen examples from Great Namaqua Land, obtained by Mr. Andersson, who has published the following note on the species in Damara Land:—"This Lark is not uncommon in Ondonga; before the breeding season they are seen in small flocks, but are less observable after they are paired. A pair which I watched occupied about eight days in constructing their nest and in the female bird laying her eggs, which I took on the 31st of March, after they had been incubated about three days. The nest is formed in a hole excavated to the depth of about two and-a-half inches and thickly lined with decomposed grasses."

The following description of the species is taken from the Editor's paper on the Larks of South Africa:—

Adult female (one of the typical specimens).—Above fulvous brown, the feathers of the head and back blackish down their centres, which are very broad, the margins being sandy, more or less inclined to deeper rufous; all the plumes of the hind neck, rump, and upper tail-coverts, as well as a few of the dorsal feathers, broadly margined with greyish, producing a distinct ashy appearance; wing-coverts brown, broadly margined with sandy buff, the lesser and median series so broadly as nearly to obscure the dark brown centres to the feathers, the greater coverts with a slight greyish shade on their outer margins; quills lighter brown, with a slight ashy shade, the feathers margined with sandy buff, paling on the extreme edge of the feather, the outer edge of the first primary sandy white for nearly the entire length of the quill; tail blackish, tipped with dull white, with ashy fulvous margins, broader on the centre feathers, which are paler and nearly uniform brown, the two outer feathers margined with sandy buff, occupying part of the inner web and the tip of the outermost; a distinct line of white over and under the eye, with a small patch of blackish feathers in front of the latter; ear-coverts brown, blackish on upper margin; cheeks white, washed with pale brown on hinder margin, and spotted with black, a narrow line of which runs from the gape to the ear-coverts; throat pure white, with a few black spots on lower portion; rest of under surface of body sandy rufous, paler and more fulvous on the lower abdomen, the fore neck and chest rather largely spotted with triangular spots of blackish brown; under wing-coverts sandy buff, the lower series inclining to ashy, and resembling the inner lining of the wing. Total length, 4·7 inches; culmen, 0·5; wing, 3·0; tail, 1·75; tarsus, 0·75.

Six specimens of this pretty little Lark are before us, and we appear to have the extremes of summer and winter plumage, with intermediate grades. For the determination of the species we have described one of the typical specimens in the British Museum, received in exchange from the Stockholm Museum; but Mr. Gurney owns an example in still fuller plumage, the specimen figured (badly) in "The Ibis" for 1874. The general colour of this bird above is reddish sand colour, varied with

black centres to the feathers, and the under surface is likewise deep sandy rufous with white throat and triangular chest spots (wing, 3·0). This specimen was shot at Potchefstroom by Mr. Ayres, on the 16th of June, 1872, and is a female. Another female, killed by Mr. Andersson at Ondonga on the 1st of November, 1867, is in what I take to be the winter dress of the bird. The general colour is a sandy buff, with no rufous tinge to speak of, but with narrow blackish centres to the feathers, and the under surface is buffy white tinged with sandy rufous on the chest, which is streaked with narrow little spots of blackish brown: the throat and sides of the face are white, with a blackish malar stripe forming an indistinct moustache. We think there can be no doubt of this being the winter plumage of *A. conirostris*. The difference of being more mealy is usual in the winter dress of Larks, and the proportions fairly agree (wing, 2·85; tarsus, 0·75). Two male specimens are in the British Museum from the Houtop River, Great Namaqua Land, shot by Mr. Andersson on the 3rd of June, 1862. These birds are intermediate between the winter and summer specimens described. They are rather mealy in appearance, but the dark centres to the feathers of the upper surface are becoming somewhat pronounced, and several of the dark chest-spots are developing, as if it appeared that the summer plumage is gained by the wearing off of the sandy margins. These birds have the wing 2·9—3·0 inches, and the tarsus 0·75.

The white on the outer tail-feathers varies very much. In a young specimen it occupies the outer web and half of the inner one, as it does also in Wahlberg's Transvaal skin and the Ondonga female: but in the full-plumaged bird in Mr. Gurney's collection, and in both the Namaqua examples the sandy white is confined to the outer web and forms a narrow margin to the tail.

Young.—Above dark brown, the feathers washed with sandy colour and tipped with white, the hind neck inclining to ashy grey, the white tips almost imperceptible; wing-coverts dull brown, margined with sand colour and ending in a white tip; quills and tail much as in adult, but inclining to whitish at the tip of the feathers; lores dusky blackish; sides of face nearly uniform brown, with a blackish streak running along the upper margin of the ear-coverts and down the cheeks; under surface pale isabelline, the

throat spotted with dusky, and having on each side a moustachial streak of the same, the breast inclining to sandy brown on the sides and obscurely spotted with dusky.

Mr. Andersson observes that the iris is brown, the legs and bill flesh coloured, but the lower mandible paler and more livid than the upper.

Fig. Ayres, Ibis, 1874, pl. iii, fig. 1.

508. *TEPHROCORYS CINEREA* (Gm.) Rufous-capped Lark.
Megalophonus cinereus, Layard, B. S. Afr. p. 212.

The genus *Tephrocorys*, of which the present species is the only representative, is like *Spizocorys* in general structure, but has the bill of different proportions, being as broad as it is high, whereas in *Spizocorys* the bill is higher than it is broad.

The Red-headed Lark is common throughout the colony, affecting, however, some spots in preference to others; for instance, just on the top of the little hill before reaching Mowbray, on the high-road from Cape Town, a few pairs may always be found dusting themselves; yet a mile on each side the species is not often found. It feeds on insects and seeds, builds a nest on the ground by a tuft of grass, and lays three to five eggs, of a cream colour, profusely speckled with brown and purple: axis, 11''; diam., 8''.

At Port Elizabeth it is common, according to Mr. Rickard, who also met with it near East London, and we have procured it near Grahamstown. Mr. T. C. Atmore found it near Eland's Post, and Capt. Trevelyan has forwarded specimens from Kingwilliamstown. We have never seen any from the coast line of Natal, but Mr. Ayres found a pair near Pietzmannsburg, and Mr. T. E. Buckley shot one near the Shirè Town in May, and Mr. Frank Oates also procured it there. It is to be found in the open country of the Transvaal, according to Mr. Ayres, and Mr. Andersson gives the following note:—"This Lark is very abundant in some parts of Damara and Great Namaqua Land. I have observed that it uses much gravel with its food." The Damara birds are rather smaller than those of the Cape Colony, and have been separated under the name of *Tephrocorys spleniata* (Strickl.), but they seem to us to be merely a slightly diminutive race. Professor Bocage has received two specimens from Senor Anchieta, one from Benguela, and one from Ambaca.

Adult male.—Above ashy, mottled with dark brown centres to the feathers, some of the dorsal plumes washed with sandy colour; crown of head bright chestnut, forming a cap, some of the feathers slightly margined with fulvous; hind neck decidedly ashy, paler than the back and forming a kind of collar; wing-coverts ashy brown, with broad fawn coloured margins, forming a conspicuous shoulder-patch; the greater and primary coverts ashy brown, with ashy fulvous edgings; quills dark brown margined with ashy fulvous inclining to rufous near the base of the feathers; the outer primary with a broad external margin of creamy white; upper tail-coverts rufous fawn colour, the longest shaded with brown down the middle; tail-feathers dark brown, the penultimate and outer feather edged with white occupying the whole external web of the latter; the two centre tail-feathers margined with ashy brown; small frontal plumes whitish; lores and a distinct eyebrow white, as also the feathers under the eye and the cheeks white, the latter slightly spotted with brown; ear-coverts pale rufous; sides of neck clear ashy grey; throat white; rest of under surface also white; the middle of the breast ashy fulvous; the sides of the upper breast bright chestnut, forming a patch on both sides; sides of body inclining to ashy fulvous, washed with fawn colour on the lower flanks; thighs ashy fulvous; under wing-coverts pale ashy grey; the edge of the wing fulvous white; inner lining of wing ashy brown, the inner webs of the quills slightly rufescent towards the base; "bill yellowish brown; legs and toes brownish or reddish brown; iris dark brown" (*C. J. Andersson*).

Total length, 6·2 inches; culmen, 0·55; wing, 3·9; tail, 2·7; tarsus, 0·85.

Adult female.—Coloured like the male. Total length, 6·2 inches; culmen, 0·5; wing, 3·65; tail, 2·6; tarsus, 0·85.

The description is taken from a pair of birds collected and sexed by our friend Mr. Ayres. They are both, we take it, in full winter plumage, and we regret that we have the dates of scarcely any of the specimens, which makes it difficult to determine the seasonal changes of the species. Two examples, however, now before us differ sufficiently in their colouration to make us believe that they are in their breeding-dress, and we therefore give the following short notes on this plumage:—General colour more rufous than in winter, especially on the upper tail-coverts and crown, the latter

being deep chestnut and the patches on the sides of the breast much larger and extending farther down the sides of the body, the centre of the chest being also washed with rufous.

Young.—Above blackish, some of the feathers washed with sandy colour, but all of them terminally spotted or edged with creamy white, producing a pretty and variegated appearance; hind neck greyish mottled with dark brown and spotted with creamy white; head blackish varied with sandy rufous bases to the feathers and spotted with creamy white; lores and a broad eyebrow whitish, as also the sides of the face, which have, however, a mark of brown on the cheeks under the eye, while the ear-coverts are dark brown washed with rufous and spotted minutely with creamy white; under surface whitish, the breast and sides of body mottled, with dark brown bases to the feathers inclining to rufous on the sides of the breast; under wing-coverts whitish ashy; quills brown broadly margined with rufous, the outer web of external primary fulvous white, the inner secondaries broadly edged with whitish; rump and upper tail-coverts bright fawn colour spotted with white, before which is a subterminal spot of dark brown; tail blackish-brown, the outermost feather white on the outer web crossing the inner one obliquely near the tip, the two centre feathers rufous near the base and margined with whitish towards the tip.

Fig. Le Vaill. Ois. d'Afr. iv, pl. 199.

509. CALENDULA CRASSIROSTRIS (V.)

Thick-billed Lark.

Alauda crassirostris (V.): Layard, B. S. Afr. p. 208.

The first primary is very well developed in the genus *Calendula*, being longer than the inner toe and claw. The nostrils are covered with stiff bristly plumes, and the bill is very stout, being much deeper than it is broad.

This fine Lark frequents equally the cultivated and bush-covered lands. It feeds on insects and seeds; and makes a rough nest in September in a depression of the soil, under the shelter of a low bush, or large clod of earth, and lays four or five eggs of a very pale cream colour, profusely dotted throughout with small light brown and purple spots. Axis, 11'''; diameter, 8'''.

Captain Shelley shot specimens at Ceres and Stellendorf in January, 1874, and it is abundant throughout the colony, extending into the eastern districts, as we have received it from Hopetown

from Mr. T. C. Atmore. We have seen a specimen from Little Namaqua Land, and Mr. Andersson writes:—"This species is pretty generally diffused over Damara and Great Namaqua Land; it frequents localities covered with grass and dwarf vegetation, and frequently those which are of a rocky character."

Adult.—Above dark brown, the feathers tolerably broadly margined with sandy fulvous, getting lighter on the extreme edge of the feather, the lower back and rump ashy brown, more uniform, or having only a few central streaks of dark brown on the lower back; head rather lighter brown than the rest of the upper surface, the dark brown central streaks rather narrower; hind neck inclining to ashy fulvous and minutely streaked with dark brown; wing-coverts dark brown, somewhat shaded with ashy and rather broadly margined with sandy fulvous on the median and lesser coverts, the greater series margined with ashy, but without such distinct edges of sandy buff as the other series; quills brown, narrowly tipped and margined on the outer web with sandy white, the secondaries distinctly shaded with grey; upper tail-coverts ashy brown shaded with sandy and streaked with dark brown down the centres of the longest feathers; tail-feathers dark brown margined with ashy grey, the penultimate feather narrowly, and the outermost a little more broadly margined and tipped with sandy white or fulvous; lores, feathers above and below the eye, as well as a streak running along the sides of the crown fulvous white, but not forming a distinct eye-brow; cheeks fulvous white, minutely spotted with blackish brown; ear-coverts dark brown streaked with sandy buff; under surface of body dull yellowish white, the throat very slightly spotted with blackish brown, of which colour there is a moustachial line on each side; the breast thickly and distinctly streaked with blackish brown, gradually narrowing on the lower breast and sides of abdomen to hair-like lines; belly, vent, and under tail-coverts unspotted; flanks ashy brown streaked with dark brown; under wing-coverts pale ashy brown narrowly margined with sandy white, the outer feathers near the bend of the wing sandy white spotted with brown, the centres of the feathers being of this colour; "upper mandible horn colour, the lower one buff shading into dark horn colour towards the tip; legs pale brown; iris brown" (*Shelley*). Total length, 6·8 inches; culmen, 0·75; wing, 4·0; tail, 2·75; tarsus, 1·0.

Young.—Duller and more uniform brown than the adult, with whitish edgings to the feathers of the crown, ear-coverts, and the

wing-coverts, the greater series of the latter with sandy rufous margins; quills brown, paler towards the tips, and margined with sandy rufous paling into whitish buff towards the tips of the secondaries; under surface of body white, the breast streaked with blackish brown, each feather narrowly margined with whitish.

Winter plumage.—Duller and more ashy brown than in summer, all the feathers obscured with greyish margins; underneath more yellowish, the spots on the breast duller and paler brown, and not nearly so largely developed.

Fig. Le Vaill. Ois. d'Afr. iv, pl. 192.

510. *MIRAFRA APIATA* (V.)

Bar-tailed Lark.

Megalophonus apiatus (V.): Layard, B. S. Afr. p. 215.

In the genus *Mirafra* the first primary is well developed, being longer than the inner toe and claw, but the nostrils are exposed with a membrane on the upper margin, but not covered with bristles, as in *Calendula*. The present species has the tail varied with zigzag spots and bars of black like *M. rufipilea*, but it differs from that species in being grey, and on having the rufous on the primaries confined to the outer web.

This beautiful Lark, of whose elegant colours it is impossible to convey any idea by mere words, is common in all the western districts of the colony, and is well known from its singular habit of rising fifteen or thirty feet into the air, perpendicularly, making a sharp cracking sound with its wings as it rises, uttering a long shrill "phew," and then falling as abruptly to the earth. This action it will repeat at intervals of a minute or two, for an hour or more, chiefly during dull mornings, but in bright weather it commences before and after sunset. It delights in warm sandy soils; but we met with it on the high table-land of the Cold Bokkeveld in considerable abundance.

It is not met with at George, according to Mr. Atmore, but extends as far as Port Elizabeth. Here, writes Mr. Rickard, "it is common. It is most lively at sunrise and sunset, sometimes heard when it is nearly dark. If on the ground near short scrubby bush, it will run into it and may be driven a long distance before taking wing." We have seen specimens also from Kuruman, but in the Transvaal and to the north of the colony its place appears

to be taken by the next species. It has been found, however, in Benguela by Senor Anchieta, who shot a specimen at Caconda; and has also occurred in the Congo district.

Adult.—Above cindery grey, with concealed bars of cinnamon rufous and black on most of the dorsal feathers, as well as all the wing-coverts; head uniform with back, much crested, the feathers blackish in the centre of the plumes, which are also minutely spotted with rufous; hind neck cindery grey, separating the head from the back; quills dark brown, margined with rufous, the inner secondaries with grey like the back, the innermost washed with rufous and crossed with narrow transverse black lines; tail dark brown washed with cindery grey, and tipped with white, the outermost feather broadly edged with fulvous extending over a great portion of the inner web obliquely towards the tip, the centre feathers slightly washed with rufous and minutely barred with blackish in an irregular manner, besides a few spots of the latter here and there; loreal feathers minutely tipped with white, and behind the eye a small streak of buffy white; ear-coverts light rufous, inclining to blackish on their hinder margin; rest of the sides of the face light fulvous thickly speckled with blackish; throat whitish with a few scattered spots of blackish brown; rest of under surface ashy fulvous, the feathers being all broadly margined with this colour, and thus obscuring the pale fawn colour of their bases, the breast thickly spotted with large triangular marks of dark brown, and on the flanks a few narrow lines of dark brown; the under tail-coverts minutely spotted with dark brown; under wing-coverts fawn colour, except the outermost, which are washed with ashy brown, like the greater series and the entire inner lining of the wing. Total length, 5 inches; culmen, 0·55; wing, 3·0; tail, 2·2; tarsus, 1·0.

The difference between the summer and winter dress in this Lark may be tabulated as follows:—

The full-plumaged specimens before us of this Lark have not their dates of capture attached; but we believe that we have both winter and summer plumages represented, thus disposing of the idea that *M. apiata* can be the winter plumage of *M. rufipileus*. We therefore append short comparative characters of the two states, the specimen described being in what we consider full winter dress.

Summer plumage.

Upper surface dark brown, the rufous obscure and the grey shade strongly marked only on the lower back and secondaries.

Head dark brown, with scarcely any grey shade or rufous markings.

Hind neck scarcely lighter than the head or back.

Wing-coverts ending in rufous, with no perceptible grey margin.

Inner secondaries with a narrow blackish shaft-line, from which radiate about six narrow blackish cross lines.

Tail nearly uniform brown, with an obsolete shade of greyish on centre feathers, the external ones light fawn colour on outer web.

Eyebrow pale fawn.

Under surface of body bright fawn, the throat and chest speckled with black.

Fig. Le Vaill. Ois. d'Afr. iv, pl. 194.

Winter plumage.

Upper surface grey, the rufous colour in broad and half-concealed bands.

Head entirely grey, mottled with blackish centres to the feathers, and slightly washed here and there with rufous.

Hind neck very clear grey, paler than head or back.

Wing-coverts with a broad whitish grey margin.

Inner secondaries dark brown in the centre and at entire base of feather, with only a few imperfect radiations of black near the tip.

Tail dark brown, tipped with white, the centre feathers clearly washed with grey as well as slightly tinged with rufous, and plainly marked with blackish radiations and spots near the shafts.

Eyebrow ashy fulvous.

Under surface ashy fulvous, concealing fawn coloured bases to the feathers, the chest-spots obscured.

511. MIRAFRA RUFIPILEA (V.)

Rufous Bar-tailed Lark.

Megalophonon rufipileus (V.): Layard, B. S. Afr. p. 211.

This species is nearly allied to *M. apiata*, which it resembles in its radiated tail and peculiar mottled plumage. It is, however, not the same bird, but a distinct species, distinguished by its general cinnamon-coloured appearance and rufous head, but particularly by

its red wings, the cinnamon colour occupying the basal two-thirds of both webs, and not being confined to the basal portion of the outer web, as in *M. apiata*. In size the two species appear to be very similar.

The present bird represents *M. apiata* on the northern borders of the colony, ranging into the Transvaal. We have received it from Bloemfontein, whence Dr. Exton sent us a specimen. Mr. T. Ayres has procured the species in the Transvaal, and observes:—"This Lark has precisely the habits of *M. apiata*, mentioned in Mr. Layard's catalogue, p. 206. One of the birds sent (a male) had evidently, from the appearance of the skin on the breast and belly, taken his share in incubation; it was shot about the end of March." Professor Barboza du Bocage states that this species was obtained in the neighbourhood of the Zambesi by Major Serpa Pinto.

Adult male.—Above entirely cinnamon rufous, the feathers of the crown faintly tipped with whitish, these tips being much broader and more distinct on the back, scapulars, and wing-coverts, these light tips relieved by a subterminal line of black, most of the feathers being blackish at base and having one or two other concealed bars of blackish; hind neck and interscapulary region brighter cinnamon, with central streaks of deeper cinnamon; wing-coverts cinnamon like the back, but the margins to the feathers broader and the black subterminal margins more pronounced; quills rufous for two-thirds of their length, brown for the terminal third, the secondaries browner, the inner web almost entirely brown, the outer one mottled with the same externally, the innermost deep cinnamon, like the back, with the same distinct margins; tail brown, slightly tipped with rufous, the two outer feathers externally margined with creamy buff, the outermost more broadly, the two centre tail-feathers cinnamon, dark brown in the centre, from which radiate several imperfectly formed bars and mottlings of blackish; lores and a fairly distinct eyebrow buffy white; ear-coverts rufous, deeper on the hinder margin; cheeks and sides of neck buffy white, minutely speckled with dark brown; throat buffy white, unspotted; rest of under surface pale fawn colour, rather obscured in some places by fulvous margins to the feathers, the fore neck and chest numerously marked with little round spots of black; under wing-coverts deep cinnamon like the inner lining of the wing; "bill pale, with the tip dusky; tarsi and feet pale dusky; iris light tawny" (*Ayres*).

Young.—Similar to the adult, but far deeper cinnamon, and everywhere barred with black wavy lines on the upper surface, the head included; tail with a broad centre of ashy brown followed by another subterminal line along the apical portion of the feather, this line evidently breaking up into the radiations from the shaft which are seen in the tail-feathers of the adult; ear-coverts cinnamon, thickly spotted with black; under surface of body isabelline, the throat with a few concealed brown bars, the flanks and thighs deeper rufous slightly mottled with brown barrings, the chest much deeper cinnamon, especially on the sides, the latter being slightly varied with blackish wavy lines, the centre of the chest sparsely spotted with blackish. Total length, 5·8 inches; culmen, 0·6; wing, 3·0; tail, 2·35; tarsus, 1·0.

Fig. Le Vaill. Ois. d'Afr. iv, pl. 198.

512. MIRAFRA AFRICANA, *Smith*.

Rufous-naped Lark.

Megalophonus africanus and *M. rostratus*, Layard, B. S. Afr. pp. 212, 213.

In this and the remaining species of African *Mirafra* the tail is uniform with rufous edgings to the centre feathers. The entire base of the quills is rufous with the exception of the brown shaft, and the present species is told by its large size and by the rufous nape-patch.

Sir Andrew Smith found this Lark in the eastern districts, frequenting the grassy plains between Algoa Bay and Grahamstown. It was generally seen in pairs, feeding on insects and seeds. Mr. Rickard tells us that it is rather rare at Port Elizabeth, but more numerous near East London. Mr. Arnot sends it from Griqua Land, and Mr. T. C. Atmore found it at Eland's Post. We have received it from Mr. Moffat from Kuruman. From Natal Mr. Ayres writes:—“ This Lark is a stout, thickset bird, and runs with great swiftness on the ground amongst the grass, so that even with a good dog it is sometimes a difficult matter to flush it. From the frequently worn appearance of their claws, I fancy they partially obtain their food by scratching the earth, after the manner of the *Rasores*. If undisturbed when rising, their flight is generally fluttering and noisy; they also sometimes (but not always) utter a few sharp notes as they rise. They are fond of sunning themselves on the top of any convenient low bush, fluttering their wings every few seconds,

and making a sort of rattling sound." In the Transvaal, states Mr. Ayres:—"These Larks frequent principally the open country, and are tolerably plentiful to the west of Potchefstroom, between the Hartz and Vaal Rivers. They are found singly or in pairs, and are fond of sitting on any low bush to sun themselves, at the same uttering a rather loud whistle, pretty constantly repeated." The late Mr. Frank Oates found the species at Tibaka's Vley, a little to the south of the Zambesi.

Mr. Andersson does not appear to have procured it in Damara Land, but Senor Anchieta found it very common at Quillengues from January to March, and also obtained it at Humbe on the Cunene River.*

Adult male in summer plumage.—Above light fawn brown, all the feathers with a distinct blackish shaft-streak down the centre and margined with ashy fulvous; the rump slightly more ashy than the back, narrowly streaked with brown, the upper tail-coverts shading off into light fulvous and having dark brown shaft-stripes; wing-coverts fawn colour, darker brown in the centre of the feather, margined with fulvous and streaked with dark brown along the shaft, the greater coverts light rufous towards their tips; primary coverts rufous fawn, with narrow whitish margins; quills rufous fawn, gradually shading off into dark brown, which occupies about the terminal third of the quills, which are margined with ashy white or fawn colour; the secondaries brown, washed with fawn colour externally, and broadly margined and tipped with ashy buff; tail dark brown, the feathers margined with ashy buff, especially the two centre ones, which are rufous fawn at base, extending some way up the margins of the feathers, a shade of the same colour extending over the other feathers near their base, the outer feather creamy buff on the outer web, the penultimate one narrowly margined externally with the same colour; crown of head bright fawn colour, with a few narrow shaft-lines of dark brown, the forehead minutely streaked, giving it a certain obscurely mottled appearance; lores and a rather broad eyebrow buffy white, as also the sides of the face, the cheeks and ear-coverts minutely spotted with dark brown, the ear-coverts washed with rufous, and inclining to dark brown on their upper

* Professor Barboza du Bocage mentions a Lark from Caconda which he proposes to call *M. angolensis* as being allied to *M. africana*, but, as yet, no detailed description has been published by him.

margin; throat white, the rest of the under surface isabelline buff, washed with bright fawn colour, minutely spotted with dark brown on the lower throat and chest, and streaked with the same on the sides of the breast; under wing-coverts entirely rich fawn colour, a little brighter than the inner lining of the wing, which is rufous and very conspicuous; "upper mandible dusky, lower mandible pale; tarsi and feet pale; iris light hazel" (*Ayres*).

Total length, 7 inches; culmen, 0·8; wing, 4·0; tail, 3·0; tarsus, 1·3.

Adult female.—Smaller than male, and with a much thinner bill.

Total length, 6·8 inches; culmen, 0·75; wing, 3·5; tail, 2·7; tarsus, 1·2.

Winter plumage.—Much darker brown than in summer, and not nearly so rufous on the upper surface, the rufous of the crown entirely obscured by the broad dark brown shaft-stripes, and the forehead entirely brown, shaded with ashy and slightly tinged with rufous; the hinder back and rump decidedly shaded with ashy; below rather more richly coloured than in summer, the breast largely marked with triangular spots of dark brown; hind neck decidedly more ashy, separating the head from the back.

Young.—Obscure brown, with hardly any rufous shade above; the hind neck washed with ashy fulvous, all the feathers very broadly black in the centre, and subterminally barred with a crescentic black line, very conspicuous before the fulvous tips to the feathers, more distinct on the wing-coverts, which incline to light fawn colour; quills much as in adult, and rufous at base, the inner secondaries dark brown, with a distinct ashy whitish margin, before which runs another subterminal line of black; tail brown, shaded with ashy on the margins of the feathers, the external web of the outer tail-feather creamy white, the penultimate one broadly margined with the same; over the eye a broad superciliary streak of creamy buff; lores and sides of face buffy white, the cheeks thickly spotted with black, the ear-coverts washed with rufous; throat white, with a few tiny specks of brown on the lower part: rest of under surface isabelline fulvous, the breast washed with fawn rufous and mottled with rufous brown bars, some of the new triangular-spotted feathers just appearing.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. lxxxviii, fig. 1.

512. MIRAFRA DAMARENSIS, Sharpe.

Damara Lark.

This Lark is smaller than *M. africana*, and does not show the rufous patch on the nape, this part being of the same colour as the head and back. It is distinguished from *M. africanoides* by the white edgings and tips to the tail-feathers.

The only specimens which we have seen were from Ondonga in Ovampo Land, where they were collected by the late Mr. Andersson.

Adult male in winter plumage.—Above sandy grey, slightly washed with fulvous and having a distinct shade of ashy grey on the margins of the feathers; the upper surface narrowly streaked with black shaft-lines, rather broader and more distinct on the crown; the hind neck inclining to ashy, the streaks much more minute; wing-coverts like the back but rather paler by reason of distinct whitish grey margins to the feathers which have also central streaks or markings of bright fawn, many of the greater coverts washed with the latter colour before the whitish margin; quills dark brown, externally shaded with ashy buff, broader and clearer grey on the secondaries; the outer aspect of the wing rufous, this colour extending right across the primaries of which it occupies *quite two-thirds* and traverses also the basal part of the secondaries; lower back and rump sandy grey, like the back, with scarcely any shaft-streaks, more distinct on the upper tail-coverts, which have distinct ashy white margins; tail blackish brown, all the centre feathers distinctly shaded with bluish grey and margined with whitish ash colour, shading off into white at the tips, the three external feathers bordered and tipped with white, this colour occupying the entire web of the outermost feather; lores, a distinct eyebrow, and sides of the face white; the ear-coverts sandy, with indistinct white streaks; throat white, unspotted; rest of under surface creamy white with a tinge here and there of sandy isabelline, the chest with numerous minute specks of dark brown; thighs buff washed with sandy; under wing-coverts entirely rufous, like the inner lining of the quills, this colour occupying the base of *both* webs. Total length, 5·5 inches; culmen, 0·65; wing, 3·45; tail, 2·4; tarsus, 1·1.

Another specimen is rather clearer and more bluish grey above, the central streaks darker and plainer, the spots on the chest a little larger and more distinct. Total length, 5·5 inches; culmen, 0·65; wing, 3·35; tail, 2·15; tarsus, 1·0. This is probably the female bird.

Fig. Sharpe, P. Z. S. 1874, pl. lxxv, fig. 2.

513. MIRAFRA AFRICANOIDES (*Smith*). Fawn-coloured Lark.
Megalophonus africanoides, Layard, B. S. Afr. p. 214.

Sir Andrew Smith says that specimens of this Lark are occasionally to be procured to the south of the Orange River, but most readily on the arid open plains which lie between that river and the Tropic of Capricorn. We have received it from Mr. Ortlepp at Colesberg, and he writes:—"Found singly, inhabiting wooded places, and abounding on tall camel or thorn trees, on whose topmost twigs they are frequently to be heard pouring out a sweet sustained song." We have seen it in Mr. T. C. Atmore's collections from Hope Town and Griqua Land, but it does not appear to extend to the Transvaal. In Damara Land, Mr. Andersson writes:—"This bird is very frequent in the neighbourhood of Otjimbingue, and is not uncommon in various other parts of Damara and Great Namaqua Land. It is easily distinguished from most of the other Larks by its reddish appearance. It is found in pairs, and is comparatively tame, flying but a short distance when disturbed, and settling on the ground or on a bush or tree; it has a kind of chirping song."

Adult (type of species).—Above sandy rufous, with narrow black shaft-stripes to the whole of the upper surface, the neck very slightly inclining to greyish; wing-coverts dark brown, with narrow blackish shaft-stripes, margined with sandy rufous, inclining to fulvous on the extreme edge of the feathers; primary coverts dark brown, with broad margins of sandy rufous; quills ashy brown, rufous on the outer web and very conspicuous, the inner web also rufous, but separated the entire length of the quill by the dark brown of the quill, the secondaries ashy brown, especially the innermost, which are distinctly shaded with grey, all margined with sandy colour; upper tail-coverts pale ashy brown, broadly washed with whitey brown; tail dark brown, the middle feathers washed with clear grey and broadly margined with sandy rufous, the others narrowly and almost imperceptibly edged with pale sandy, the outermost narrowly bordered with whitish for the whole length of the outer web; lores and feathers round the eye whitish as well as a distinct eyebrow; feathers in front of the eye dusky; ear-coverts bright sandy rufous; cheeks, throat, and underparts generally whitish, washed with sandy isabelline on the chest, the cheeks with a few indistinct dusky spots, the chest sparsely marked with triangular spots of dusky black; under wing-coverts entirely rufous,

as also the greater part of the inner web of the quills; "bill yellowish brown, shaded on culmen with brownish red; tarsi and toes sienna-yellow, brightened with flesh-red; iris light chestnut" (*Sir A. Smith*).

Total length, 6·5 inches; culmen, 0·6; wing, 3·65; tail, 2·7; tarsus, 1·1.

Adult female.—Similar to the male. Total length, 5·5 inches; culmen, 0·6; wing, 3·25; tail, 2·25; tarsus, 0·9.

The summer plumage is different from the winter dress only in being much darker by reason of the absence of light margins to the feathers of the upper surface, which is also much more rufous; underneath the chest is washed with rufous, and the black spots are more distinct; the inner lining of the wing is also deeper and more leaden grey.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. lxxxviii, fig. 2.

514. *MIRAFRA NÆVIA* (*Strickl.*).

Dark-lined Lark.

The present bird and all the remaining African species of *Mirafra* have no rufous base of the quills, the primaries being merely edged with rufous, this colour being confined to the outer web.

Mirafra nœvia has the outer tail-feathers black, narrowly margined with isabelline, and the inner lining of the wing leaden grey, as also the under wing-coverts, the inner webs of the primaries narrowly edged with isabelline. It resembles the next species, but has a larger and stouter bill. As far as is known, the present species is an inhabitant of Damara Land, ranging into the Transvaal and the eastern districts of the Cape Colony. Mr. Andersson tells us that it is a very common bird about Otjimbingue: it is by no means timid, and settles on trees and bushes as well as on the ground. Its food consists of seeds and insects. We have also received specimens from Griqua Land, in summer plumage, collected by Mr. T. C. Atmore. Those obtained by Mr. Andersson in Damara Land were in winter plumage, and it probably migrates northward in the cold weather. Specimens from Great Namaqua Land (*Andersson*), are also in the British Museum.

The following note by Mr. Andersson given under the heading of *M. sabota* in his work, also belongs to the present species:—"I met with this Lark at various places north of the Omaruru River, where, although rather local, it is abundant in some localities, and

especially in Ondonga. On the 25th of April, I found its nest in the last-named locality, containing three eggs of a very elongated form, and much pointed at one end. Other nests which I met with on various occasions were either empty or contained young birds. The nest is composed of fine grasses, and is built upon the ground into which the lower portion of it is sunk to the depth of two or three inches; it is placed between and resting against two stout plants, and is round and dome-shaped, with one large opening to the southward, the side farthest from the wind and rain. I am always delighted to hear this bird as it makes the welkin ring with its sonorous song and call, composed of a series of notes, which it utters either when perched on a tree, or when moving from one spot to another. Whilst thus flying and singing it may be seen alternately to open and close its wings, sometimes almost bringing them to meet over its back, when it appears for the moment to be suspended in the air.

Adult male in summer plumage.—Above sandy rufous, with dark brown centres to the feathers, the head with rather paler sandy margins; the hind neck distinctly inclining to ashy, and separating the head from the back; scapulars blackish in centre, with very broad margins of sandy rufous on each side; wing-coverts coloured like the back, with concealed blackish centres to the feathers, which are margined with sandy, shading off into fulvous on the extreme edge, the greater series more broadly margined, the primary coverts more narrowly; quills blackish, the primaries narrowly tipped with greyish white and margined externally with sandy rufous, the secondaries much more broadly, and bordered with fulvous on their extreme edge; upper tail-coverts sandy rufous, inclining to brown in the centre of the feathers, and narrowly tipped with greyish buff; tail black, very narrowly margined and tipped with sandy buff, the centre feathers broadly margined with sandy rufous, the outermost externally margined with a narrow edging of light sandy colour, changing to white at extreme tip: lores and a tolerably plain eye-brow isabelline; feathers in front of the eye dusky, those under it isabelline, and marked with blackish; ear-coverts dark brown, very plainly and regularly streaked with sandy buff; throat and cheeks white, the latter washed with isabelline on the chest and sides of the body, the lower throat and chest plainly spotted with triangular markings of light brown; under wing-coverts ashy brown,

the innermost washed with sandy, the inner lining of the wing entirely ashy brown also, excepting the base of the inner web, which inclines to sandy; "iris hazel" (*T. C. Atmore*). "Iris light brown; upper mandible horn coloured, fading into white on the edges and on the lower mandible; legs and toes pale straw colour, with a tint of pale flesh colour on the toes" (*Andersson*). Total length, 6·5 inches; culmen, 0·75; wing, 3·5; tail, 2·6; tarsus, 0·95.

Adult female.—Rather smaller than the male. Total length, 5·7 inches; culmen, 0·65; wing, 3·4; tail, 2·3; tarsus, 0·9.

Winter plumage.—There are four specimens in the British Museum in full winter plumage, which does not differ so much on the upper surface as do some of the South African Larks. It is much more mealy and of a paler sand colour, the grey collar round the hind neck being very distinct, as well as the white eyebrow and the margins to the wing-coverts and quills; under surface of body white, tinged with isabelline on the chest, flanks, and thighs, the chest with a few narrow streaks of pale brown, the entire lining of the wing ashy, as also the wing-coverts, some of which are margined with sand colour.

515. *MIRAFRA SABOTA*, *Smith*.

Sabota Lark.

Megalophonus sabota, *Layard*, *B. S. Afr.* p. 213.

Sir Andrew Smith procured this Lark on the arid plains north of Latakoo; it perched frequently on low shrubs. Mr. Frank Oates shot it at Tati in the Matabele country, and Mr. Ayres has met with the species in the Transvaal. He observes:—"I found these Larks in the Mariqua district, frequenting the open glades at the commencement of the thicker bush, but in the latter I did not notice them. When disturbed, they generally flew from the ground on to the nearest bush." Mr. T. E. Buckley likewise met with it in the Transvaal and in Bamangwato. It is by no means improbable that the present bird and *M. navia* will be found on the comparison of a larger series, to belong to one and the same species, as the only difference seems to be the smaller and much more slender bill of *M. sabota*, but as far as our material goes, the large bill of *M. navia* seems to be a very constant and conspicuous character.

Adult male.—Above sandy fawn colour, with distinct mesial centres of blackish brown to all the feathers, more closely mottled on the head, which appears in consequence rather darker than the

back; the hind neck distinctly washed with ashy fulvous, slightly separating the head from the back; wing-coverts dark brown in the centre, with broad fawn coloured margins, shading off on the extreme edge into fulvous, the edge of the wing whitish, and the primary coverts dull ashy brown, distinctly edged and tipped with white; quills dark brown, the primaries narrowly margined with sandy buff and tipped with whitish, the secondaries broadly edged with fawn colour exactly like the wing-coverts; rump coloured like the back; upper tail-coverts dark brown, tipped and margined with fulvous, and washed with fawn colour near the base; tail-feathers blackish, distinctly margined with sandy fawn colour and tipped with whitish, the borders of the two centre feathers and the external one the broadest; a very distinct white eyebrow; feathers in front of the eye blackish, with a line of white feathers under the latter; ear-coverts sandy fawn colour, darker on the upper margin, and streaked with fulvous; cheeks buffy white, spotted with black, and forming a moustache on each side of the throat, which is buffy white and unspotted, excepting a few blackish spots on the lower part; rest of the under surface isabelline sand colour, the chest plainly covered with triangular spots of dark brown, some of the spots inclining to rufous; sides of the body streaked, and the flanks washed with sandy rufous; under wing-coverts ashy, with broad whitish margins, some of them washed with sandy colour; the inner lining of wing light ashy brown, inclining to pale isabelline near the base of the inner web; "upper mandible and tip of lower one light reddish brown, rest of the lower one sienna yellow; legs, toes, and claws sienna yellow, tinted with flesh red; claws faintly shaded with light reddish brown" (*Sir A. Smith*). Total length, 5·8 inches; culmen, 0·55; wing, 3·3; tail, 2·4; tarsus, 0·9.

The summer plumage is different from the winter dress only in being much darker by reason of the absence of the light margins to the feathers of the upper surface, which is also much more rufous; underneath the chest is washed with rufous, and the black spots are more distinct; the inner lining of the wing is also deeper and more leaden grey.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. lxxxix, fig. 2 (err. for fig. 1).

516. MIRAFRA FRINGILLARIS (*Sund.*)

Finch-like Lark.

This species was discovered by the late Professor Wahlberg in

South-eastern Africa. Mr. T. E. Buckley had one specimen in his collection from the Transvaal, and we have seen four examples from Damara Land.

Adult.—Above dusky brown, the feathers margined with ashy buff, but the general character of the upper surface more dingy than in most other Larks, some of the back feathers washed with fulvous; wing-coverts dull brown, narrowly margined with fulvous, the greater series with rufescent margins, especially at the tip; quills dark brown, the primaries with broad rufous margins narrowing towards the tip, the secondaries with ashy fulvous edgings; lower back, rump, and upper tail-coverts dull brown, slightly varied with ashy fulvous margins; tail dark brown, the central feathers paler and plainly margined with fulvous, the other feathers less plainly edged, the penultimate one broadly margined with white on outer web, the outermost feather white at base, but obliquely white for more than the terminal half; lores and a distinct eyebrow sandy buff; ear-coverts rufous, spotted with dark brown, especially on the hinder margin; cheeks, throat, and sides of neck buffy white; rest of under surface creamy buff washed with isabelline on the chest, which is thickly spotted with dark brown, a few spots of which colour extend on to the throat; under wing-coverts isabelline, resembling the inner lining of the quills, with a few spots of brown on the carpal edge of the wing; "beak horn coloured; legs sienna; iris hazel" (*T. E. Buckley*). Total length, 5·3 inches; culmen, 0·6; wing, 3·1; tail, 2·5; tarsus, 0·85.

It is very closely allied to *M. cheniana* but is a much larger bird, has not the red borders to the wing-coverts, nor is it so richly coloured. The white border does not extend on to the inner web of the penultimate tail-feathers in the present bird, whereas in *M. cheniana* it extends to the inner web of the penultimate, and even forms a border to the third feather.

Fig. Sharpe, P. Z. S. 1874, pl. lxxv, fig. 1.

517. MIRAFA CHENIANA, *Smith*.

Latakoo Lark.

Megalophonus chenianus, Layard, B. S. Afr. p. 214.

This species appears to be rather rare. Sir Andrew Smith found it first on the extensive grassy plains to the northward and eastward of Latakoo. He says that it prefers situations abounding in long rank grass, amongst which it runs; it feeds on grass and insects.

Mr. T. C. Atmore procured it on the Whittlesea Flats in the eastern district, and Mr. Ayres says that it is found in the Mariqua district, where both bush and glade are pretty equally distributed. He writes:—"This Lark somewhat resembles in its habits the English Skylark, rising in the air in the early morning, with the same fluttering flight and singing sweetly all the time. I observed this in the middle of February, towards the end of our summer; and the birds were then in pairs. The food of this species consists of small insects."

This species is very like *M. fringillaris*, but is smaller and has the three tail-feathers white on their outer webs.

Adult.—Above dark brown, almost blackish, the feathers margined with sandy rufous, especially broad on the hind neck, some few of the scapular feathers with narrow fulvous tips; wings *rufous*, the coverts having dark brown bases, the greater series dark brown, margined with rufous, shading off into fulvous on the extreme edge; quills dark brown, with very broad rufous margins, the edges of the secondaries more fulvous; upper tail-coverts dark brown, with ashy fulvous margins; tail dark brown, the two centre feathers margined with rufous, shading off into fulvous towards the tips; the two outermost feathers pure white, with a touch of brown near the base of the outer, but occupying the half of the inner web of the penultimate feather for all its length, as well as a short distance towards the end of the shaft; feathers above and below the eye, forming a distinct eyebrow, creamy buff; ear-coverts rufous, slightly mottled with dark brown, as also are the cheeks and sides of the neck, which are white; throat white, unspotted; rest of under surface creamy buff, strongly inclining to rufous on the chest, which is marked with triangular spots of dark brown, inclining to streaks on the sides of the breast; flanks and thighs washed with rufous; under tail-coverts buffy white; under wing-coverts deep rufous; inner lining of wing ashy brown, inclining to rufous on the inner web; "upper mandible deep brownish red, lower mandible deep sienna yellow; legs, toes, and claws pale buff orange, tinged with flesh-red" (*Sir A. Smith*); "iris dark brown" (*Ayres*). Total length, 5·3 inches; culmen, 0·5; wing, 2·85; tail, 2·9; tarsus, 0·9.

Fig. Smith, Ill. Zool. S. Afr. pl. lxxxix. fig. 2 (err. for fig. 1).

518. *MIRAFRA NIGRICANS*, *Sundev.* Dark-coloured Lark.

This large species, remarkable for its size and peculiar coloration, is apparently a rare bird in all parts of South Africa. It was originally discovered by the late Professor Wahlberg in the district of the Upper Limpopo, and we have seen one specimen obtained by Dr. Bradshaw in the Makalaka country. Two specimens have been forwarded by Anchieta from Humbe and Quillengues in South-Western Africa, and from one of these kindly lent to us by Professor Barboza du Bocage, we have drawn up the following description:—

Adult.—General colour above blackish-brown with obsolete sandy-coloured edgings to the feathers of the upper surface, the wing-coverts more broadly margined, the edgings being whiter and more distinct; quills dark brown, the inner primaries and secondaries tipped with white, the innermost secondaries broadly margined with sandy buff; upper tail-coverts and tail blackish brown, with almost obsolete fulvous tips; lores and plumes above and below the eye white slightly spotted with black; cheeks and sides of face also dull white, the ear-coverts conspicuously ending in black and a line of black feathers drawn across the cheeks from below the eye; entire under surface of body white, the throat, abdomen and under tail-coverts unspotted; the lower throat and fore-neck thickly mottled with black spots, becoming smaller and more ovate on the breast; sides of the breast ashy black; under wing-coverts and axillaries dull black, very broadly tipped with buffy-white, the edge of the wing entirely of the latter colour, the lower series ashy brown like the inner lining of the quills, which are pale rufous at the base and for the greater part of the inner web; bill horn brown, yellowish near the base; feet dull fleshy brown; iris brown. Total length, 8·3 inches; culmen, 0·7; wing, 4·8; tail, 3·3; tarsus, 1·15 (*mus. Lisb.*).

Fig. Bocage, *Orn. Angola*, pl. viii. fig. 1.

Fam. MOTACILLIDÆ.

519. *MACRONYX CAPENSIS*, *L.* Cape Long-claw.

Anthus capensis, *Layard*, *B. S. Afr.* p. 120.

This handsome Pipit, which is called the "Cut-throat Lark" by the English colonists, "Kalkoentje" by the Dutch, is common throughout all the open country of the colony; it would be better to say the forest itself is the only place where it is not to be found.

Mr. W. Atmore declares that it is never found on Karroo soil, and we do not remember noticing it near Beaufort: certainly it is not recorded in Victorin's collections from the Karroo, though he appears to have met with it plentifully in the Knysna district. Mr. Rickard tells us that it is very abundant, both at East London and Port Elizabeth, and Mr. T. C. Atmore sends it from Eland's Post. In Natal it occurs along with *M. striolatus*, and Mr. Fellowes found it abundant in Zulu Land. The late Mr. Frank Oates procured it at Pretoria and between Ladysmith and Newcastle. Mr. T. E. Buckley writes: "Very common through Natal and the 'Hight Veldt' part of the Transvaal. They are found singly or in pairs, and fly with several very rapid beats of the wing together, uttering their call-note all the time, which is exactly what Layard calls 'mewing.'" Majors Butler and Feilden and Captain Savile Reid relate that in Natal it is universally distributed and extremely common. "Besides its peculiar 'mewing' cry, it has a rapid, spasmodic, but not unpleasant song, which it utters only when on the wing, and which is apparently confined to the breeding season. Never seen in flocks." During Mr. Jameson's expedition to the Mashoona country, the present species was said to have occurred as far north as the Inshlangeen River.

In its habits it resembles the Sky-lark, excepting that it does not soar, sing, or congregate in flocks. Instead of perching on clods of earth,—such luxuries not being common in this land,—it mounts a white-ant's heap, and keeps a look-out for its enemies from that eminence. It is usually found in pairs, and when one flies off, uttering its peculiar "mewing" cry, the other is sure to follow. It often perches on low bushes, amid which it runs with great rapidity, leaving a scent so strong that even the best pointers will "draw" after it for a considerable distance.

The flesh of this bird is delicious eating,—and on the high plateau about the Knysna, where they abound, a good shot might secure a sumptuous dish in a very few hours. But powder and shot is too expensive in these regions to be wasted on such "small fry," and perhaps the report of your gun will spring two or three Bustards within a few hundred yards.

It makes a close compact nest of roots of fibres in a tuft of grass most artfully concealed, and the female sits so closely that she will allow the clump to be touched before she will move. Eggs 3-5; they

are large and vary much; but they are usually of a white or cream-coloured ground plentifully spotted, but chiefly at the obtuse end, in the form of a ring, with brown and pale purplish spots of different shades and sizes: axis, 13''; diam, 9''.

Upper parts, variegated dark-brown, the feathers having light edges; wing and tail-feathers the same, the edges of some of the former being yellow, others white; three outer tail-feathers more or less tipped with white; over the eye a bright orange line; from the corners of the bill rise two black stripes, which extend down the sides of the chin, and unite in front on the lower part of the throat; all within this is a brilliant, shining, crimson-orange; below it the centre of the breast and belly is orange; sides and flanks cinereous; edges of shoulders bright orange; toes very long and strong, the hinder one armed with a claw 9'' long. Length, 7'' 9''; wing, 3'' 9''.

Fig. Levaill, Ois. d'Afr. iv. pl. 195.

520. *MACRONYX STRIOLATUS*, *Heugl.*

Southern Yellow-breasted Long-claw.

Anthus flavigaster, Layard, B. S. Afr. p. 121.

A fine male bird, from which the subjoined description is taken, is contained in the Albany Museum, and was procured near Grahams-town. This is the only instance of the occurrence of the species within the limits of the colony, although it is frequently seen in Natal collections. Captain Shelley states that they were common about Pinetown, in Natal, and he also met with them near Durban. He writes: "They were generally in pairs, and when disturbed from the high grass, they often fly to the topmost branches of some neighbouring tree." The specimens brought to England by Mr. F. A. Barratt, belonged to this species and not to *M. capensis*; and he states that he has seen it from Bloemfontein up to Pretoria and Nazareth, and on his trip to Rustenberg. "I have never seen them," he adds, "elsewhere than in the grass. This bird is often killed by waggon-drivers with the whip, and I have frequently done so myself when I wanted a specimen." Dr. Kirk found them abundantly in the Zambesi, on the sea-coast of the Delta, and he believes that it was this same species which was observed in the interior. It ranges along the Eastern Coast of Africa into the region of the Gazelle River, in North-Eastern Africa. Although Mr. Andersson never obtained specimens during his sojourn in South-Western Africa, Senior

Anchieta has procured it at Huilla, in Mossamedes, and the British Museum contains a specimen shot in Angola by Mr. Monteiro.

Upper plumage light brown, the middle of each feather being more or less occupied by black; wings the same; tail blackish, the four lateral feathers more or less tipped with white. Under plumage bright and clear yellow, interrupted by a gorget of deep black, commencing beneath the eye and widening to the breadth of more than half an inch on the breast, the sides of which have dusky stripes; bill and legs pale. Length, 7" 6"; wings, 3" 2"; tail, 3" 3".

521. *MACRONYX AMELIÆ*, *De Tarr.* Red-breasted Long-claw.
Anthus amelice, Layard, B. S. Afr. p. 124.

This fine Pipit is distinguished from the foregoing and indeed from every species of *Macronyx* by its pink breast in addition to several other striking characteristics. It is, says Mr. Ayres, found only along the coast of Natal, on marshy flats, where they are fond of perching on small mounds early in the morning, and sunning themselves. Mr. Fellowes obtained the species north of the Tugela and informs us that it is not uncommon there, taking the place of *Macronyx capensis* of the Cape Colony.

Fig. Gray and Mitchell, Gen. B. i. pl. 54.

522. *ANTHUS CAMPESTRIS*, *Bechst.* Tawny Pipit.

This bird has been included by Mr. Gurney in Andersson's "Birds of Damara Land," on the strength of a specimen in the Editor's collection from Damara Land. The example in question, however, we now believe to be referable to *A. nicholsoni*, but Professor Barboza du Bocage states that he has received birds from Senor Anchieta which are identical with *A. campestris* of Europe, though the description which he gives of the outer tail-feathers in the specimen described leads us to believe that his bird is likewise *A. nicholsoni*. In fact it appears to us extremely doubtful whether the European Tawny Pipit comes to South Africa at all, as we believe that its place is taken throughout all the southern portion of the African continent by *Anthus caffer*.

We may state for the benefit of collectors that *A. campestris* can be told unfailingly by two characters: it has only the 2nd, 3rd, and 4th primaries with an emargination on the outer web, and

the 2nd tail-feather is white along the whole of the outer web, and diagonally white across the inner web almost to the same extent as the outer one. These two nearly white outer tail-feathers ought to distinguish it from all other African species excepting *A. caffer*.

Fig. Dresser, B. of Europe, iii. pl. 137.

523. *ANTHUS CAFFER*, *Sund.*

Lesser Tawny Pipit.

The present species may be looked upon as a small southern form of the Palearctic *A. campestris*, and like that species it has no distinct emargination on the 5th primary, only the 2nd, 3rd, and 4th being clearly emarginate. Like that species also it has the outer tail-feather nearly white and the penultimate one almost entirely white, but in freshly moulted specimens these feathers are sometimes slightly fulvescent. The breast is always spotted, whereas in *A. campestris* it is quite uniform in the breeding plumage, and only the young birds show spots on the chest. The wing in this species measures 3·4 to 3·55 inches, the tail 2·5 to 2·6, and the tarsus 1·05 to 1·15. Examples from the Cape Colony are rather larger than those from more northern localities.

It appears to be widely distributed throughout South Africa. We have shot it ourselves near a vley on the Cape flats, and have received it from Colesberg, Swellendam, and Kuruman. Mr. Ortlepp and Mr. Rickard have both met with it near Port Elizabeth, and from the Transvaal specimens are frequently forwarded. It was observed as high as the Tati River in Matabele Land by Mr. Jameson's expedition. Mr. Ayres notes that here it was pretty generally distributed, but not common anywhere; almost always in pairs and frequenting the trees. The species was procured at Tete on the Zambesi by Sir John Kirk, who has also found it near Zanzibar.

Besides the above localities in the Cape Colony we may mention that Mr. T. C. Atmore has shot the present species at Eland's Post and Grahamstown in the eastern districts, and that the late Mr. Frank Oates procured a specimen near Pietermaritzburg. Mr. Ortlepp sends eggs, which are dirty white spotted with dark and light brown spots of various sizes. Axis $9\frac{1}{2}$ "", diam. $6\frac{1}{2}$ ". This Pipit places its nest on the ground in some snug well-sheltered nook, or at the foot of a tuft of grass. It is cup-shaped and neatly built of dry grass, the outer layers coarse, the next fine, and lined with hair from the tails of cattle. The eggs are four in number.

With regard to its occurrence in Natal, Majors Butler and Feilden and Capt. Reid give the following note:—"Common at the Ingagane River, near Newcastle, where Reid obtained four specimens in June and July, feeding on the bare patches round the stone cattle 'kraals.' He also met with it near Ladysmith in November, and obtained the eggs from two nests on the 18th and 19th of that month. The nests were cup-shaped, well concealed among the growing herbage, and resembling those of our common European Meadow Pipit. The eggs in the first nest, three in number, are white, with distinct freckles and small blotches of chocolate-brown, and a more obscure series of ashy grey markings, most numerous towards the larger end, measuring .8 inches by .6 inches. In the second nest the two eggs have the markings smaller, but more numerous and of a slightly duller brown."

Adult male.—General aspect above mottled, the plumage rather clear sandy brown with distinct blackish centres to all the feathers, the margins of the mantle plumes slightly ashy; lower back and rump perfectly uniform sandy ash-brown; wing-coverts more strongly mottled than the back, the feathers with blackish bases and broad sandy rufous margins, edged with creamy whitish at their ends; inner median and greater coverts, bastard-wing and primary coverts blackish edged with ashy rufous; quills blackish, externally sandy rufous, the primaries narrowly edged with whitish; inner secondaries very broadly margined with pale sandy buff; upper tail-coverts sandy brown with dusky brown centres; tail-feathers blackish, narrowly edged with sandy brown, the two centre feathers more broadly edged with sandy buff inclining to white near the tips, the outermost feather almost entirely white, excepting a dusky patch for two-thirds of the inner web along its edge, the penultimate tail-feather also for the most part white, but having the dusky patch on the inner web darker and extending nearer to the tip, the shaft of this feather being blackish; head and neck clear sandy brown mottled with blackish centres to the feathers like the back; lores dusky; a well-defined eyebrow of yellowish buff; ear-coverts clear sandy brown, darker on the upper margin; cheeks yellowish buff, separated from the whitish throat by an indistinct moustachial line of black; lower throat, fore-neck, breast and flanks bright sandy buff, a little browner on the latter; centre of the breast and abdomen isabelline white; on the lower throat and fore-neck some

very distinct longitudinal spots of black; thighs and under tail-coverts pale sandy buff; under wing-coverts smoky brown, the lower ones slightly tinged with sandy buff; axillaries smoky brown with sandy buff margins; quills below dusky brown, inner edges ashy fulvous: "bill brown, with the basal portion of the lower mandible flesh-colour; legs and feet yellowish clay-colour; iris brown" (*Reid*). Total length, 6·5 inches; culmen, 0·6; wing, 3·5; tail, 2·5; tarsus, 1·1.

524. *ANTHUS PALLESCENS*, *Bocage*.

Pale Tawny Pipit.

This species is a pale edition of *A. caffer*, which it resembles in the character of its markings, but differs in its extremely light colouration. Only one specimen is known as yet, viz., the type which has been kindly lent to us by Prof. Barboza du Bocage; it was procured by Anchieta at Humbe on the Cunene River, and, although we should like to have seen more specimens of this pale form, yet the mere fact that none of the many specimens examined by us from other parts of Africa in the least approach it in colour, induces us to believe that it may be a different species peculiar to South-Western Africa.

Fig. Bocage, Orn. Angola, pl. viii. fig. 2.

525. *ANTHUS NICHOLSONI*, *Sharpe*.

Nicholson's Pipit.

Anthus campestris, auct. ex Afr. merid.

All the remaining Pipits of South Africa besides the three foregoing species have the 2nd, 3rd, 4th, and 5th primaries emarginate on the outer web, and the three species which follow are distinguished by their smoky or fulvous brown axillaries and under wing-coverts. One of these appears to us to be without a name, as we cannot at present find any of the published descriptions which will suit it, and we have affixed to it the name of Mr. Francis Nicholson who has long been studying the *Motacillidæ*, and whose monograph of the family we hope shortly to welcome.

The present species is about the same in size as *A. pyrrhonotus*, but is distinguished by its more mottled back and by the markings of the two outer tail-feathers: it would appear to be the South African representative of *Anthus sordidus* of Abyssinia, but is not nearly so distinctly mottled on the back, although it is much more varied in this respect than its ally *A. pyrrhonotus*. The tail-

feathers, however, are so characteristically marked that we do not think it can be mistaken for any other African Pipit. The penultimate feather is almost entirely blackish, save for a narrow fringe of isabelline along the outer web, sometimes extending round the tip of the inner web, but always extremely narrow. The outer feather is diagonally blackish on the inner web, the shaft appears to be always blackish at the ends and generally for its whole extent. The outer web is pale isabelline buff for its entire extent, but becoming whiter towards the end; this is especially the case on the inner web, which is diagonally pale isabelline for its terminal third, becoming whiter towards the tip.

Five specimens of this species are in the British Museum. One is a male collected by Mr. T. C. Atmore, at Eland's Post, in June, 1870; a second was obtained by the same gentleman at Sigonell on the Vaal River; a third, also a male, was shot by Mr. C. Newby near Kingwilliamstown on the 24th of May; all these specimens are in a very similar plumage and appear to be in winter dress. A female killed by Mr. Andersson near Cape Town on the 1st of May is also in winter plumage and differs only in being rather more fulvescent on the tail-feathers. The editor's collection also contained a specimen of Mr. Andersson's marked as a male, but unfortunately bearing no indication of its locality. It is apparently one of his Ondonga skins, and seems to be in breeding plumage. It is much more rufescent than the winter killed birds, and from the wearing off of the edges of the feathers the dark mesial markings of the upper surface appear in somewhat stronger relief, and impart a more distinctly mottled appearance.

526. ANTHUS PYRRHONOTUS, V. Cinnamon-backed Pipit.

Megalophonus pyrrhonothus (V.): Layard, B. S. Afr. p. 211.

Anthus leucophrys, *id.*, *tom. cit.* p. 122.

This Pipit, the *Enkelde Leeuwerk* of the Dutch colonists, is by far the commonest of the South African species. It is found abundantly all over the colony. Mr. Andersson procured it in the neighbourhood of Cape Town, as well as at the Knysna. Mr. Rickard says that it is common near Port Elizabeth, and we shot it ourselves in the neighbourhood of Grahamstown. It was sent by Mr. Atmore from Eland's Post, as well as from the Vaal River, and Captain Trevelyan procured it near Kingwilliamstown. We have seen examples from

Natal collected by Mr. Ayres, and Mr. Frank Oates shot it on the Kaarkloof Heights near Pietermaritzburg. Majors Butler and Feilden and Captain Reid state that in Natal it is an exceedingly common bird on the "Veldt" in the upper portions of the colony. Several nests were taken near Newcastle and Ladysmith.

In the Transvaal, writes Mr. Ayres:—"This Pipit is distributed during the winter months over the whole country, but more plentifully on high bare lands than in the bush or along the Limpopo. It feeds on insects, has a low dipping flight, and occasionally alights on low trees." Mr. F. A. Barratt met with it in the Lydenburg district, and Mr. Jameson procured specimens on the Umvuli River in August and October. Mr. Ayres gives the following note:—"In pairs, but not common. They frequent the lower parts of the rocky hills, and on being disturbed at once fly on to the nearest tree, and when followed, continue from tree to tree. I was surprised at this habit, as also at the bird not preferring the more open grassy country: for those I saw were always in well wooded parts." According to Mr. Andersson it is widely dispersed over both Damara and Great Namaqua Land, and Senor Anchieta has met with it at Caconda in the interior of Benguela, and in Angola proper.

As in *A. nicholsoni*, the 2nd, 3rd, 4th, and 5th primaries are emarginate, but the outer tail-feather is very pale smoky brown or slightly rufescent, lighter at the tip and a little more dusky along the inner web; the shaft very pale; the penultimate feather smoky brown, edged and tipped with whitish, both scarcely perceptible. The uniform character of the upper surface will, however, generally distinguish the present bird.

The nest of this species is placed under a tuft of grass, and the eggs are very variable. The ground is usually cream colour profusely spotted throughout with various shades of brown and purple, more thickly at the obtuse end. Axis 2"', diam. 7'".

Major Butler gives the following note on its nesting in Natal:—"Found a nest near Newcastle, on the 1st of October, under a tussock of grass. It was well concealed and composed of dry grass, lined with finer material of the same description, cow-hair, horse-hair, etc., with a run up to it on one side, so that it was necessary to stoop down very low to see into it. Eggs three in number, fresh, white, spotted all over with grey. Another nest, precisely similar in

composition and situation, at Sunday's River, on the 12th of October, containing three eggs slightly incubated."

Adult female (in breeding plumage).—General colour above nearly uniform umber brown, but slightly paler and more ashy on the hinder neck; least wing-coverts like the back, the remainder blackish, edged with dark sandy buff; the bastard-wing and primary-coverts blackish brown narrowly margined with ashy fulvous, as also are the primaries, the secondaries, however, having rather broader edges of sandy buff; tail-feathers dark brown narrowly edged with ashy fulvous, the two outer feathers smoky brown with an oblique mark of dark brown along the inner web, the tips of both feathers isabelline, as also the outer web of the external rectrix; head nearly uniform like the back; lores and a distinct eyebrow as well as the feathers under the eye isabelline whitish, rather more sandy on the hinder part of the eyebrow; ear-coverts pale sandy buff, browner along the upper margin; cheeks whitish with a dusky line along the upper margin and a plainer moustachial line of blackish; throat whitish; remainder of the under surface of the body pale sandy buff, inclining to isabelline on the centre of the breast, abdomen, thighs and under tail-coverts; fore-neck and breast slightly washed with ashy fulvous with a few indistinct streaks of dusky brown; flanks rather more strongly washed with sandy buff; axillaries and under wing-coverts smoky brown washed with sandy buff; under surface of quills dusky, ashy isabelline along the inner web. Total length, 6·4 inches; culmen, 0·65; wing, 3·6; tail, 2·25; tarsus, 1·1.

Fig. Levaill. Ois. d'Afr. iv. pl. 197.

527. ANTHUS BRACHYURUS.

Short-tailed Pipit.

Anthus calthropæ and *A. brachyurus*, Layard, B. S. Afr. pp. 121, 122.

The diminutive size of this Pipit is its foremost claim to recognition among its South African relations. Total length, 4·6 inches; wing, 2·5. It is not a common bird in museums, and is almost exclusively known as a Natal bird. Mr. Thomas Ayres writes from that colony:—"This species is only plentiful during the summer months; it is quite a terrestrial bird, never, to my knowledge, alighting on any twig or stem of grass, but always on the ground. The birds generally rise from the grass close to one's feet, and it is no easy matter to shoot them, as their flight is both strong and very

eccentric. They build their nests (I am tolerably sure) similarly to the Lark's on the ground, with a few loose dry leaves of grass: they are generally either single or in pairs." We have recently seen examples from the Lydenburg district in the Eastern Transvaal, collected by Mr. Lucas, and now belonging to the Bloemfontein Museum.

The author had a specimen alive at the Cape for a long time, which he described as *Anthus calthropæ*, but which we now know to be the same as *A. brachyurus*. The following account of it is extracted from the first edition of the present work:—"A little pet—the only specimen I have seen—of a small *Anthus* is merrily hopping about in my aviary, and known to the household by the familiar name of 'Brownie,' and from his engaging ways and sprightly song, is a general favourite. He came into my possession more than six years ago, and was brought from Swartland. He usually commences his song the earliest, but one, of all my birds: the "early bird" is a Java sparrow, who with the faintest dawn begins a low guttural gobbling, ending in a mellow but short pipe. As soon as I remove the cover from the cage, 'Brownie,' who roosts on the ground, sometimes in a corner, at other times behind the seed-box, mounts a large stone, placed in the cage for his special benefit, and pours out his voluble song, short, certainly, but oft-repeated. Occasionally he will hop on the edge of the cage, or mayhap on a perch, and then treat us to a stave; but his favourite singing-place is the stone. Sometimes when I am going to bed, without any warning, 'Brownie' will start off in full tide of song: he is then usually on the ground. He, however, has more than once been in disgrace. Among the many birds confined with him, are a pair of doves from Java: these he almost stripped of their feathers, for the sake of nibbling the quill-ends, which are rapidly passed through his little sharp bill, like canes through a sugar-crusher, and with the same results. From this propensity, I fancy 'Brownie' must like a meat diet—worms and insects, perhaps; he, however, feeds upon canary-seed, and will eat groundsel and chickweed, and all that the canaries which are inhabitants of the same large cage feed upon."

528. *ANTHUS LINEIVENTRIS*, *Sund.* Larger Yellow-tufted Pipit.

This and the two following species of *Anthus* are distinguished by their yellow axillaries and under wing-coverts. The upper

plumage is mottled with dark centres to the feathers, and the only other species with which it could be confounded is *Anthus chloris*. It is, however, larger than that bird, and has no yellow in the centre of the breast, which is streaked with black, like the flanks. The species was originally discovered by the late Professor Wahlberg, in the Limpopo River, and it appears to have been only once obtained since, viz., by Senor Anchieta, at Pungo-Andongo to the north of the Quanza River.

The following description is taken from the latter specimen, which has been kindly lent to us by Professor Barboza du Bocage:—

Adult male.—General colour above dull brown, with lighter brown edgings to the feathers; head lighter brown, with dark brown centres to the feathers, producing a streaked appearance; hind neck more ashy brown with dark brown centres, appearing streaked like the head; wings dark brown, all the feathers broadly margined with fulvous, washed with olive yellow on the least and median wing-coverts, the quills also edged with olive-yellow; tail dark brown, margined with lighter brown and with olive-yellow near the base; outermost feather brown, with a large triangular wedge of white on the inner web, the outer web white also near the base; penultimate feather with a smaller triangle of white at the tip of the inner web, the third feather having one smaller still; lores and a narrow eyebrow dull whitish, the latter tinged with yellow; in front of the eye a dusky spot; round the eye a ring of yellowish white plumes; ear-coverts dark brown; cheeks white with small triangular spots of dark brown; throat dull white, unspotted; rest of under surface of body dull white, the throat marked with small triangular spots, of blackish brown, widening on the fore-neck; breast and sides of the body longitudinally streaked with blackish brown; thighs dark brown; under tail-coverts dull white with large centres of dark brown; under wing-coverts olive-yellow with brown bases; bill blackish, the lower mandible yellowish, the tip dusky; feet yellowish; iris dusky brown. Total length, 7·4 inches; culmen, 0·65; wing, 3·5; tail, 2·9; tarsus, 1·1.

529. *ANTHUS CHLORIS*, *Licht.*

Smaller Yellow-tufted Pipit.

Though possessing the yellow axillaries and yellow under wing-coverts of *A. lineiventris*, which it further resembles in its mottled back, the present species may be distinguished from that bird by its

smaller size, and by the patch of yellow in the centre of the breast. The under surface is nearly uniform with a few indistinct centres of light brown to some of the feathers. From *A. crenatus* it is easily distinguished by its smaller size and Lark-like appearance, the upper surface being strongly mottled with dark centres to the feathers, thus presenting a great contrast to the uniform back of *A. crenatus*; the thin, straight hind claw which is as long as the hind toe itself is a further difference.

The species was originally described by Lichtenstein from "Kaffraria," and a single specimen from Natal collected by Dr. Gueinzus is in the British Museum: it measures as follows:—Total length, 6·5 inches; culmen, 0·6; wing, 3·25; tail, 2·6; tarsus, 0·95; hind toe, 0·45; its claw, 0·45. Another specimen was shot near Grahamstown by J. B. Glanville, and is preserved in the Albany Museum. We think that there can be no doubt that the bird recently described from Natal as *Anthus butleri* is the same as *A. chloris*, and therefore the following note from the paper on the Birds of Natal, by Majors Butler and Feilden and Capt. Reid, refers to the present species:—"Feilden shot the first specimen on the 6th June, and Reid met with it at the Ingagane River in July, and obtained three specimens. Butler afterwards obtained a fine male, nearly in full plumage, on November 9th, at Newcastle, where it was by no means common. Those obtained at the Ingagane were very local, and only to be found on one particular open flat near the main 'drift.' In their movements and flight they much resembled Wagtails." Captain Butler adds the following notes referring to his type specimen:—"Legs and feet brownish flesh; bill horny-brown above, lavender below: iris dark brown." He also says that it is a bird of skulking habits, seeking concealment in the grass much more than the other Pipits, especially when pursued, lying close, and being consequently often difficult to flush a second time. Mr. F. Nicholson has received specimens from Mr. Lucas, shot in the Rustenburg district, in the Eastern Transvaal.

Adult female.—General colour above dark brown, all the feathers with edgings of sandy-buff, giving a Lark-like appearance to the upper surface; hind neck slightly ashy; head with longitudinal centres of dark brown; scapulars like the back with a slight wash of yellow; least and median wing-coverts dark brown with broad margins of pale olive-yellow, the greater series margined with sandy

buff like the secondaries; primaries and their coverts dark brown with narrow edgings of olive-yellow, the first primary whitish along the outer web; upper tail-coverts and tail-feathers dark brown with distinct edgings of sandy buff, slightly washed with yellow towards the base, the penultimate feather tipped with white, the outermost one for the greater part white excepting a broad diagonal mark of brown on the inner web, widening towards the base: lores and a broad eyebrow dingy white, as also a ring of feathers round the eye; ear-coverts dull white, marked with dark brown on the upper and lower margins; cheeks sandy buff; throat dull white, the fore-neck sandy buff narrowly streaked with reddish brown shaft-lines; centre of the breast pale yellow; abdomen dull whitish, the sides of the body dull sandy buff, with distinct dark brown shaft-streaks on the flanks; under tail-coverts fulvous, with dark brown centres; edge of the wing and axillary feathers light olive-yellow; remainder of under wing-coverts dark brown, broadly edged with white; quills ashy brown below, greyer along the inner web: "iris dark brown; upper mandible, and tip of lower, neutral tint; base of lower mandible purple flesh-colour; legs and toes light yellowish brown" (*Reid*). Total length, 6.7 inches; culmen, 0.6; wing, 3.2; tail, 2.7; tarsus, 0.95; hind toe, 0.45; claw, 0.5.

530. ANTHUS CRENATUS, *F.* and *H.* Larger Yellow-tufted Pipit.

This species belongs to the section of Pipits with the shoulders or, more strictly speaking, the wing-coverts washed with yellow. It is distinguished from *A. chloris* by its larger size, curved hind claw and uniform upper surface.

The typical example was sent by us to the Bremen Museum from the neighbourhood of Cape Town, and another specimen exists in the British Museum, obtained by the late Mr. Andersson at the same place. Beyond these two birds we have only seen a pair, for which we were indebted to Mr. T. C. Atmore, who procured them in the eastern province, the male at Burghersdorp, the female at Colesberg.

Adult male.—Uniform brown above, with obsolete ashy-brown edges to most of the feathers of the upper surface; wing-coverts and quills brown, the least and median coverts, primary-coverts and primaries washed with olive-yellow on the margins, the inner greater coverts and inner secondaries edged externally with ashy-brown; tail-feathers dark brown slightly washed with olive yellow on the

margins near the base; the outermost feather edged with fulvous along the outer web and tipped with dull white on the inner web, the penultimate feather with a dull whitish tip; a narrow eyebrow running from the base of the nostril, and a ring of feathers round the eye, dull white; ear-coverts rufous brown, streaked with whitish-brown, the upper edge of the ear-coverts dark brown, forming with the dusky brown feathers in front of the eye a second streak running through the eye below the white eyebrow; cheeks and throat dull white; rest of under surface fulvous brown with fawn buff bases to the feathers, the chest and sides of body with narrow rufous-brown shaft-streaks; edge of wing and axillaries deep olive yellow; rest of the under wing-coverts dull brown washed with olive-buff on their edges, the outermost of the greater series and the quills below ashy brown, the latter pale rufous-buff along the inner webs. Total length, 6·8 inches; culmen, 0·7; wing, 3·45; tail, 2·6; tarsus, 1·05; hind toe, 0·5; its claw, 0·45.

531. *MOTACILLA LONGICAUDA*, Rüpp. Long-tailed Pied Wagtail.

This very elegant Wagtail is rare within the bounds of the colony. A single specimen was procured near Grahamstown by Mr. Glanville on the 28th of May, 1868, and Mr. Rickard obtained another at the Buffalo River on the 3rd of January, 1871. We have also seen a skin preserved by Mr. F. A. Barratt, who shot it near Kingwilliams-town: this specimen is now in the collection of Mr. Francis Nicholson. Mr. Ayres has met with it in Natal, whence also some few skins have been forwarded by his son to Captain Shelley.

The following notes on this species in Natal are given by Mr. Ayres:—"These Wagtails are particularly graceful in their movements. They frequent rocky streams, and go so close to the rushing water that one expects to see them washed away every instant. They appear to glide rather than walk or run over the stones in search of insects, and are not at all afraid of wetting their feet. Soft small dragon-flies are favourite food with them. They are generally seen in pairs, and warble very prettily though not loudly." We must mention that Professor Barboza du Bocage records a Wagtail obtained at Biballa, which he says agrees in colour with the present species but is rather smaller.

Adult male.—General colour above clear blue-grey; lesser wing-coverts blackish edged with a little darker grey than the back;

median and greater coverts black, tipped with white, the inner ones more broadly; inner greater coverts white with a black centre to the outer web; bastard wing, primary-coverts and quills black, only the inner secondaries edged with white, narrowly along the inner web, very broadly along the outer one; upper tail-coverts grey like the back, the lateral ones externally white; four centre tail-feathers blackish, edged with greyish white, the remainder of the feathers pure white; head a little duller grey than the back, scarcely perceptible except on the forehead; a distinct superciliary streak of white from the base of the nostril to above the ear-coverts, as well as the upper and under edge of the eyelid; lores and ear-coverts blackish, the latter washed with ashy and having a patch of white on their posterior lower half; cheeks, throat and under surface of body pure white, including the thighs and under tail-coverts; across the fore-neck a crescentic bar of black, wider in the centre; sides of breast and flanks slightly washed with ashy grey; axillaries and under wing-coverts white; the external greater coverts blackish like the under surface of the quills, which are white at the base of the inner webs; "bill black; legs grey; iris brown" (*Ayres*). Total length, 7 inches; culmen, 0·7; wing, 2·95; tail, 3·8; tarsus, 0·8.

Adult female.—Similar to the male.

Young.—Browner than the adult and having the middle tail-feathers somewhat mottled with white indentations near the base; the white markings on the wings abraded and much less distinct; the black collar on the fore-neck much narrower and browner than in the adult.

532. MOTACILLA VIDUA, *Sund.*

African Pied Wagtail.

Motacilla aguimp, Layard, B. S. Afr. p. 119.

Le Vaillant found this species first on the borders of the Orange River, about the 28th degree of south latitude, and thence to the tropic. We have received one or two specimens from Beaufort West, more from Colesberg, and several from Kuruman and the Free State. Mr. Rickard procured a fine male in full plumage on the 9th of June, 1870, at East London, and we are indebted for a specimen to Mr. T. C. Atmore, who shot it at Hopetown. In Natal Captain Shelley says that he "only saw single specimens or pairs of birds at the edges of the rivers and brooks near Durban." The late Mr. Frank Oates met with it on the Crocodile River, and

Mr. T. Ayres states that in the Transvaal, this Wagtail is "not nearly so plentiful as *M. capensis*: it is almost always found in pairs, usually near rivers, and often where cattle have been lying during the night, where it catches the insects that are attracted by the cowdung. It is generally distributed, but rather more plentifully along the Vaal River than elsewhere." Mr. Jameson's expedition procured this species on the Umvuli River in August, and in the Zambesi region Dr. Kirk says it is found everywhere and is superstitiously regarded by the natives, who call it "Droindwi." Mr. Andersson writes in the "Birds of Damara Land":—"I have only observed this Wagtail on the borders of the Orange River, where it is not uncommon. It is generally to be seen either singly or in pairs, and usually settles on stones or on the ground, along which it runs with great celerity in pursuit of small insects, which constitute its chief food, and it also skims the surface of the water for the same purpose." Senor Anchieta has procured it once at Humbe on the Cunene River, and Sala met with it at Kattumbella in Benguela, as well as in Angola. On the West Coast of Africa it appears to be seen on all the rivers from the Quanza to the Cameroons. It is also found in other parts of Eastern and North-Eastern Africa.

Mr. Ortlepp sends eggs of this species found at Colesberg, which are light brown, profusely speckled throughout with dark brown, chiefly at the obtuse end. Axis, 11''; diam. 7''. He says that in its habits and nidification it resembles *M. capensis* and that it has a "sweet and sustained note like that of the Cape Canary."

In their recent paper on the birds of Natal Majors Butler and Feilden and Captain Reid observe:—"One seen and obtained by Reid on the edge of a sluggish stream near Colenso, on the 20th November, where Butler also observed a pair on the banks of the Tugela. Several pairs seen, and a specimen procured, at the mouth of the Umgeni, near Durban, on the 24th December. Not observed in the neighbourhood of Newcastle."

Adult male.—General colour above jet black from head to tail; lesser wing-coverts like the back; median and greater coverts white with concealed black bases, forming a conspicuous shoulder-patch; bastard-wing and primary coverts black; quills black with white bases, the shafts of which are black; the innermost secondaries as well as the innermost greater wing-coverts entirely black, the

former with slight ashy white edgings ; upper tail-coverts black, the lateral ones edged with white ; all but the two outer tail-feathers black, with slight remains of a white edging on the centre ones ; the two outer tail-feathers white, the penultimate one edged with black along the inner web ; head like the back ; a broad white eyebrow ; lores and ear-coverts black, joined to the sides of the nape ; throat white, succeeded by a black patch on the fore-neck, which is joined above by a narrow line to the ear-coverts and laterally to the sides of the mantle, so as to enclose a large white patch on the sides of the neck ; breast and abdomen white as well as the under tail-coverts ; sides of breast and flanks ashy grey ; thighs black with white tips ; under wing-coverts and axillaries white, mottled with blackish bases near the edge of the wing ; quills dusky blackish below, with a broad white base to the inner web. Total length, 8 inches ; culmen, 0·7 ; wing, 3·65 ; tail, 3·7 ; tarsus, 1·0.

Winter plumage.—Is ashy brown above with a black head, instead of being entirely black above. The black collar has remains of white edges to the feathers.

Fig. Le Vaill. Ois. d'Afr. iv. pl. 178.

533. MOTACILLA CAPENSIS, L.

Cape Wagtail.

The "Quick Stertje," as it is called by the colonists, is abundant throughout the colony, frequenting the crowded cities equally with the outlying farmsteads. In Natal, according to Captain Shelley, it is not met with in anything like the same abundance, but is still considered by Mr. Ayres to be the most common of the Wagtails in that colony. He writes:—"It will frequently for a length of time follow a horse or ox whilst grazing, running actively along the ground and catching small insects which are thus disturbed ; it also appears to find its food abundant in cattle pens and in muddy streams. Its flight is dipping, like that of the Wagtail in England."

Majors Butler and Feilden and Capt. Reid observe:—"Everywhere abundant inland in Natal, but not so numerous, apparently, in the neighbourhood of the coast. A graceful lively bird, with an extremely pretty little song, not often heard. Nests were found in September, October, and November, built on the banks of streams or dry "dongas," among over-hanging roots, or under projecting stones ; they are cup-shaped, neatly and massively constructed

of dry grass, lined with fur and cow's hair. The eggs, three in number, are usually brownish cream-colour, very distinctly freckled with brown, and very slightly glossed; .85 in. by .55 in."

It likewise occurs in the Transvaal, where it also breeds. According to Mr. Ayres, the nest "is coarsely built of rough grass rather thickly lined with short hair; it is cup-shaped and generally placed in some crevice of a wall, or in a bank, or amongst the crannies of a rock, and frequently within a foot or two of some water. It may also often be found under the eaves of a building, or in a hole in the thatch. The eggs are generally four in number."

It even extends its range to the northward of the Transvaal, as the late Mr. Frank Oates shot a specimen at Inyati, and it was observed in December in the Mashoona country by Mr. Jameson's expedition. The following note is given by Mr. Andersson:—"This is rather a local bird in Damara and Great Namaqua Land, but is found somewhat numerously in moist and humid localities, and is also at times pretty freely met with on the sea-shore. It occurs sometimes in pairs, and sometimes in small flocks. It captures its prey both on the wing and by running along the ground, frequently following in the wake of cattle and picking up such small insects as may chance to be thus disturbed." Senor Anchieta has procured three specimens at Caconda in Benguela, where he states that the bird bears the native name of *Oquice-cerebanene*.

The Common Wagtail is everywhere petted and protected on account of its trusting, confiding manners, and the gentle way in which it makes itself one of the family.

Of course, in the towns, where boys, those natural enemies of birds, abound, the Wagtail is more shy than in the country; but even there they know the dwellings of those who protect them, and take up their abode accordingly. In the country, each farm-house and "pondok" (mud-dwelling of Hottentot labourer) has its well-known pairs of this engaging bird; and woe to the unlucky urchin who dares to meddle with them or their nests!! To say that "the angels won't love them," would be a blessing compared to the fate that would be prophesied for the wicked child.

We have often seen the master of the house sitting in his chair in the cool of the evening, and, perhaps, while one bird perched on the

rail of his chair, another would jump at the flies on his soil-stained shoes, while two or three more stood pecking at those that plagued the old dog lying at his master's feet. Perhaps one or two would have found their way into the *voorhuis*, or entrance-hall, where a rich harvest awaited them in the bodies of those flies slain by the attendant dark urchins, who, often ignorant of breeches or petticoats, guard their master's viands with a plume of dirty ostrich-feathers or leafy bough torn from the nearest tree.

These birds consort much with cattle, and jump up against their sides as they stand lazily chewing the cud, to catch the small flies that keep about them; they also congregate in considerable numbers on the sea-beach, to feed on the flies bred in the putrifying seaweed: they run along the sand with great agility, or walk with a stately, swaggering gait, which is very amusing. They also congregate in flocks upon favourite trees for the purpose of roosting; and this may chiefly be observed in towns.

The nest is generally constructed in a bank if in the fields; but when in the town they select a hole in the wall, or a dense mass of leaves in some plant creeping up a wall or tree. The nest is composed of leaves, small roots, and horse-hair, with which the structure is lined. The eggs are four or five in number, greyish white, minutely freckled with brown, chiefly at the obtuse end: axis, 9''' : diam., $6\frac{1}{2}$ '''.

Adult male.—General colour above brown with a faint wash of olive; wing-coverts like the back, the outer median and greater series as well as the bastard-wing edged with ashy olive; primary-coverts and quills dark brown, edged with ashy olive, browner on the secondaries, the first primary narrowly margined with white; upper tail-coverts and tail-feathers blackish brown, the two outer feathers white with a mark of brown extending from the base of the outer web for some distance obliquely up the inner web and more extended on the penultimate than the external feather; head and hind neck dull ashy grey; a narrow eyebrow of white; lores, feathers below the eye and ear-coverts blackish; cheeks and entire throat white; across the fore-neck a rather broad crescentic band of black; breast and abdomen pale yellowish or white marked with pale yellow, becoming pure white on the under tail-coverts; sides of body brown, the sides of the upper breast lighter and more ashy brown; thighs dusky brown; axillaries pale ashy or smoky

brown; under wing-coverts white with dusky bases, the edge of the wing mottled with dark brown; quills below dusky brown, with a large patch of white near the base of the inner web.

Total length, 7·2 inches; culmen, 0·65; wing, 3·25; tail, 3·4; tarsus, 0·95.

Adult female.—Similar to the male, but a little duller in colour, and having the collar on the fore-neck not quite so broadly indicated. Total length, 6·8 inches; culmen, 0·65; wing, 3·2; tail, 3·35; tarsus, 0·95.

534. *BUDYTES FLAVA* (L.).

Blue-headed Yellow Wagtail.

In our first edition we noticed (p. 119) a yellow Wagtail which had been sent us from Swellendam by Mr. J. Reitz, the skin of which was unfortunately lost. In the spring of 1868, however, Mr. F. Dumbleton of Wedgewood, near Durban, about fifteen miles from Cape Town, shot another specimen, which he was kind enough to send to us. He had previously told us that he had seen a specimen about the same farm many years before, and as he was a close observer of birds we feel sure that his observations may be trusted, and we may conclude from the fact that only two specimens were met with by him in sixteen years, that this Yellow Wagtail is a very rare and accidental visitor to this part of Southern Africa. Mr. T. C. Rickard mentions the fact of a specimen having been killed once near East London. In the Transvaal the species has been noticed by Mr. Ayres, who writes:—"This Wagtail appears here in our spring in considerable numbers, and leaves again about the latter end of April; they do not appear to rest here, neither are they in good plumage; the best plumaged birds are to be got just as they are leaving. During their stay here they are common on our market-square early every morning, where they find abundant food amongst the short grass, and the cow-dung, which attracts many insects, on which they are often to be seen feeding in company with *Motacilla capensis*." Mr. Andersson gives the following note:—"I had been fifteen years in Damara Land before I became aware of the existence of this Wagtail, which I first observed at Otjimbingue in 1865, when I obtained a few specimens, nearly all of which were immature. It is a migratory bird, and appears only in or about the rainy season."

This yellow Wagtail is easily distinguished by its blue-grey head and white eyebrow.

Fig. Dresser, B. Eur. iii. pl. 129.

535. BUDYTES MELANOCEPHALA (*Licht.*).

Black-headed Yellow Wagtail.

The present species may be distinguished from *B. flava* by its perfectly black head. As far as we know at present it has only once been noticed in South Africa, a specimen having been sent by Mr. Ayres from the Transvaal along with examples of *B. flava*.

Fig. Dresser, B. Eur. iii. pl. 130.

536. BUDYTES CAMPESTRIS (*Ball.*).

Ray's Yellow Wagtail.

The British Museum contains a specimen of an adult Ray's Wagtail, shot by Sir John Kirk at Tete, on the Zambesi River. The species may be told by its yellow forehead, this colour in old birds pervading the entire head. We do not know of any certain character by which immature birds of any of these three yellow Wagtails can be distinguished.

Fig. Dresser, B. Eur. iii. pl. 131.

Fam. COLIIDÆ.*

537. COLIUS ERYTHROMELON, *Vieill.*

Quiriva Coly.

Colius capensis, Layard (nec Gmel), B. S. Afr. p. 222.

This Coly is generally distributed in the George district, and to the eastward, but it does not appear to frequent the sparsely wooded country west of Swellendam. We saw it abundantly at the Knysna, and Mr. Atmore obtained the nest and eggs at Traka. Mr. Rickard records it from Port Elizabeth and East London. Mr. Buckley states that it is "very common throughout the Transvaal, being found in flocks of six or eight or more; they fly with a rapid and straight flight, and, when disturbed, generally all go off together." Mr.

* These birds, it should be noticed, are entirely out of place here, and ought to be placed near the *Musophagidæ*, the reason being that at the time when the Editor was writing of the latter birds a question had arisen amongst Systematists whether the Colies were not Passerine birds allied to the Tits, but by the time the latter family were reached the general opinion was in favour of their relation with the *Musophagidæ*, near which family they ought to be placed in a future edition.

Ayres procured it near Rustenburg in June, and says:—"This is the only species of *Coly* that I found amongst the Magaliesbergen; it is there very common in families, and feeds on various berries; its flight is very much like that of some Parrots, rapid and straight, with very quick beats of the wings." Mr. Frank Oates shot a specimen in August on the Makalapsi River, and it also occurs in the Zambesi, as Sir John Kirk found it in large flocks flying from bush to bush, and states that it is common in the forests and brushwood of the river valley. Mr. Andersson writes:—"This species is scarce in Damara Land; but I met with it about the Swakop River, and also near Okambute, at Otjimbingue, and near Ojipatna. It lives principally on the shoots and fruit of a bush of a yellowish-green colour, bearing red berries, and resembles *C. capensis* in its habits." Senor Anchieta has procured it at Benguela and at Capan-gombe, where it bears the native name of *Mokende-kende*, and also at Humbe on the Cunene River.

Our friend Captain Shelley has kindly lent us a MS. paper on the *Coliidae*, from which we find that the present species may always be distinguished by the colour of the bill, which has the basal half red, as well as the bare space round the eyes (fading into buff in dried skins). The red base is sharply defined from the remainder of the bill which is jet black. The upper surface of the body is more or less shaded with green.

Upper parts shining bluish-green, inclining to grey; forehead reddish-brown; under surface reddish-brown, with a grey tinge on the breast; vent, and under side of elongated tail-feathers, reddish-brown; base of bill, and cere round the eye, a fine coral-red, fading to dirty-yellow in dried specimens. Length, 13" 6"; wing, 3" 9"; tail, 9" 9".

Mr. Andersson states that the males are larger and handsomer than the females. Mr. Ayres gives the following soft parts:—"Irides pale grey; bill, tip black, basal part and also bare skin round the eye crimson; tarsi and feet rose-red. (Female similar.)"

Fig. Le Vaill. Ois. d'Afr. pl. 258.

538. *COLIUS CAPENSIS*, *Gm.*

White-backed *Coly*.

Of the four species of this genus found in South Africa, and known by the trivial name of *Muisvogel*, or *Mousebird*, this is the only one that is found in the neighbourhood of Cape Town. It is

not uncommon in gardens during the fruit season, ranging about in small families of six or eight individuals. They fly with a rapid, though laboured flight, generally at a lower level than the object at which they aim, and on nearing it rise upward with a sudden abrupt curve. They creep among the branches like Parrots and hang suspended, head downwards, without inconvenience; indeed, it is said that they invariably sleep in this position, many of them congregated together in a ball.* They breed in the centre of a bush or tree, making a structure of sticks and fine roots lined with wool, laying three or four eggs, somewhat rounded at each end, of a dull white colour, sometimes streaked with a golden brown; axis, 10''; diameter, 8''.

In habits, the three species closely resemble each other; and at the Kynsna, where they are all to be found, we frequently shot them, and could not distinguish which we had obtained until we picked them up.

Mr. Ayres writes from Natal:—"These birds are entirely frugivorous. They live in companies, and are by no means so common as *C. striatus*; but their habits are very similar to those of that species, except that they are more shy, and take wing more readily. In this Coly the tarsus acts apparently like a heel, being quite rough from constant use in climbing." In the Transvaal, the same gentleman observes: "I met with these Colies in pairs in February, in Lat. 27° 30' and long. 26°, but found no nests. They do not occur about Potchefstroom." Mr. Barratt shot specimens on the Vaal River, but did not observe it at Macamac. He states that he has also received it from Marico. Mr. Andersson writes as follows:—"This species is somewhat widely diffused over Great Namaqua Land and Southern Damara Land, through a portion of the Lake-country, and in the valley of the River Okavango. It is gregarious in its habits, being found in flocks by day and also when roosting at night. Its flight is short and feeble, seldom extending beyond the nearest bush or tree, on reaching which it usually perches on one of the lower branches and then gradually glides and creeps upwards through the foliage, using both bill and feet for that purpose. It is essentially a fruit-eating bird; but I believe, when hard pressed for its regular food, it does not despise insects and the young shoots of plants. Its flesh is palatable. On September 26th,

* Mr. Atmore says he once fired into a cluster and killed twenty-five!

1866, I obtained three eggs of this *Coly* from a nest built in a small bush, and composed externally of grass and twigs, lined internally with softer grass; the eggs were white, but dull. On October 16th, I met with several nests of this bird on the same tree; but all contained young, invariably three in number. On December 29th, I obtained a nest with three eggs."

According to Captain Shelley's arrangement of the genus the present species belongs to that section of the *Colies* which has the entire lower mandible pale, with the upper mandible black (sometimes with a paler basal portion). The chestnut rump and uniform throat are also characters which distinguish this section of the genus, but the colour of the middle of the back, which is black with a broad white band down the centre, will always serve to distinguish the present species.

Upper parts generally ash-coloured; a white line, bordered on each side by a broad black one, extends from between the shoulders to the rump, which is purple, glossed with red; throat and chin cinereous, changing into vinaceous on the breast, and a dirty yellow on the belly; head crested; tail very long, and graduated; wings short and rounded; legs in a fresh specimen bright coral-red; bill bluish; plumage of body singularly short and hair-like. Total length, 13" or 14"; wing, 3" 7''' ; tail, 10"; bill, 6"; tarsus, 8".

Mr. Ayres gives the following soft parts:—"Iris greyish white; bill black at tip, dark crimson at base, as is the cere; bare skin round eye bright scarlet; tarsi and feet dark pink. Sexes appear to be similar in plumage."

Fig. Le Vaill. Ois. d'Afr. vi. pl. 257.

539. *COLIUS CASTANONOTUS*, Verr.

Chestnut-backed *Coly*.

This species belongs to the same section of the genus as *C. capensis*, but has the middle of the back chestnut and uniform with the rump.

It occurs in West Africa from the Gaboon down to Angola, and its only claim to be included in our limits is its occurrence at Benguela and Capangombe, where it was found by Anchieta. Mr. Monteiro gives the following note:—"Feeds on wild fruits, principally on that of a wild fig-tree very abundant all over the country, and called *Mucuzo*; flies slowly, generally in threes and fours together, uttering a disagreeable note; found generally

distributed; its skin very thick and tough; stomach small and delicate; legs of a beautiful light-red colour."

Fig. Selater, P. Z. S. 1876, pl. 35.

540. *COLIUS STRIATUS*, *Gm.*

South African Coly.

The present species is not uncommon in the Karroo, and is equally frequent about the Knysna, Caledon, and Worcester, and it extends on this side of the mountain as far as Eerste River, as we found by shooting them in Mr. Laurence Van der Byl's garden. Mr. Rickard notes it from Port Elizabeth and East London. In Natal, according to Mr. Ayres, it breeds, building in the thick fork of a mimosa or other low tree, well sheltered by creepers and foliage above. He also remarks:—"These birds appear to have the habit of constantly adding fresh and green leaves to the inner surface of their nests. Is a certain amount of dampness necessary for their eggs during incubation? These Colies are always found in small companies, excepting during the time of breeding. They inhabit the Bush, and are fond of climbing about and sunning themselves on any trees well covered with thick creeping plants. They are destructive in a garden, attacking soft fruits, such as loquats, &c. I rather think that when roosting they hang with their heads downwards, the whole family being nestled together; but those I have seen have generally flown off so quickly that I could not be positively certain as to their position."

Mr. F. A. Barratt observes:—"This bird was often observed at Macamac and elsewhere on my route from Potchefstroom to the Gold-fields. All the species of this genus, as far as I could make out, closely resemble each other in their habits. In British Kaffraria one cannot give a Kaffir a greater treat than a few 'Mouse-birds,' as they are called; and if one of them flies from a bush, sticks and knobkeries will be thrown with such precision that the bird has little chance of escape."

Mr. L. C. Layard sent plenty of eggs of the species from Swellendam; many of them were curiously streaked with a dull golden yellow; the ground-colour of all was a dirty chalky-white, rough to the touch.

Captain Shelley distinguishes this species from all the other South African ones by the colour of the legs, which are dark reddish-brown, and by the uniform black upper mandible, as well as by the

dull brown rump and the narrow bars which are seen in the throat. Dr. Schalow has separated the bird from Natal as a smaller race.

Above cinerous, with a tinge of glossy greenish-brown on the wings and tail, lightest on the head, which is crested; under part of throat and chest cinereous, minutely striated with brown; centre of belly dirty yellow, inclining to rufous on the vent; inner surface of wing rufous; tail long, and graduated; upper mandible black, and much curved; lower one light horn-colour; feet horn-colour. Length, 13"; wing, 4" 10"; tail, 9"; tarsus, 11"; bill, 6".

Fig. Le Vaill. Ois. d'Afr. vi. pl. 256.

ORDER, COLUMBÆ.*

Fam. COLUMBIDÆ.

SUB-FAM. TRERONINÆ (*Tail with fourteen feathers*).541. TRERON CALVA, *Temm.* Bald-fronted Green Pigeon.

This species is easily distinguished from the other Green Pigeons of South Africa by its grey tail. It is principally known as a West African bird, but was met with by the late Mr. Andersson at Ondonga in Ovampo Land, and Professor Barboza du Bocage does not seem certain as to the identity of some of Anchieta's specimens from South-West Africa; this species will probably be found to be represented among them.

According to Captain Shelley the measurements are as follows:— Total length, 10·5 inches; culmen from the frontal feathers, 0·95; wing, 6·1; tail, 3·7; tarsus, 0·9. The iris is blue, surrounded by a red rim; bill bluish grey, with the basal portion red; feet yellowish flesh colour.

Fig. Temm. and Knip, Pigeons, I, pl. 7.

542. TRERON WAKEFIELDII, *Sharpe.* Wakefield's Green Pigeon.

The colour of the tail will serve to distinguish this Pigeon from *T. calva*, as all the tail-feathers are olive-yellow, like the back, ending in a broad yellowish buff sub-terminal bar. It was originally discovered by the Rev. Mr. Wakefield, near Mombas, in Eastern Africa, and it has been recorded from various places on the east coast, occurring on the Zambesi, according to Dr. Bradshaw, and extending to Matabele Land, where it was obtained by the late Mr. Frank Oates. Captain Shelley thinks that some of the specimens from South-Western Africa which Professor Barboza du Bocage was unable to identify, may perhaps belong to the present bird.

* In treating of this Order we have followed the arrangement proposed by Captain Shelley in his paper on the "Columbidæ" of the Ethiopian Region (*Ibis*, 1883, pp. 253-331).

The following description is given by Captain Shelley:—Very similar to *T. calva*, which it resembles in size, nudity of the forehead, the grey collar at the base of the hind neck, the vinous and the yellow on the wings, the bright yellow thighs, and in the under tail-coverts; but differing in the head, neck, and chest being yellower, in the olive parts of the back and wings being also yellower, and in the tail being olive-yellow above instead of grey, ending in a broad yellowish-buff terminal bar; the iris, bill and legs are probably similarly coloured to those of *T. calva*. Total length, 9·2 inches; culmen from the frontal feathers, 0·8; wing, 6·15; tail, 3·5; tarsus, 0·9. The wing varies from 5·7 inches to 7·2.

Fig. Sharpe, P. Z. S. 1873, pl. 58.

543. TRERON DELALANDII, Bp.

Delalande's Green Pigeon.

This is entirely a bird of the eastern districts; Captain Trevelyan tells us that it is rare in British Kaffraria, and during his stay there he only saw three examples in the flesh. One was killed on the road from Kingwilliamstown to East London in July, 1870, one at Macleantown, and one he killed himself out of a small flock of five or six on the banks of the Chalumna River in March, 1877. Mr Rickard informs us that they are not uncommon at East London, and he has seen one which had been procured in the neighbourhood of Uitenhage. Captain Shelley saw a specimen at Pinetown in Natal, and he says that they generally keep well hidden amongst the foliage of the large trees, where, owing to their green colour, they are extremely difficult to observe; and relying on this natural protection they sit close, often allowing stones to be thrown into a tree before they will take wing.

Mr. Ayres writes:—"I found these handsome Pigeons somewhat scarce in the Magaliesbergen in winter; but my brother tells me that they are exceedingly plentiful there during our summer months, when wild fruits abound; they are fond of densely foliaged trees, keeping very quiet if any one approaches; and one may often walk quietly right under the trees where they are, when they dash out suddenly, generally one at a time. They are sometimes solitary, but often in small flocks; their food consists entirely of small berries; and for the pot they are not by any means to be despised." During Mr. Jameson's expedition to the Mashoona country, this species was

procured on the Umvuli River in August and September, and Mr. Ayres observes:—"It is plentiful at the Umvuli at this season, feeding on the wild fruit which the Boers call the 'Moople;' the tree is a handsome, dense, dark-foliaged one, and grows here and there all along the banks of the river. There is also a wild fig-tree in full bearing with an insipid fruit of the size of a walnut, which the birds are very fond of. After leaving Rustenburg we did not meet with this bird until we arrived at the Umvuli."

Like *T. wakefieldii* this species has the tail of the same colour as the back, and the following description is given by Captain Shelley.

Very similar to *T. calva* and *T. wakefieldii*, but differs from them both in the more ashy olive shade of the head, neck and breast; the feathers extend further on the forehead; the vinous patch on the wings is generally paler and more ashy; the remainder of the wing is similar, excepting that the olive parts, as well as the back and tail, are yellower; tail olive-yellow as in *T. wakefieldii*, with the broad terminal band paler but not so strongly marked; "iris of a beautiful pale blue; bill very light bluish ashy at the tip, with the basal portion bright orange" (*T. Ayres*). Total length, 10 inches; culmen from frontal feathers, 0·9; wing, 6·65; tail, 4·1; tarsus, 0·95. The wing varies, according to Captain Shelley, from 6·2 to 6·8 inches.

Fig. Bp. Icon. Columb. pl. 1.

SUB-FAM. COLUMBINÆ (*Tail with twelve feathers*).

Captain Shelley divides this sub-family into ten genera, of which eight are represented in South Africa. We shall under the heading of the various species enumerate the points by which the above-named author distinguishes these genera.

544. COLUMBA PHÆONOTA, *Gray*. South African Speckled Pigeon.

Columba guineæ, *Layard*, B. S. Afr. p. 256.

In the genus *Columba* the wing is longer than the tail, the latter not being two-thirds of the wing in length, and the distance between the tip of the secondaries and the tip of the wing is more than half the length of the tail; the fourth primary never longer than any of the outer three; tarsus naked. The members of this genus nest in holes. The present species represents in South Africa the well-known *Columba guineæ* of the northern part of the continent, from

which it is distinguished by having the rump and upper tail-coverts deep leaden-grey instead of ashy-white.

The *Bosch-Duif* or *Wilde-Duif* of the colonists is common throughout the colony, nesting in rocky places in inaccessible ledges and holes, never in trees. The nests are rude structures of a few sticks situated on a ledge or cleft. Dr. G. W. Atherstone writes:—"I saw it at Committees' Drift, breeding in the Old Fort. The Hottentot living there had a brood of young ones, and the old bird with her wings clipped." They fly in flocks when the crops are on the ground, and do considerable damage to the agriculturist.

In the sea-face of the mountains, of which Cape Point forms the extreme south, there are numerous caverns tenanted by these birds. Some years ago we entered one of them in a boat, and for the first time had the pleasure of seeing this fine Pigeon breeding in considerable numbers: every ledge of the cavern side was tenanted by as many nests as could be conveniently stowed away, while the parent birds were continually arriving or departing on their busy task of feeding their young. The cave was unapproachable except by water, and one would have thought that the birds would have been careless in consequence in the choice of their eyrie; but not a nest was accessible. We have, however, obtained eggs of this species from other sources; they are always two in number, glazy-white, nearly similar at each end: axis, 17"; diameter, 12".

Mr. Rickard states that it occurs near East London, and Captain Trevelyan says that it is common in British Kaffraria. Mr. Buckley procured it in Natal, and Captain Shelley states that it arrives in that colony in large numbers; but he did not meet with it in March or April.

According to Mr. Barratt it is common in the Transvaal, where it flies about in vast flocks, amongst the crops, and on newly-ploughed land. Mr. Ayres observes:—"These Pigeons were pretty common about the Magaliesbergen; and I saw them in pairs and shot some young birds amongst the ravines and precipitous clefts of the rocks, where, without doubt, they breed, and where I frequently heard their deep notes." During Mr. Jameson's expedition to Mashoona Land a specimen was procured at Dry Hart River, on the 25th of January, and Mr. Ayres gives the following note:—"The birds were passing over in flocks from east to west, this evening. The crop of our specimen was crammed with the triangular sharp-

pointed thorny seed of a plant which grows along the ground in great abundance, all over the country, near water. These seeds are very troublesome to those who try to walk barefoot, and dogs are continually temporarily crippled by them; but the natives, who are accustomed to go barefoot, do not appear to feel them."

According to Mr. Andersson, "this Pigeon is common throughout Damara Land and Great Namaqua Land, and congregates in immense flocks about March, April, and May, after the breeding-season, and may then be obtained in any quantity, at the expense of a little powder and shot, which these birds are well worth, as their flesh is well tasted and gamey." Professor Barboza du Bocage has recorded *C. guineæ* from Huilla and Capangombe, but we agree with Captain Shelley that the record probably belongs to the present species.

Head, body beneath, rump, wings, and basal two-thirds of tail, on upper side, cinereous, or plumbeous; back, shoulders, and wing-coverts, vinaceous, the latter with numerous triangular white spots, which also appear on some of the cinereous feathers of the wings; feathers of neck and breast, ruddy vinaceous; each feather being bifid at the tip, stiff, and inclined to cinereous, with a glossy green tint; apical third of tail, black on the upper side; legs and bare skin round the eye, in life, crimson; bill dark cinereous. Length, 12"; wing, 8" 9"; tail, 4½".

Fig. Le Vaill. Ois. d'Afr. pl. 265.

545. *PALUMBUS ARQUATRIX*, *Temm.*

Rameron Pigeon.

In the genus *Palumbus* the tail is more than two-thirds the length of the wing, and the difference between the tip of the secondaries and the tip of the wing is less than half the length of the tail; the tarsus is feathered on the upper part near the knee joint, and the fourth primary is shorter than the outer three. The characters which distinguish the present species are the white spots on the wing-coverts and chest, and the lemon yellow bill and feet.

In the months of November and December these pigeons congregate at the Knysna in vast flocks, to feed on the berries that are then ripe; they also extend to the Cape peninsula, migrating thither at the season when the wild olive is in fruit, on the berries of which

it greedily feeds, whence its name of "Olive Dove." It breeds upon trees in mountain ravines, and, we have been informed, lays four eggs, only two of which come to perfection. Two eggs which we have had given us as the eggs of this species, are of the usual white colour and shape: axis, 1" 6"; diameter, 14". The nest is a loose structure of sticks. Mr. Atmore writes, under date 13th May, 1864, from near Blanco:—"The large yellow-billed and yellow-legged Bush Dove is breeding here now, high on the mountain. They make their nests on the tops of the tree-ferns. I am trying to get some young ones for you." The colonists call this bird Olive Dove, or Bush Dove. Mr. Rickard tells us that it is common near East London, and, according to Captain Trevelyan's notes, it is plentiful in the Peri Bush, near Kingwilliamstown, and is very fond of the wild plum tree. In Natal, Mr. Ayres says that "they come by thousands in the month of June, leaving again in August; they keep to the bush along the coast, only a few stragglers being found a few miles inland; they feed entirely on the berries which abound on the trees in the bush during the winter months. I have never seen them alight on the ground; they are shot here by hundreds, and afford our Durban sportsmen capital sport."

He also writes:—"I found this pigeon scattered rather sparsely amongst the Megaliesbergen, during the winter months; and, according to my brother, it is not much more plentiful in summer; they are generally solitary birds; but once I saw about twenty together." Mr. Andersson did not meet with the species in Damara Land, nor has Senor Anchieta procured it in a wild state in any part of South-Western Africa. Mr. Monteiro forwarded a living specimen in 1864 from Benguela, and Professor Barboza du Bocage states that he has also received two live birds from Angola, but as he very properly remarks, this does not prove that the species occurs in South-Western Africa, although specimens in the Lisbon Museum are labelled as coming from Galungo-alto.

General colour above, dark ashy, inclining to reddish on the back and shoulders, light on the edge of the wing, and very dark on the tail, over which there is a decided greenish tinge; wings, at the shoulders spotted with white; forehead vinaceous, passing into light ash-colour on the back of the head; chin, neck, and breast, obscure vinaceous, mottled with black; belly and flanks, a mixture of vinaceous and cinereous, with a profusion of crescent-shaped

markings; a bare place round the eye; bill and legs bright yellow. Length, 13"; wing, 8" 9"; tail, 5½".

Fig. Le Vaill. Ois. d'Afr. vi, pl. 265.

546. TURTURENA DELEGORGUII, *Deleg.* Delegorgue's Pigeon.

The smaller size and white or pale terminal bar on the under surface of the tail are some of the characters which distinguish *Turturæna* from *Palumbus*, the proportions of the primaries and the short tarsi being the same in both genera.

The present species will always remain a curiosity among ornithologists as being one of the few instances in which a naturalist has named a bird after himself. It is an extremely rare bird in collections, and is only known from Natal. One specimen was shot in 1863 by Mr. T. Ayres in November, being the only one he had seen up to that time. "The stomach contained the frothy larvæ of a small species of *Cicada*, which is found plentifully in Natal on the tops of trees." Captain Shelley has received a female from Mr. T. L. Ayres, who writes:—"This is the only specimen I have shot. It was feeding upon mulberries in a garden on the Berea. My cousin shot two a few days before at the same place in October." Delegorgue himself appears to have procured but two specimens, and the British Museum contains only a single example, the type of *C. lunigera* of Gray.

There is a curious difference in the sexes, the male having a broad white collar at the junction of the hind neck and mantle, which is absent in the female. The following descriptions are copied from Captain Shelley's paper.

Adult male.—Head and neck deep slate colour, only very slightly paler towards the forehead and chin; back of the head and back, and sides of the neck very strongly glossed with metallic amethyst lilac, with reflexions of green in certain lights; this same gloss extends on to the front of the neck, from the middle throat on to the upper chest, but is far less intense, only being visible in certain lights, and disappears altogether on the lower chest; the back of the neck is separated from the mantle by a broad white collar extending from shoulder to shoulder; remainder of the upper parts slaty black, shading into chestnut on the upper back, wing-coverts, and portion of the inner secondaries; the edges of the feathers of the upper back are faintly glossed towards their edges with

metallic lilac and green; the tail has a narrow pale end, most perceptible from beneath. Under surface—crop and chest vinous, shading into slate colour on the sides of the body, abdomen, and under wing and tail-coverts; towards the junction of the vinous and slate colours the feathers become freckled with the two colours, and the ends of some of the under tail-coverts are also freckled with vinous; end portion of the bill yellow; basal portion dark; legs yellow; “iris dark brown; bill ash; bare skin round the eye, and also the tarsi and feet, dark pink” (*T. Ayres*). Total length 12·5, inches; culmen, 0·75; wing, 7·3; tail, 4·6; tarsus, 4·9. As before stated the female has no white collar. “Iris dull red, end portion of bill yellow, basal portion dark purple; legs flesh colour” (*T. L. Ayres*). Total length, 10·5 inches; culmen, 0·65; wing, 6·5; tail, 4·8; tarsus, 0·9.

547. *Haplopelia larvata*, *Temm.* Rufous-breasted Wood-Dove.
Peristera larvata, *Layard*, *B. S. Afr.* p. 206.

The genus *Haplopelia* is close to *Turturæna*, but is separated by Captain Shelley by the following characters:—The fourth primary longer than the first; the tarsus longer than the third toe with claw, and almost entirely naked; the sexes always similar in plumage.

This species, which is the Cinnamon Dove and Lamoen Duif (Lemon Dove) of the colonists, is not uncommon about Rondebosch, near Cape Town; and it is also found plentifully at the Knysna. It keeps to wooded places and feeds on berries, and the nest is a rude structure of sticks placed on the horizontal branches of a tree, the eggs, two in number, are oval and white. Axis, 13''; diam., 11''. We have no records of its occurrence in the eastern districts of the colony, but in Natal it appears to be plentiful. Captain Shelley writes:—“Very common in the thick bush about Durban, where its brown colouring renders it hard to detect as it sits motionless on the low creepers in the darker parts of the forest. When disturbed it flies rapidly, but for only a short distance; and I did not observe it at any other times on the wing, as it never appears in the open. On the 11th of April I found two of their nests, placed about four feet from the ground, in the low creepers close to the same path, and nearly opposite to each other. The nests were similar to those of *Turtur auritus*; each contained two eggs nearly ready to hatch.”

Mr. Ayres gives the following note:—“These Pigeons inhabit the

dense bush along the coast of Natal, and are generally seen on the ground, silently and busily seeking for food. They are rather shy birds, and not easy to obtain. The best method of doing so is to sit still in those parts of the bush which they frequent, when they soon begin to move about; otherwise they watch from their thick covert any intruder who approaches, and, when he comes within a few yards, fly up with much bustle and are immediately out of sight. Their note is a low melancholy 'coo-coo,' rather prolonged and very guttural. There is not much difference in the plumage of the sexes; but the male is brighter and also larger than the female. It is seldom that more than two or three are found together."

In the Lydenburg district of the Transvaal Mr. Ayres states that these Doves are pretty common "in the dense bush and underwood of the kloofs; but more than two are seldom found together. They utter a low melancholy note, and are not very easy to shoot as they are generally on the ground, and on the approach of anyone are up in a great bustle and are immediately lost to sight." Mr. F. A. Barratt also notes the species from the Macamac Gold-fields.

General colour above dark-brown; back of the neck and head vinaceous, iridescent, with a beautiful coppery-green; forehead, top of head, and throat, white; under parts vinaceous, inclining to rufous on the belly and vent, and iridescent on the breast, with a coppery gloss; tail-feathers above, with the exception of the two central pair, cinereous-brown, cinereous on the tips, below the same, but the brown is darker, the cinereous lighter; thighs brown. Length, $10\frac{1}{2}$ " ; wing, $6\frac{1}{2}$ " ; tail, 3" 9". According to Captain Shelley the iris is "deep lilac; the bill black; bare skin round the eye, and the legs red."

Fig. Temm. and Knip, *Fig.* pl. 31.

548. TURTUR ERYTHROCEPHALUS, *Gray*. Rufus-headed Turtle-Dove.

The two preceding genera, *Turturana* and *Haplopelia*, have both been remarkable for metallic shades on the back of the neck and upper mantle, but this is entirely absent in the members of the genus *Turtur*, which have also a more or less defined black collar on the neck. *T. erythrocephalus*, according to Captain Shelley's arrangement, belongs to the group of typical Turtle-Doves which have the wings mottled, many of the scapulars and wing-coverts having their centres darker than their edges, while the collar is

confined to the sides of the neck. The tail-feathers have rather narrower white ends, and the under tail-coverts are pale grey, while the lower breast is vinous, fading into white on the vent.

All that is known of the present species is, that the type specimen exists in the British Museum, and is said to have been sent from the Cape of Good Hope by Mr. F. Campbell, who gave many specimens of South African birds to that Institution. It is nevertheless somewhat peculiar that no second specimen has ever been procured.

549. *TURTUS SEMITORQUATUS*, Rüpp. Red-eyed Turtle-Dove.
Turtur vinaceus, Layard, B. S. Afr. p. 359.

This Dove belongs to the section of the genus *Turtur*, which has the collar not confined to the sides of the neck, and the wings not mottled with dark centres to any of the feathers. It has a well marked black collar round the back and sides of the neck, but has no black feathers in front of the eye. The entire abdomen and under tail-coverts are deep leaden grey, the chest being of a deeper vinous shade. Great confusion has existed as regards the number of Turtle-Doves inhabiting South Africa, but we have followed Captain Shelley in his identifications, and we trust that hereafter the various species will be found more easy to determine. The present bird is found in some abundance at Twenty-four Rivers. We also shot it at Van Stadens' River Bush, and saw it near Grahamstown, but it is certainly a rarer species than *T. capicola*. Mr. Rickard states that it is common at East London, and probably occurs at Port Elizabeth. Captain Trevelyan tells us that it is rather scarce near Kingwilliamstown. A specimen was obtained by Mr. Jameson's expedition on the Umvuli River on the 8th of October, and Mr. Ayres gives the following note on the bird: "Iris bright orange-red; bill black; tarsi and feet dark rose-red."

Mr. Andersson says, that it is not found either in Damara or Great Namaqua Lands, nor does he remember to have met with it on the Okavango, but he received specimens from Lake N'gami. According to Mr. Gurney, a specimen from the Cunene River was in Mr. Andersson's last collection, and Senor Anchieta has forwarded examples from Humbe (native name, *Filafila*) as well as at Caconda and other localities in Benguela and Angola. This species has a wide range over other parts of the African continent.

Fig. Rüpp. Neue Wirb. Vög. pl. xxiii. fig. 2.

550. TURTUR DECIPIENS, *F.* and *H.* White-bellied Turtle-Dove.

With all the general characters of the foregoing species, this bird is distinguished by having the centre of the abdomen and vent white, the remainder of the abdomen and the under tail-coverts being pale grey, the latter broadly edged with white.

This Turtle-Dove has been described since the publication of the first edition of the present work, and not much is known about it. Sir John Kirk obtained two specimens at Tete on the Zambesi River during the Livingstone Expedition, and Professor Barboza du Bocage states that Anchieta has forwarded two specimens to the Lisbon Museum; one from Dombe in the South of Benguela, and another from the River Coroca in Southern Mosamedes. Captain Shelley has also in his collection a pair obtained by Dr. Emin Bey on the Upper White Nile.

551. TURTUR CAPICOLA, *Sundev.* Cape Turtle-Dove.
Turtur semitorquatus, Layard, B. S. Afr. p. 260.

This species, according to Captain Shelley, may be known by the following characters. It has a narrow black band from the eye to the lores; the under tail-coverts are white: the under wing-coverts leaden grey; and the under-surface of the quills is uniform dark brown. The only bird with which it can be confounded is *T. vinaceus*, which is a West African bird ranging from Senegal to the Congo, but not occurring within the limits of the present work. The Cape Turtle-Dove is abundant all over the colony, breeding even in Cape Town. The nests are simply rude platforms of sticks, covered with a thin layer of fine roots, through which the eggs (two in number, oval, and pure white; axis, 13''; diameter, 11'') are, in most instances, plainly visible from below. They are laid in September.

Mr. Rickard states that it is common near Port Elizabeth and East London, and Captain Trevelyan observes that it is plentiful near Kingwilliamstown. In Natal, according to Majors Butler and Feilden, and Captain Reid, it is common everywhere. They took fresh eggs in the Newcastle district on the 23rd of October, and at Richmond Road, near Pietermaritzburg, on the 7th of December. Mr. Ayres has found it tolerably common at Potchefstroom, and Mr. Barratt observed it in many places in the Free State and throughout the Transvaal. He mentions having received it from Marico, and he

shot the species on the Vaal River near Rustenburg. The late Mr. Frank Oates procured specimens at Pietermaritzburg and also on the journey from Pretoria to Bamangwato. It was seen by Mr. Ayres in the Mashoona Country.

In Damara Land and South-West Africa there is a pale form, concerning which Captain Shelley writes as follows:—"There is a well-marked tropical race, rather constant in its character, first recognized by Le Vaillant and afterwards named by Drs. Finsch and Hartlaub, *T. damarensis*. It differs from the typical Cape Town bird, but the arrangement of the colours and the proportions are identical. The grey of the head fades almost, or occasionally quite, into white on the front and sides of the forehead and on the front of the cheeks; the grey shade on the cheeks is rarely present; the partial grey edges to the black collar above and below often pass into white; the vinous of the neck and breast is paler, generally almost clear pink with no grey shade, but greyer-breasted intermediate forms are not uncommon; the brown of the upper parts is generally paler, but not always so. Total length, 10·3 inches; culmen, 0·55; wing, 6·21; tail, 4·5; tarsus, 0·8.

Of this race Mr. Andersson gives the following account:—"This is the most abundant species of Dove in Damara Land and the parts adjacent. It cannot be strictly said to be a gregarious species; yet numbers are often found in close proximity, both on trees and on the ground, and rise in one flock when flushed, producing a great noise by the rapid concussion of their wings above their backs. They seek on the ground for their food, which consists almost exclusively of seeds. They build in small trees, generally at the extremity of a bough, constructing a rough nest of a few twigs, with no lining of any kind. The eggs are two in number, of a pure white. I have observed these Doves building on August 20th, and have found their eggs abundantly at the end of December; so that it is probable that they produce two broods in the year." Senor Anchieta has also procured this bird in various parts of South-West Africa. At Benguela it is called "Bango" by the natives, and at Humbe "Cocolumba."

552. *TURTUR SENEGALENSIS, L.*

Senegal Turtle-Dove.

The present bird is recognized by the "mottled collar on the front and sides of the throat, formed by the feathers of these parts

being black, broadly tipped with fawn-colour" (*Shelley*). It is widely spread over Africa, and is found throughout the colony, and is well known from the peculiarity of its note, which somewhat resembles a human laugh. It frequents the same localities as do the other species, and is often mistaken for them when on the wing. A hen-bird, attracted by the call of the male of the Australian *Geopelia tranquilla* in our aviary, entered the room and was captured. We kept her in confinement a few days, and finally let her loose. To our astonishment she appeared in the evening on the window-sill to pick up the seed spilt there accidentally. She remained about the house and garden, sometimes venturing into the room, and in the breeding season sought a mate and bred in one of the oak trees close to the window. Her first nest was destroyed by a mischievous boy; but she made another, and brought off the young one, which together with herself and mate were daily to be found morning and evening, feeding in the garden, unmindful of our presence. They also associated with them *Turtur semitorquatus* and a Java sparrow. Subsequently they attracted many of their own species, and we have counted as many as sixteen in the garden at once. Eggs taken from the nest of this bird measure—axis, 13"; diameter, 10". They are of the usual pure glossy white.

This species is rather scarce near Grahamstown, but is common at Fort Brown, on the Fish River. It is not mentioned in Mr. Rickard's lists from East London and Port Elizabeth, and is stated to be rare near Kingwilliamstown by Captain Trevelyan.

Mr. Ayres has not procured it in Natal, but a specimen was given to him from that colony. Captain Reid found the species common in the mimosa bush along the Tugela River, at Colenso, in November.

From the Transvaal Mr. Ayres writes:—"These Doves are common in the Mariqua district; and many may be seen together hunting for wheat or other grains amongst the chaff and straw on the threshing-floors of the farms in the neighbourhood of the bush. I have found but one nest of this bird, the egg from which I now send; it is pure white, rather glossy, and equally obtuse at either end. The nest was composed of a few twigs, and placed on the horizontal branch of a low thorn tree growing on the banks of a stream. A pair of these Doves built a nest in a rose hedge in June, and laid two eggs; these I took, and in a fortnight they had built another nest and laid two more eggs. Their eggs are pure white,

beautifully delicate and pretty." The same gentleman states that he observed it in the Mashoona country, and Sir John Kirk procured a specimen on the Zambesi. Mr. Andersson writes:—"This species is found abundantly from the Okavango River southwards throughout Damara Land and Great and Little Namaqua Land, as also at Lake N'gami. In its habits, manners, and nidification, it resembles *Turtur damarensis*; but its eggs are a trifle smaller." Professor Barboza du Bocage records several specimens as procured by Anchieta; but all of them were got to the south of the Quanza, at Benguela, Capangombe, Caconda, and Humbe.

Fig. Le Vaill. Ois. d'Afr. vi. pl. 270.

553. *CHALCOPELIA AFRA*, L. Emerald-spotted Wood Dove.

Peristera afra, Layard, B. S. Afr. p. 262.

This genus and the following are distinguished by the large metallic spots on the wings, and the rufous under-surface of the wings; the first primary not having a notch. Le Vaillant appears to have found this species abundant about the Gamtoos, the Lourie, and Van Staden's Rivers, and throughout Kaffirland. Only one specimen has, however, reached our hands, and for this the Museum was indebted to Mr. J. D. Hugo, of Worcester, near which place he shot it on the 3rd of September, 1862. Mr. Atmore afterwards forwarded another specimen from the Long Kloof (Sept., 1865). Mr. Rickard records it from Uitenhage, and states that at East London it is more plentiful than *T. tympanistria*. It is mentioned in Captain Trevelyan's list from Kingwilliamstown. Captain Shelley states that it is common about Durban and Pinetown, in Natal. The late Mr. Frank Oates also procured it on Blauw Kranz River, in May. Mr. Ayres writes:—"This Dove is usually found in pairs. It inhabits the same localities as the Tambourin Pigeon (*Peristera tympanistria*), which it much resembles in its habits."

Sir John Kirk obtained it on the Zambesi, and Professor Barboza du Bocage records it from various places in Angola, as well as from Caconda, in Benguela (natives names *Ebobo* and *Bobo*), and at Humbe, on the Cunene River, where, according to Anchieta, it is called *Kutiambobolo*. Mr. Andersson has the following on the species:—"I have never observed this pretty Dove in Great Namaqua Land, nor in Southern Damara Land. I consider Omanbondé its southerly limit; and in travelling northwards I did

not find it abundant till I reached Okamabuti, some miles to the north of Omanbondé; from thence to the Okavango River it was common. This Dove constructs a nest of a few rough sticks in a bush or at the extremity of a bough of some low stunted tree. The sticks composing the nest are so loosely put together that a person looking at it from below may see the two eggs through the nest. It is seldom that more than one egg is hatched. The young are usually fledged by the middle of January."

General colour above, cinereous-brown; forehead, light cinereous; top of head, lead-coloured; across the lower part of the back is a white stripe, on each side of which is a broad black one; three narrow bands of the same colour extend across the tail-coverts, the last one being on the tips of the feathers; on the centre of the wings are two or three large spots of brilliant purple and green, while the inner webs of the wing-feathers are bright rufous; under plumage, vinaceous, lightest on the vent; under-surface of the tail, and tail-coverts, black; the basal half of the outer web of the former, and part of the three outer pair of the latter, white. Length, $7\frac{1}{2}$ "; wing, $4'' 5''$; tail, $3\frac{1}{2}$ ". Some authors have considered that the birds with blue and green spots on the wings constitute different species, but Captain Shelley thinks that they are only varieties of one form.

Fig. Le Vaillant, Ois. d'Afr. vi. pl. 271.

554. TYMPANISTRIA TYMPANISTRIA (*Temm.*)

White-breasted Wood Dove.

Peristera tympanistris, Layard, B. S. Afr. p. 262.

The genus *Tympanistris* is closely allied to *Chalcopelia*, from which it differs in having the first primary notched. The present species is apparently confined to the forest districts. We found it common at the Knysna, and all the wooded portions of the eastern province. But though continually heard, it was difficult to procure, as it possesses the power of throwing its voice to a distance like a ventriloquist, thus deceiving the hunter, who often creeps from the tree on which the bird is actually perched. It is not very common near East London, according to Mr. Rickard, and Captain Trevelyan says it is scarce near Kingwilliamstown. Captain Shelley found it very plentiful about Durban in Natal, and Mr. Ayres writes: "These pretty Doves inhabit the bushy country on the coast line, gradually becoming rarer as we proceed inland. Their note is a soft and

melancholy *coo-coo*, uttered slowly at first, then gradually more and more quickly, until it ends in a prolonged rattle. They feed on the seeds of trees that drop on the ground (such as those of the castor oil plant, which is indigenous here), and they may be seen actively running about in search of such food. Their flight is exceedingly rapid; they are found singly or in pairs, but never in companies."

Although widely spread over nearly the whole of Africa, it has not been recorded from any part of Benguelá, Damara, or Great Namaqua Lands, or from the western districts of the Cape Colony.

General colour above, on the vent and tail-feathers fuscous-brown, with a few dark-green, iridescent spots about the centre of the wing; forehead, stripe over the eye, and the under parts pure white; inner webs of the wing-feathers and flanks, clear rufous. Length, $8\frac{1}{2}$ "; wing, $4\frac{1}{2}$ "; tail, $2' 9''$. Captain Shelley gives the soft parts as follows: "Beak deep lilac tipped with horn colour; irides very dark brown; eyelids deep lilac; bare space round the eye dark slate-colour; legs lilac red." According to the same author the female differs slightly in the cheeks, lower throat, and crop being tinted with dusky grey.

Fig. Le Vaill. Ois. d'Afr. vi. pl. 272.

555. *CENA CAPENSIS, L.*

Long-tailed African Dove.

These lovely little Pigeons extend over the whole of the colony, and appear in all the collections made in the Interior. They are, however, rather rare in the eastern province. In the Karroo they abound, breeding in the mimosa bushes. Their nests are rarely placed above a man's reach, and are simply a loose platform of sticks, covered with fibrous roots, and on this are deposited their two delicate cream-coloured eggs: axis $10''$; diameter, $8''$; similar at each end.

The young during the first year are mottled. They generally fly in pairs, but several are often seen in company. The males are very salacious, cooing to any female they chance to fall in with. We kept one in confinement for many months: it became very tame, and would salute our first coming into the room in the morning with a deep, plaintive "*coo-coo-oo*." It was killed at last by some little love-birds (*Euphemia elegans*), who tore it to pieces. These Doves feed entirely on grass seeds and grain, and walk with such rapidity when feeding, that we have often mistaken them for rats when about the farmsteads where they congregate. It is probably migratory.

Captain Trevelyan writes : " I have very seldom noticed this bird in British Kaffraria, but for a few days a pair were constantly seen feeding in the barrack square in Kingwilliamstown. Writing in 1865, Mr. Ayres says : " This I killed in January, 1864 ; it is one of the scarcest birds here, and I have seen but three since my arrival in Natal some thirteen or fourteen years ago. This is the first I have shot ; it was busily engaged in our garden, picking up, with extraordinary swiftness, some small grass seeds from the ground. The flight is even, and the beat of the wings extremely rapid. It is, as far as I know, the smallest of our Doves. The tail seemed to have a decided tendency to divide, or fork." Mr. Frank Oates procured a specimen between Pretoria and Bamangwato, and again near the Crocodile River in July : he also met with it at Tati in September. Mr. Ayres, who accompanied Mr. Jameson's expedition to the Mashoona country, writes as follows :—" Tolerably plentiful along our route as far as the Inshlangeen river in Matabele, but we did not notice it to the north of that locality. Southward again on the Harts River in Griqualand it was very abundant." The accompanying note is taken from Mr. Andersson's " Birds of Damara Land." " This exquisite little Dove inhabits most parts of Ovampo, Damara, and Great Namaqua Land, but is most abundant in the latter country, and is known by the name of ' Namaqua Dove ' to the Dutch Cape-colonists. This species occurs in pairs, and is chiefly found frequenting the ground ; and when disturbed, it seeks shelter in low trees or bushes, but rarely in the larger trees. It feeds on seed ; and its flesh is very palatable. It constructs its nest on a low bush of similar materials to those employed by its congeners, but with rather more care. Its two white eggs have a rosy tint, from the thinness and semi-transparency of the shell." Senor Anchieta has forwarded specimens to the Lisbon Museum from Humbe on the Cunene River (native name *Tundulo*), and from Capangombe in Benguela (native name *Kagolulo*.)

Above ash-coloured ; bluish on the secondaries, with a rich purple spot ; wing-feathers deep red, edged with dark-brown ; forehead, cheeks, chin, throat, and chest, glossy black ; as are also the under sides of the tail-feathers, the outermost of which are blotched with white ; a white bar almost hidden by the closed wing extends across the rump, succeeded after a little interval by a narrow black one—the ends of the tail-coverts, black, form a third bar on the tail ; bill

and feet, in life, coral-red and orange. The female wants the black, on the head, throat, &c., and is altogether more dull in colour; tail much elongated and graduated. Length, $10\frac{1}{2}$ " ; wing, 4" ; tail, 5" 9" .

Fig. Le Vaill. Ois. d'Afr. pls. 273, 274, 275.

Fam. PTEROCLIDÆ.

556. PTEROCLES NAMAQUA, *Gm.* Namaqua Sand-grouse.
Pterocles tachypetes, Layard, B. S. Afr. p. 277.

The "*Namaqua Patrys*" of the colonists is very abundant on the arid karroo plains throughout the colony and Namaqua Land. It congregates in small parties of one or two families, as may easily be seen from the age of the various individuals, which is marked by their plumage. It runs with considerable swiftness, and its flight is extremely rapid. While on the wing, it utters a shrill "tweet," which may be heard at a vast distance, and resembles the piping of a Plover, for which, till well accustomed to the sound, we have often mistaken it—indeed, the whole appearance of the bird, whether flying or running, reminds one of the Plover. It occasionally, during great droughts, extends its migrations as far as the Cape Flats; but of late years their visitations have been few and far between. Two or three eggs are laid, of a light cream-coloured ground, spotted with brown and purple, oblong, rounded, or semi-circular at both ends: axis, 17" ; diameter, 12" . The nest is only a depression in the soil. The crops of those we have examined contained masses of small grass seeds.

Mr. Rickard records it from the neighbourhood of East London, but we have not received any further notices of its occurrence in the eastern districts. Mr. Ayres writes:—"I shot the first of these birds on 10th May, on bare open country between Potchefstroom and Marico, and subsequently found them, though not very plentifully, throughout the whole of my journey along the River Limpopo. When approached they do not run, but squat close to the ground until they think it prudent to be off, when they rise with a noisy rapid beat of their wings. Their flight, like that of other Sand-grouse, is extremely rapid." Dr. Exton procured it near Kanye, in the Matabele country. The following note on the species is given by Mr. Andersson:—"This Sand-grouse is very abundant in some parts of Damara Land, where these birds may be observed to make

their appearance at the water about eight or nine o'clock in the morning in immense flocks, circling round the water at a considerable height before they descend, and adding to their numbers at almost every turn they take. Frequently they make no attempt at a descent until they are directly over the spot they intend to visit, when they suddenly descend with great velocity, at the same time describing more or less of a semicircle before they alight. This species feeds on seeds, berries, and small bulbs, and swallows gravel freely to assist its digestion. Its eggs are deposited on the sand, and are of a drabish colour closely spotted with grey and brown; they are oval and less elongated than those of *P. bicinctus*." Mr. Monteiro procured it in Benguela, and Senor Anchieta has met with a single specimen on the Coroca River in Mossamedes.

Male.—Ashy-brown; throat and chin, yellowish; head, neck, and chest, ashy; feathers of back, dark brown at the shafts, succeeded by a band of bright nankin, then by a light purple spot, and finally tipped with dark brown, giving the back a spotted appearance; wing-feathers dark brown; lower part of chest, vinaceous; between it and the belly a double band, first of white, then of dark brownish-red; belly, purple ash; vent and under tail-coverts, ochreous-yellow; tail-feathers pointed, tipped with the same, but lighter. Length, $10\frac{1}{2}$ " ; wing, 7" ; tail 3".

Female.—Colour throughout, rich nankin, confusedly barred with deep brown; paler on the under side; under tail-coverts immaculate; wing-feathers as in male.

Fig. Reichenb. Hühnevög. tab. ccix. figs. 1825-26.

557. PTEROCLES BICINCTUS, *Temm.* Double-banded Sand-grouse.

Specimens of this Sand-grouse have been received from Kuruman, through the late Mr. R. Moffat, and from Mr. Arnot, at Colesberg. It does not appear south of the Orange River. Mr. Arnot's specimens came from the northern bank.

Mr. Ortlepp informs us that it is very common in Griqualand. Eggs brought by Dr. Exton are of a warm cream colour like those of *P. alchata*, more or less speckled, blotched, and dashed, with reddish brown and pale purple markings, chiefly in a ring near one end. Axis, 1" 5" ; diam. 1" 1". He writes:—"I send also three eggs of *P. bicinctus*, which I took out of the nest from which

I flushed and shot the female. The nest was a depression in the ground lined with grass."

Mr. T. E. Buckley procured specimens in the Transvaal, and states that it was very common from the Limpopo to the Matabele, and Mr. Ayres writes:—"Next to *P. gutturalis*, this is the most plentiful of the Sand-grouse found near the Limpopo. The greater number of those we saw there in June were in flocks, but some few had paired and were breeding. The eggs, three or four in number, are laid on the bare ground amongst the short grass, and the hen bird will almost allow herself to be trodden on before she will rise." Dr. Exton procured it near Kanye, in the Matabele country, and Mr. Frank Oates shot the species in the Makalapsi River in August and also on the Motloutsi River in August. Mr. Andersson also gives the following note:—"This is perhaps the most common species of Sand-grouse in Damara and Great Namaqua Land, where considerable numbers may be seen, during the dry season, at any of the few permanent waters which exist in those countries, and which these birds frequent in large flocks about dusk and during the early part of the night, as well as sometimes also at early dawn; they remain only a short time at the water, and announce their arrival and departure by incessant sharp cries. When dispersed on their feeding-grounds, they are generally found in pairs, or at most two or three together. They feed chiefly on the seeds of grass, as well as on other seeds and berries, and mingle with their food considerable quantities of coarse sand. Their flesh is very white but excessively tough; it may, however, be somewhat improved by divesting the bird of its skin before cooking it. The eggs of this species are from two to three in number, laid upon the bare sand, and of a pinkish-yellow colour, spotted with grey and reddish brown." Senor Anchieta has found it at Biballa, at Capangombe, and at Humbe on the Cunene River, at all of which places it is called *Kambanjo*.

Male.—Above, ashy-brown, with triangular white spots and reddish-brown bars; top of head, reddish-brown, with longitudinal dark stripes; forehead black, with a small white patch at the base of the bill, and a larger over each eye; chin, sides of head, and throat, dirty nankin colour; chest ashy; between it and the belly, two bands, the first white, the second black; belly, dirty-white, minutely barred with very dark-brown; under-tail coverts,

bright rufous nankin, sparingly barred with arrow-headed black markings.

Female.—Not unlike that of *Pterocles namaqua*. Length, $9\frac{1}{2}$ " ; wing, 7" ; tail, $3\frac{1}{2}$ ".

Fig. Reichenb. Hühnevög. tab. ccviii. figs. 18, 19.

558. PTEROCLES GUTTURALIS, *Smith*. Yellow-throated Sand-grouse.

The expedition under Sir A. Smith discovered this species about eighty miles east of Latakoo, repairing in large flocks to water at fixed periods, and feeding on grass seeds. Mr. Ayres writes :— "These birds are tolerably plentiful in the neighbourhood of Potchefstroom towards the latter end of winter and the beginning of spring, but appear to leave in summer; they are generally in companies of from three to a dozen or so, and very seldom found singly: they mostly frequent bare ground not far from water; and I am informed that they go regularly to drink twice a day, however distant they may be from their supply. Their flight is exceedingly strong; they rise with a loud whirring noise, and when on the wing they somewhat resemble some of the Pigeons, especially *Columba phæonota*. On the approach of danger they crouch and lie very close to the ground, and it is then exceedingly difficult to see them; when disturbed they do not run, but rise quite suddenly. Their notes, which are, I believe, only uttered on the wing, are short and harsh, and may be heard a considerable distance; they feed much upon the seed of a small species of tare or pea, and also upon bulbous nutty roots of a small species of grass, which they scratch up; these bulbs have a strong, agreeable aromatic smell; and when the birds have freely fed upon them they appear to be thoroughly scented." A second note from the same gentleman is as follows :— "I found these birds about the River Limpopo in June; they were in flocks which apparently consisted entirely of females. I killed four out of a flight at one shot, with dust shot, all of which were hen-birds. A few of them were breeding; and I found their eggs, three in number, laid on the bare ground amongst the grass, without the slightest appearance of a nest, at no great distance from the water." Dr. Exton tells us that he did not observe it himself in the neighbourhood of Kanye in the Matabele country, but two specimens were obtained by a waggon-driver north of Bamangwato. Mr. T. E.

Buckley states that he first met with this species about two days journey by bullock-waggon from the Limpopo in the north of the Transvaal, where they go about in small flocks in the open country. He says that their note is very like the croaking of a Woodcock, but much louder. The late Mr. Frank Oates procured a pair on the Shashe River, where the Zambesi road crosses it north of Tati, and Mr. Ayres gives the following remarks on the species, as observed by him during Mr. Jameson's expedition:—"We found large packs of this Grouse feeding on the caffre-corn, which, at this season, was hanging dead ripe on the stems. The birds were exceedingly tame, allowing one to walk up to within a few yards of them. Their note, being loud, harsh, and guttural, can be heard at a considerable distance, and, being only uttered during flight, betrays their approach to the sportsman. They are very plentiful from Crocodile River, in the Transvaal, to about Tati River, the southern boundary of Matabele land; but we did not meet with them to the north of that river. They are excellent eating, split open and grilled, with a little butter."

Male.—Upper surface of head dull-green, faintly freckled with black; sides of head and chin, straw-yellow; eye-brows, yellowish-white; space between the eye and the bill, black; the neck, the breast, and a portion of each shoulder, intermediate between oil-green and sulphur-yellow; chest crossed by a narrow crescent of deep brownish-black; back and upper tail-coverts pearly-grey, strongly tinged with brown; belly and under tail-coverts deep reddish-brown.

Female.—Above, nankin-yellow, profusely variegated with black; chin and throat immaculate; belly and vent deep chestnut, transversely barred with black; under tail-coverts immaculate. Length, $11\frac{1}{2}$ " ; wing, $8'' 3''$; tail, $4''$.

Fig. Smith, Zool. S. Afr. Aves, pls. 3, 31.

559. *PTEROCLES VARIEGATUS*, *Burch.* Variegated Sand-grouse.

This species was found by Sir Andrew Smith's expedition at Tsinning, thirty miles to the west of Latakoo. Dr. Reid, of Colesberg, has sent specimens from between Soutpan's Drift, Orange River, and Griqua Town, and Mr. Ortlepp found it between Hopetown and Eskdale, eight miles north of Hopetown. Dr. Exton

says that it is not uncommon on the flats to the north of Kuruman, does not go in flocks, but is usually met with singly or in pairs in the open grassy plains, and is very wary and shy in its habits. "Its note is less shrill and piping," he continues, "than that of *P. namaqua*. They come down to water with a dash, and are off again in a moment, differing much from the other two, who lie about on the sand or move with quick hurried notions."

Mr. Ayres observes:—"I found these birds tolerably plentiful in June and July along the Limpopo and Mariqua; but though they were often in pairs I did not succeed in finding their eggs. These and the other Sand-grouse of this district are dry and very tough if cooked fresh, but if kept for nearly a week become tender and well-flavoured." During Mr. Jameson's expedition the species was obtained at Limonie Pan in the Bamangwato country in June, and Mr. Ayres gives the following note on their occurrence:—"At about eleven o'clock hundreds of these birds came to the Limonie Pan in small flocks, from about half-a-dozen to thirty; they did not remain more than a few minutes but hastened back to their feeding ground, and by mid-day all had quenched their thirst and not one remained at the Pan. Along the Crocodile River we also found these birds mostly in pairs, which showed that their breeding season had then commenced. The crops of those we shot were crammed with seeds."

Mr. Andersson writes as follows:—"This species is not uncommon in the northern and middle parts of Damara Land, as well as in the Lake-regions; but I do not recollect having met with it further to the south. It feeds on seeds, berries, and roots, and frequents its drinking-places early in the morning. Its flesh is tough, like that of its congeners. The mode of drinking adopted by this and by other South African Sand-grouse resembles, as has been already mentioned, that which I have described in the case of the wild Guinea-fowl."

The egg of this species is a pale dull green, spotted with light brown and indistinct purple, and upon this more sparsely spotted with dark brown. Axis, 1" 5"; diam., 1" 2".

Male.—General colour above, greenish-yellow, spotted with white; top of head dark brown, mottled with ochreous-yellow; eyebrows, chin, and sides of head, silver-grey; bare space round eye, light-

yellow; under surface, rufous-brown; the breast spotted with white; the belly and vent clouded with ochreous; wing-feathers, dark ashy-brown, tipped with white.

Female.—Chin, sides of head, and stripe over the eye, ochreous-yellow, instead of silver-grey; belly, pale yellowish-brown, barred with dusky-white; the rest much the same as in the male. Length, $9\frac{1}{2}$ " ; wing, $6''\ 3''$; tail, $3''\ 3''$.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 10.

ORDER GALLINÆ.

Fam. PHASIANIDÆ.

560. NUMIDA CORONATA, *Hartl.* Crowned Guinea Fowl.*Numida mitrata*, Layard, B. S. Afr. p. 266.

This species extends over the whole of the frontier districts, into Mossamedes on the West, and to the Moçambic on the East. It is still abundant in some places within the colony, where the mimosa bush affords it sufficient shelter. It feeds on grain and insects, and lays from seven to ten eggs, rather sharply pointed at the small and rounded at the obtuse end, of a dark cream colour, minutely dotted all over with pin-point spots of brown: axis, 2" 1"; diameter, 1" 7".

In reply to some queries of ours, as to whether our friend Mrs. Barber had ever seen a wild bird with white quill-feathers, she writes:—"With regard to Guinea-fowl. They are still very numerous in several partially-wooded districts of the Eastern Province, but more especially in the valley of the Great Fish River, which is their stronghold, and I have been accustomed to see them occasionally all my life; but I have *never seen a wild one* with white feathers in its wings. It is contrary to the laws of natural selection (in which I am a believer) for nature to produce any form that is *useless* or *hurtful* to her, such as white wing-feathers would be to wild Guinea-fowls, for they would at once point out to wild-cats, owls, hawks, and sportsmen, the direction in which the bird had flown or run (for in crossing all rough places they open their wings while running); and I am inclined to think that if they do occur in any part of the colony with white wings, it is when they have accidentally been crossed with the tame, white-breasted Guinea-fowl, that is so common (especially amongst the Dutch colonists) nearly all over the colony. Our wild ones are easily tamed, and you frequently see *both sorts together* upon farmers' homesteads on the frontier. Our South African species is altogether a much handsomer and larger bird than the tame, white-breasted

sort, and is of a much deeper colour, with the white spots larger and more conspicuous. They are good layers, and rear their young much in the same way as our pheasants do. If the female bird is startled she flies off and leaves her young ones, who at once disperse in every direction, and hide so cunningly amongst the grass and bushes that they are seldom found; and the dear little creatures will remain for any length of time in their hiding-places until they are called together again by the shrill note of the parent bird. In the Fish River valley they roost upon the willow branches that project over the large holes of water, out of the reach of wild-cats. Sir Walter Currie has upwards of a hundred of these beautiful birds upon his property (Oatlands) at Grahamstown: they are thorough-bred South African ones, with dark wings. I will try and get you a skin of one somewhere. As I have friends in the Fish River, where they are numerous, I will ask some of them to get me a skin.—M. E. B.”

Near East London, Mr. Rickard tells us it is not common, but one specimen was caught close to the beach. Captain Trevelyan records it from Kingwilliamstown, and Mr. Ayres writes:—“These birds are abundant in some of the upper districts of Natal; they are gregarious, and are generally found amongst scrubby bush on the borders of streams and rivers. They run with exceeding swiftness, and in open ground a person on foot would stand but a poor chance of running them up. When in cover they lie very close indeed, and require a good dog to find them; when found they will frequently fly up into the lower boughs of any convenient bush or tree. They are naturally very tame, and easily domesticated, and may be found thus at any farmsteads. In some instances I am informed that they come regularly to feed with the poultry. In their wild state they feed much upon berries, the roots of various grasses, and so forth. They are excellent eating; and a good cock will weigh from three pounds and a quarter to three pounds and a half.”

Majors Butler and Feilden and Captain Reid write:—“Though not obtained in the Newcastle district, this fine bird occurs in considerable numbers in places, as at Estcourt, Ladysmith, etc.” Mr. Ayres states that:—“These Guinea-fowls are plentiful along the banks of the Rhinoster River, on the Free State side of the Vaal River.” Mr. T. E. Buckley found it very common from the

Limpopo to the Bamangwato district, and on one occasion he says that he "must have seen about two hundred on the wing together. In the evening they come to the water holes to drink, and roost in the trees close by." In the Mashoona country it was seen by Mr. Jameson's expedition, but not procured, and, according to Sir John Kirk, it is extremely common in the Zambesi region. It is called *Kanga* and *Kaha* in the interior. He says when the rains commence, the flocks go off to the interior, and scatter for the purpose of breeding. Although easily domesticated, it does not breed in captivity; and fresh birds require to be got, or eggs obtained from the nests in the bush. Mr. Andersson has published the following account of the species in South-Western Africa:— "This Guinea-fowl is the commonest game bird in Damara and Great Namaqua Land, being most abundant from the Orange River in the south, to the Okavango in the north of those countries; and it is also very common in the Lake-regions. It is a highly gregarious bird, especially during the dry season, when it is not uncommonly found in flocks of several hundred individuals; and on one occasion I saw upwards of a thousand collected in one spot, which was one of the prettiest sights I have had the good fortune to witness. These wonderful congregations usually occur in the immediate neighbourhood of waters of small extent; and it is quite evident that were such a mass of birds to make a simultaneous rush for the precious liquid, there would be much confusion, and comparatively few would be enabled to have their fill. But, on the contrary, they go to work most economically and judiciously, and it is very interesting to watch the process. The first comers enter the well or hole, as the case may be, and, rapidly and dexterously taking their fill, they make their exit in a different direction, if possible, from that by which they entered; in the meanwhile the outsiders gradually and evenly approach, and the ring is gradually narrowed by a steady progressive movement of the whole. A batch of fresh comers never attempt to force their way amongst those which had previously arrived, but remain quietly on the outside of the ring until their turn comes. I may add that I have observed the same habit amongst the Sand-grouse. The Guinea-fowl feeds on grass, seeds, and insects, but chiefly on a small bulb which is also eagerly sought for by all gallinaceous birds, as well as by man, and which grows very abundantly throughout the country. These

birds are great travellers, often going over fifteen or twenty miles in the course of the day, but always returning, if possible, to the water at night; so that by judiciously dodging their steps a thirsty traveller may find the desired pool, though implicit reliance should never be placed on this mode of obtaining water. The Guinea-fowls usually rest during the heat of the day under some mimosa, resuming their journeyings when the greatest heat is passed. A flock of these birds is in general easily discovered by their sharp, discordant, and metallic cries, something like a rapid succession of blows struck upon iron. They have many enemies, and seek security at night by roosting in tall mimosas. The flesh of the young Guinea-fowl is very white, tender, and well-flavoured, but that of the old birds is far from tempting.

“The eggs of the wild Guinea-fowl are often hatched under domestic fowls, and the young are not difficult to rear; but as they grow their propensity for roosting on high trees is rapidly developed, much to the distress of their foster-mother, which is usually unable to follow them to their lofty perch. I have also known young chicks of this species successfully reared when captured in a wild state; but I have never known an instance of one of these birds, when tamed, having reared a brood of its own young. The nests of this species consist of slight rounded depressions in the ground, and may be found from the end of December to May, containing from fifteen to twenty eggs of a buffy-white or pale buff-colour, sometimes obscurely speckled with pale grey.” Professor Barboza du Bocage states that Senor Anchieta has sent specimens from Caconda, and from Huilla, as well as from the Coroca River in Southern Mossamedes, and from Humbe on the Cunene River. The last-named traveller gives the native name as *Kanga* in all places where the Guinea-fowls are met with.

It should be noted that Drs. Finsch and Hartlaub believe in the existence of two forms of this Guinea-fowl occurring within our limits, and Professor Barboza du Bocage says that in the specimens from Caconda and Huilla the neck and crop have white transverse lines, whereas those from the Coroca River and Humbe have these lines replaced by white spots similar to the rest of the plumage. Some of the other characters mentioned by Drs. Finsch and Hartlaub are not, however, borne out by the specimens in the Lisbon Museum; but Professor Bocage thinks that there may be two forms of this

Guinea-fowl in South Africa with different habitats—one, *N. coronata*, inhabiting Eastern Africa and spreading out on the central plateau as far as its nearest points to West Africa; and the other *N. cornuta*, essentially a more southern bird, crossing the Cunene River to the northward, and approaching the littoral region in the latitude of Mossamedes.

General colour, dark-grey, profusely spotted with round white spots; on the outer edges of the wing-feathers these spots are replaced by dashes; and on the neck they are very small, run into each other, and become indistinct bars; head bare, with a casque in some specimens 1" 16" in length; tip horny yellow; base, with top and back of head, cere, and tip of wattles pendant from base of upper mandibles, bright crimson; neck bare, sparsely sprinkled with hairs, and together with bare space round eye, brilliant sky-blue. Length, 16" to 17"; wing, 11½"; tail, 6". Mr. Ayres gives the following soft parts:—"Male. Iris dusky; bill, blood red, except the tip and under mandible, which are pale ash-coloured; tarsi and feet black."

Fig. Elliot, Mon. Phas. ii. pl. 40.

561. NUMIDA VERREAUXI, *Elliot*.

Verreaux's Guinea-Fowl.

This fine crested Guinea-fowl, distinguished by its top-knot and by the colouring of the bare neck, is apparently confined to Natal. Here it was met with by the brothers Verreaux as long ago as the year 1827, and examples existed for a long time in European Museums, but the species was always confounded with the West African *N. cristata*, from which it is different.

Mr. Ayres writes: "These fine Guinea-fowls I got in the month of July at Durban, Natal, where they were being hawked about the town by Caffre hunters as birds for the table, the flesh being uncommonly delicate and good. They frequent the densest bush immediately on the sea range, and are difficult to get; the best method is with dogs accustomed to hunt the bush, as the birds, when chased, take to the trees, and a good dog will bark until his master manages with much trouble to get to the spot through brambles, thorny bushes and nettles innumerable; and then, if due care is taken to approach without noise, the birds may be potted from the tree, a flying shot being totally out of the question. The Guinea-fowls are to be found from the Bay of Natal northwards;

but, so far as I can learn, not a single bird is to be found in the south, although the bush range is precisely similar."

It appears to be a very local species. Mr. Fellowes found it in the Umgowee forest, near the Umlalaas River, lat. 29°; in Zululand and near St. Lucia Bay on a small promontory. The healthy months for this country he found to be June, July, August, and the first half of September. After this the Guinea-fowl have it all their own way, as the country is unapproachable from fever.

The following description is given by Mr. Elliot in his "Monograph":—"Head covered with a full, long, upright, jet-black crest; the rest of the face and head bare; around the eyes black; blue on the sides and back of the neck; bright red upon the throat, extending from the base of the lower mandibles to the feathers of the breast; the skin of the neck full behind, forming a plait about midway and falling in a kind of fold over the feathers of the lower part; lower part of neck behind and upper part of breast black, having a rich chestnut tinge on the breast; entire rest of the plumage black, with a greenish gloss and spotted with light green; wings spotted like the rest of the body; primaries dark brown; secondaries black with their inner webs spotted; outer webs of the first four of the rest unspotted, black with lines of bluish-green; thighs black; bill light-horn colour; legs and feet blackish-brown." The sexes are alike in colour.

Fig. Elliot, Monogr. Phasian. ii, pl. 44.

562. *NUMIDA CRISTATA*, *Pall.*

Crested Guinea-Fowl.

According to Professor Barboza du Bocage three living specimens of this species, from Benguela, were brought to Lisbon by M. Freitas Branco, and Viegas do O.

The only difference between this species and the preceding consists in the less extent of the black on the chest in *N. cristata*.

Fig. Elliot, Monogr. Phasian. ii, pl. 45.

563. *NUMIDA PUCHERANI*, *Hartl.*

Pucheran's Guinea-Fowl.

This species may be distinguished from *N. verreauxi* by having the spotted plumage continued on the breast right up to the bare throat. Dr. Kirk, whose specimens, according to Mr. Elliot, belong to the present species, observes: "This fine species was observed in large flocks at the head of the Zambesi delta, Shupanga,

on the Shire at Chibisa, and in the interior about forty miles east of the Victoria Falls. Its nest is formed in the ground among grass. The species keeps more to the forest than the common Guinea-fowl, which frequents the open plains, and resorts during the dry season to the river every night. Native name, *Khanga Tore*."

Fig. Elliot, Monogr. Phas. ii. pl. 46.

Fam. PERDICIDÆ.

564. PERNISTES SWAINSONI.

Swainson's Francolin.

Francolinus swainsonii, Layard, B. S. Afr. p. 269.

The members of the genus *Pternistes*, according to Captain Shelley, have the chin and throat bare. The males have a sharp spur, the plumage of the sexes being otherwise perfectly similar. The tail is not hidden by the upper tail-coverts, and the feathers on the forehead are always parted by the culminal ridge. The present species may be recognized by the absence of white stripes on the back or breast, the feathers of the latter being more or less vermiculated, and having moderately narrow dark shaft stripes. The general colour of the breast is buffish brown, and the vermiculations are very indistinct.

The expedition under Sir A. Smith first found this Francolin in a valley immediately south of Kurrichane, perching on the branches of decayed trees near the margin of a small rivulet. To these places they appear to resort at night, feeding by day on the banks of rivers. In this, and in their habit of effecting their escape by fleetness of foot, rather than by taking wing, they resemble the colonial *F. clamator* and *P. nudicollis*, to which they are closely allied. We have no notes of the occurrence of this species from any of our correspondents in the eastern districts or in Natal, and Mr. T. E. Buckley states that it was first met with by him two or three days north of Pretoria, and thence it was common in all suitable localities into the Matabele country. He writes:—"This is the bird called 'Pheasant' by the colonists; they are generally found in coveys, are very quick runners, and require a good deal of exertion on one's part to flush them." In the Transvaal, according to Mr. Ayres, it "is exceedingly numerous in some parts of the Magaliesbergen along the banks of the Crocodile or Limpopo River, and of the Eland's River, amongst the

mountains." He has also found it in breeding in the Waterberg district. Mr. F. A. Barratt writes:—"This species I observed on my route between Lydenburg and the Gold-fields. They appear to be fond of water, especially small streams, where they are found at early morn. At night they frequent the dead brushwood, and the open in the day-time. I am not certain whether I observed them on my trip to Rustenberg; but I have received specimens from Macamac." During Mr. Jameson's expedition it was procured on the Inshlangeen River, and Mr. Ayres remarks concerning the specimen:—"On the 4th of June I found the nest with six eggs, slightly incubated. The nest was in rough high grass near the river, in a slight cavity, and was constructed of soft dry grass and a few breast-feathers of the old birds. The eggs are of a pinkish cream-colour, finely speckled all over with chalky white, are roundish in shape, measuring $1\frac{1}{6}$ by $1\frac{7}{16}$. We found this species also at the Quae-Quae river, and in many other spots along our route." In his work on the "Birds of Damara Land" Mr. Andersson says:—"In travelling northwards through Damara Land, I first met with this powerful and somewhat coarse-looking Francolin at the southern extremity of Omuveroom, where it occurred sparingly; but it became more common as I proceeded further north, till, on the banks of the Okavango River, I found it quite abundant. It frequents grassy localities sprinkled with brushwood, generally, but not always, selecting the neighbourhood of springs, streams, or marshes. It feeds in open spots, but retires to the jungle on the first approach of danger, chiefly trusting to its legs to effect its retreat. It always roosts on trees by night, and occasionally perches on them by day; in the early morning and at evening it utters frequent harsh cries. This species feeds chiefly on small bulbs, but also eats seeds, berries, and insects. The young of this Francolin are strong on the wing about the month of May."

General colour, brown; each feather of the back with a dark stripe down the centre, and finely mottled; under parts rusty, or yellowish-grey; the breast and lower part of neck darkest, each feather marked in the course of the shaft by a very dark umber stripe; chin, throat, and space round the eyes bare, and of a colour between lake and vermilion-red; top of head brocoli-brown. Length, 14"; wing, 8" 3"; tail, 3" 6". Mr. Ayres gives the following soft parts:—"Iris brown; bill black, with the lower mandible and

bare skin over the nostrils, round the eyes, chin and throat bright dark rose-red; tarsi and feet black with a ruddy tinge."

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 12.

565. *PTERNISTES RUBRICOLLIS*, *Gm.* Sclater's Francolin.

This Francolin is an inhabitant of South-Western Africa, where it has been found by Senor Anchieta on the Coroca River in Southern Mossamedes, as well as at Huilla, Gambos, Quillengues, and Caconda in the interior of Benguela. It is also apparently abundant at Humbe on the Cunene River; but, as Professor Barboza du Bocage well remarks, it probably does not occur to the southward of that river, as it was not met with by Mr. Andersson during his travels. In Benguela the native name is *Unquari*.

In addition to the bare throat which characterizes the genus *Pternistes*, the present species is recognized by having dark shaft-stripes on the upper parts, and white stripes on the breast, and particularly by the sides of the breast-feathers being white.

Fig. Daubent, Pl. Enl. 180.

566. *PTERNISTES HUMBOLDTI*, *Peters.* Humboldt's Francolin.

This Francolin is very similar to the foregoing, but has the sides of the breast-feathers black or brown. Dr. Peters first met with it in East Africa, and Sir John Kirk procured specimens during the Livingstone Expedition. He writes:—"Native name *Kavare*. This was the only Francolin of which I brought back specimens obtained on Manganja Hills; but there are five different species of this group in the Zambesi region, some peculiar to the coast and neighbouring parts, others to the highlands and plains of the interior.

567. *PTERNISTES NUDICOLLIS*, *Lath.* Red-necked Francolin.

Francolinus nudicollis, Layard, B. S. Afr. p. 268.

The "Red-necked Pheasant" is only found in wooded districts, such as the forests of George and the Knysna, where it replaces *F. clamator*, which it resembles in all its habits: the call is, however, different. Mr. Atmore has it on his farm at Kykoe, in the Long Kloof; and we are informed that it is very common on the frontier. About Swellendam, likewise, it is plentiful; and at Mr. Moodie's farm, Grootvadersbosch, it is equally abundant as the

common Pheasant. On this farm we killed all four *Francolins* usually found in the colony, viz., *F. clamator*, *P. nudicollis*, *F. afer*, and *F. Levallantii*.

Mr. L. C. Layard sent us the eggs from hence: they are precisely similar to those of the preceding. Mr. Rickard informs us that it is common at Port Elizabeth, but not very numerous near East London, where, however, it is said to be getting more plentiful, and Captain Trevelyan notes it from the neighbourhood of Kingwilliams-town. Mr. Barratt writes:—"I procured this bird in the district of Lydenburg and in the Chalumna district in British Kaffraria, always in the thick bush, where their loud cackling note is heard during the greater part of the early morning." Mr. Gurney states that a specimen from Damara Land was in Mr. Andersson's last collection.

General colour brown, the feathers of the back having a black stripe down the centre; those of chest cinereous, with black centre stripe; those of neck white, with black stripe, very broad; feathers of breast, belly, and flanks, dark brownish-black, with a white stripe running up each side of the shaft; chin, fore-part of throat, and space round the eye, bare, and bright crimson. Length, 13" to 15"; wing, 7"; tail, 4½".

568. *FRANCOLINUS ADSPERSUS*, *Waterhouse*. Red-billed Francolin.

In all the members of the genus *Francolinus* the throat is feathered. The present species has no white shaft stripes in the feathers of the back and wings, and has the chin, throat, and entire under parts evenly and narrowly barred with black.

It is found about the Orange River, and northward through the country to Ovampoland. It appears from all accounts to be very common, and to replace the "Pheasant," which it somewhat resembles. Eggs brought us by Mr. J. Chapman are singularly shaped, appearing truncated at each end. The shell also is of remarkable thickness, being the 24th part of an inch, and very dense and heavy. Inside pure white and iridescent, outside very pale cream colour. Axis, 1" 7"; diameter, 1" 1". Mr. Andersson found it at Lake N'gami, and writes:—"This is the most common and abundant Francolin indigenous to Damara and Great Namaqua Land, where it is found in coveys, which, in favourable seasons, not unfrequently consist of from ten to fourteen individuals. This species is seldom found at any great distance from the banks of the

periodical streams, and on the least approach of danger seeks shelter in the trees and bushes, with which these banks are generally studded. It lives much on trees, roosting among the branches by night, and also resting there during the heat of the day. These Francolins run with extraordinary swiftness, and will not use their wings unless very hard pressed; and when they do so, it is with the view of concealing themselves amongst the thickest of the branches of some convenient tree, where they remain perfectly motionless; and it requires a good and practised eye to detect one of these birds after it has taken refuge in a full-foliaged tree; when the danger is passed they generally again seek the ground. Their feeding time is in the early morning and the cool of the evening; and their food consists of seeds, berries, and insects. The notes of these birds are harsh, and so loud that they may be heard at a great distance; they resemble a succession of hysterical laughs, at first slow, but increasing in rapidity and strength, till they suddenly cease. This species deposits its eggs in a hollow in the ground, without any lining." Senor Anchieta has forwarded specimens from Humbe on the Cunene River, where he says it is called *Muelle* and *Angi*.

Throughout of a mottled, brownish-grey, brownest on the back and wings, where the marking is finest; below, the white and dark brown are pretty evenly divided into narrow, irregular transverse lines; on the neck they assume the appearance of scales; from the base of the bill over the nostrils is a small black patch; a black line also extends from the angle of the bill under the eye. Length, 12"; wing, 7"; tail, 3½". According to Mr. Andersson, the iris is dark brown, the bare skin round the eye pale yellow, the bill and legs in the adult bird rich, warm red, the toes and the spurs of the male purple. The females are somewhat smaller and less robust than the males; in very young birds the bill is dark purple, and the colour of the legs is much paler than in the adults.

569. FRANCOLINUS CLAMATOR, *Temm.*

Noisy Francolin.

In this species the chin and upper throat are spotted with black, there are no large white spots on the upper back, nor are there any white shaft stripes to the feathers of the back and wings.

The "Pheasant" is found throughout the whole of the maritime districts of the colony, delighting in bushy kloofs and water-courses,

from which it is driven with difficulty, owing to its habit of perching on branches, just out of the reach of dogs. It at all times prefers to escape by running, instead of flying; and on Robben Island, where it abounds, having been placed there some years ago, whole flocks may be chased for a mile or more in full view without once taking wing. They usually, on these occasions, make for the rocks on the beach, and will run out to the farthest extremity, regardless of the surf breaking over them. Like the other Francolins of the colony, they feed during the morning and evenings on bulbs, grain, and insects; they form their nests under a bush, and lay from eight to fourteen eggs, of a greenish-brown colour, occasionally spotted. Axis, 1" 10"; diameter, 1" 6". They are noisy clamorous birds, their harsh call being heard to a great distance. At Zoetendal's Vley they consort with the domestic fowls, coming close up to the house to feed.

We have kept them in confinement, and observe that they always seek the highest lateral branch as a roost at night. A strange disease affects them when in a cage—a kind of ophthalmia—their eyes swell to a great size, and they become perfectly blind, if the complaint does not end in death. They have been introduced into New Zealand and Australia, and will, we are convinced, soon become naturalized.

Blackish-brown, each feather longitudinally marked with narrow whitish lines, converging to the shaft; top of head, dark brown; chin and part of throat, white; feathers of neck brown, with white edges, giving this portion a mailed appearance; feathers of belly and flanks, dark brown, sparsely mottled with white, and with a broad white line down the centre. Length, 14" to 16"; wing, 8"; tail, 4".

570. *FRANCOLINUS NATALENSIS*, *Smith*.

Natal Francolin.

This species has the same general characters as *F. clamator*, but is smaller, and has no white shaft stripes on the breast.

Sir Andrew Smith discovered this species in Natal, and Mr. Ayres writes from the same colony:—"The birds live entirely in the dense underwood that abounds along the coast. Their food consists of insects and seeds; their call very much resembles that of the Guinea-fowl; they run exceedingly fast, and are shy and difficult to obtain; they roost in trees at night, and, when on the ground, will

fly to them immediately, if chased by a dog, or in any other way suddenly disturbed—otherwise they run.” Mr. T. E. Buckley says that it was the commonest Francolin throughout the Transvaal up to the Matabele country, and Mr. Ayres writes:—“ This Francolin is not very plentiful just round Rustenburg; but amongst the mountains it is as common as *P. swainsoni*, frequenting the same localities, and always found in wooded situations close to water.” The late Mr. Frank Oates obtained a specimen on the Makalapsi River in August.

Birds with their eggs have been sent us from Mahuras country by Mr. Arnot. The latter are pale brown, immaculate. Axis, 1" 8"; diam. 1" 5".

This species is also the *Francolinus lechoho* of Sir Andrew Smith, and Dr. Exton tells us “ that the Bechuana name for all Francolins is Lisögō in the plural, Mösōgo in the singular number.”

Top of head, back, scapulars, shoulders, and tail, light brown, finely mottled with brownish-black and tawny white, the former in the shape of longitudinal blotches upon the scapulars; eyebrows, sides of head, neck, breast, and anterior part of belly, variegated black and white; posterior part of belly, vent, and under tail-coverts, a mixture of black, tawny white, and light brown; bill reddish-brown; legs, toes, and claws, reddish-yellow; eyes brown. Length, 12½"; wing, 7"; tail, 3".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 13.

571. *FRANCOLINUS PILEATUS*, *Smith*.

Pileated Francolin.

This Francolin belongs to the section of the genus where there are more or less well-marked white shaft-stripes on the feathers of the back and wing. It has triangular spots of chestnut on the lower neck and fore-part of the chest: the remainder of the under surface of the body being narrowly barred with dusky vermiculations, with no brown shaft-stripes or strongly defined buff streaks along the shafts of the feathers.

Sir Andrew Smith procured the present species on the banks of the Marico River to the north of Kurrichane, frequenting open localities, and feeding in grassy places, on bulbs, seeds, and insects.

Dr. Exton writes:—“ Sir A. Smith appears to have overlooked the fact of this being a crested Francolin. I have only found it on

forest-covered hill-sides. It has the habits of the so-called 'Capo Pheasant' (*F. clamator*), frequenting dense bush, and when flushed by dogs flying up to high branches, at which time it elevates its crest and watches the movements of the dogs with evident alarm. Irides brown. Legs and feet red. Bill black." Mr. Ayres found it near the River Limpopo, and the late Mr. Frank Oates procured specimens on the same river and on the Gokwe River. According to Mr. Buckley it was very common from the Limpopo up to the Matabele country. In the Transvaal, Mr. Ayres says, it is only met with in the bush country frequenting the open glades, and he considers it a much rarer bird than *F. afer* or *F. levaillantii*. The late Professor Peters procured the species in Inhambanie, and Mr. Andersson writes:—"In travelling northward I first met with this Francolin on the stony and wooded slopes above Okambuté, in Northern Damara Land, and subsequently observed it to the north of that locality. It occurs in coveys, and feeds on small bulbs, seeds, and berries; its flesh is very palatable." Senor Anchieta has only forwarded a single specimen, obtained north of Humbe on the Cunene River. Native name *Kalangué*.

Upper surface of the head, rusty-grey, clouded with brown; stripe of the eye, chin, and throat white; sides of neck and nuchal collar, white, spotted with red; back, rufous-grey, the shoulders most rufous, each feather having a broad whitish line down the shaft; central tail-feathers light brown, delicately mottled with darker brown; outer feathers dark brown; breast and belly, cream-yellow, the former marked with triangular reddish brown spots at the point, and a similar coloured line in the centre of each feather; the latter minutely barred with fine brown transverse lines. Length, 13" 6"; wing, 6" 6"; tail, 4".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 14.

572. *FRANCOLINUS GRANTI*, *Hartl.*

Grant's Francolin.

This species is smaller than *F. pileatus*, which it resembles in the white shaft-stripes on the back and the wing, and in the triangular chestnut spots on the lower neck and upper chest. The remainder of the under parts have only obsolete vermiculations, and some strongly marked buff shaft-stripes, either uniform or enclosing a lengthened brown spot. The male has no bars on the upper parts, but indistinct barrings are present in the female,

which is further distinguished by the absence of a spur on the leg.

This species is an inhabitant of Eastern Africa, and it was procured by the late Professor Peters, at Tete on the Zambesi.

Fig. Hartl. P. Z. S. 1865, pl. xxxix, fig. 1.

573. *FRANCOLINUS AFER*, Müll. Grey-winged Francolin.

While agreeing with the two preceding species in general characters, the present bird is recognized by the absence of the triangular chestnut spots on the lower neck and chest. It has a large portion of the feathers of the crop and the flanks chestnut, and the breast is less evenly barred; the chin and upper part of the throat are white speckled with black.

Inhabits the maritime districts in considerable number, feeding on bulbs and insects, which it digs up from the ground with its powerful hooked bill. About Beaufort, it is only found on the mountain tops. It nests among bushes, forming a loose structure of grass and roots, in a depression in the soil. Its eggs, six to eight in number, vary in colour from a greenish-brown to a dark-brown, or a light-greenish, almost white. All are, however, minutely spotted with brown pin-points: axis, 1" 6"; diam., 1" 2". It feeds during the early morning and evening during hot weather, sheltering itself from the rays of the sun during the hotter portions of the day under thick bushes, from which it rises readily on being pursued. It can, however, run with great swiftness, and a winged bird, unless followed by a good dog, is sure to escape. Captain Shelley states that he met with one fine covey between Stellenbosch and the Paarl in Cape Colony, and found it fairly plentiful between Wellington and Ceres. He says that when disturbed, their flight, though strong, is slow and rarely sustained for any great distance. Mr. Rickard records it from Port Elizabeth, but says it is not known at East London. Captain Trevelyan states that he has shot this Francolin near Grahamstown, also on the Winterberg, Bontebok Flats, and near Dordrecht; he found them to rise more readily and fly quicker than *Francolinus levaillantii*. He states that it does not occur in the vicinity of Kingwilliamstown. In the Transvaal, Mr. Ayres says that it appears to be generally distributed all over the country, where it is suited to its habits. Mr. Barratt writes:—"I have shot this species in the district of Potchefstroom. I obtained all

my specimens in stony elevations and on the sides of mountains, where they are found in considerable quantity early in the morning." The late Mr. Frank Oates procured two males at Rettief's Drift on the Vaal River.

General colour, light cinereous, approaching to ashy on the breast and belly, variegated on the back with very dark blotches, rufous transverse bars, and a light streak down the shaft of each feather; breast and flanks much blotched with deep rufous; belly and vent much mottled with transverse, narrow bars of blackish-brown, assuming an arrow-headed form on the shafts of many of the feathers; chin, throat, and stripe extending from the back of the eye almost to the shoulder, white, mottled with black, disposed more or less in the shape of a circle; a broad rufous band, more or less mottled with black, extends from the forehead over the head down the neck; a similar band less in breadth, and scarcely mottled, extends from the bill under the eye, and joins the rufous marking of the chest; tail dark-brown, barred with rufous. Length, 12"; wing, 6"; tail, 3".

574. *FRANCOLINUS LEVAILLANTII*, *Temm.* Le Vaillant's Francolin.

As in *F. afer*, a large portion of some of the feathers of both the crop and flanks are chestnut, and the breast is not so evenly barred, but the chin and upper are not speckled, and the latter is rufous buff.

This very handsome bird is in the western districts extremely local, frequenting isolated spots, generally secluded vallies between high mountain ranges, through which flows a mountain stream. In the palmiet which crowds the morasses formed by the unrestrained waters, and crouching amid the tufts of coarse grass and reeds, these birds may be found; and we have often killed one with our first barrel, and a snipe with the second.

They lie very close, and on several occasions we have actually parted the grass under the pointer's nose to allow the birds to rise. If flushed a second time and well marked down, they may often be caught with the hand, as they will hardly rise again. In dry weather they keep so close to the dense palmiet, that it is impossible to get them out. We are informed that in the eastern districts it affects the hill sides, and does not frequent morasses. This we found to be the case at Grootvadersbosch, except that the places in which they

lived were always covered with long grass and rushes, indicating that they were always more damp than the surrounding country, and in the rainy season were probably swamps.

Mr. Atmore makes the following observations on these birds:—
 “Here’s a query for you about partridges. The drought appeared to have nearly destroyed them, particularly the red-wings, and now they are swarming. They could not have increased so much in the time, and I can’t make out where they come from. We had a little work near Heidelberg, and in one kloof, say one mile long, we saw more than one hundred birds. From that place we went to Riversdale: killed five out of the cart; between Riversdale and Gouritz River, killed seven and one Korhaan; between Gouritz River and Blanco fifteen, and shot only what presented themselves. On this journey we killed more than I saw altogether in two years of the drought. Again, two years ago, in this Outeniqualand, Red Kestrels were numberless, preying upon locusts. Last year rain had fallen, and very few *Kestrels* were seen, but *Harriers* were numerous; at present neither Kestrel nor Harrier is seen but rarely. South African birds appear to be very migratory, and irregularly so—probably food is the cause.”

Eggs of this species, sent by Mr. L. C. Layard from Grootvadersbosch, are rather larger and redder-coloured than those of the preceding. Axis, 1" 8"; diam., 1" 4".

According to Mr. Rickard, it is found both at Port Elizabeth and East London. “In British Kaffraria,” writes Captain Trevelyan, “this bird, owing to what it has to contend with in the shape of Hawks, Kafir Dogs, Wild Cats, grass-firing, droughts, floods, sportsmen, etc., has much decreased of late years. Any one now getting a bag of five brace within twenty miles of Kingwilliamstown, would consider himself fortunate. They are very local, a covey (should old birds be left) being found in the same place year after year.” Mr. Ayres states that in Natal, “these birds are scarce on the coast, but more plentiful in the inland districts. They frequently lie exceedingly close, and it requires a very good dog to find them. They are mostly found in small coveys, and are very good eating. Their call, which is generally uttered morning and evening, is harsh and loud. They frequent high grass and other good covert, and rise with a loud burr. Their flight is rapid and strong, and they generally manage to settle out of sight, behind some hillock or bush, where

they are not easily found a second time. Their food consists of berries, fruits, seeds, and insects. They also feed very much upon bulbous roots, which they scratch up, break to pieces, and devour. They are much esteemed, both for sport and for the table." This was the only species procured near Newcastle by Majors Butler and Feilden, and Captain Reid. Mr. Ayres notes it from the Lydenburg district in the Transvaal, and says that it appears to be generally distributed all over the country where the localities are suitable to its habits.

General colour grey, mottled on the back with very dark markings on each feather, down the centre of which, and on the shaft, is a rather broad light-buff stripe, inclining oftentimes to white; top of head mottled-brown; a narrow white band, much mottled with black, extends from the nostrils over each eye, unites at the back of the head, and extends down to the nuchal collar behind; a similar band extends from the same place under the eye across the ear, and sweeps round to the chest, where it extends into a broad crescent-shaped gorget; between these two bands is one of deep orange rufous, enclosing the eye, widening as it passes over the ear, and spreading backwards to the nuchal collar and forward to the gorget; the forepart of the throat is of the same colour; the chin albescent; below the gorget, the chest, belly, and flanks are beautifully mottled with deep rufous, and brown; wing-feathers, inside, deep rufous. Length, 13"; wing, 6" 6"; tail, 3" 3". Mr. Ayres gives the soft parts as follows:—

"*Female*.—Iris hazel; bill dusky-yellow at the base; tarsi and feet dull yellow."

Fig. Smith, Zool. S. Afr. Aves, pl. 85.

575. *FRANCOLINUS FINSCHII*, *Bocage*.

Finsch's Francolin.

A single specimen of this bird, with the adult plumage not fully completed, was forwarded by Senor Anchieta from Caconda in Benguela, and has been described by Professor Barboza du Bocage in his "*Ornithologie d'Angola*." He states that it is similar to *F. gutturalis* of North-Eastern Africa, but is larger and has a stronger bill. The head and hind neck are ashy brown, the feathers being darker in the middle; sides of the forehead, eyebrows, lores, cheeks, sides of the neck and jugulum bright rufous buff unspotted; ear-coverts dusky; throat pure white; abdomen and flanks orange buff

with large spots of ferruginous, the margins of the feathers being paler and more grey.

576. *FRANCOLINUS GARIEPENSIS*, *Smith*. Orange River Francolin.

Although the chestnut markings on the crop and flanks are of the same character as those in the preceding species, the present bird may be distinguished by its uniform white chin and upper throat.

It was found about grassy slopes towards the sources of the Caledon and Vaal Rivers by Sir Andrew Smith, whence Mr. Arnot has also forwarded it to the South African Museum. It is found in the Transvaal, according to Mr. Ayres, who says:—"These birds breed amongst rough grass in dry situations, but not far from water; the eggs are spotted throughout with dark brown on a rather tawny ground. It is rather a short egg, abruptly pointed at the small end. Size, $1\frac{7}{16}$ by $1\frac{1}{16}$ inch." The same gentleman also writes:—"This is the commonest of the Francolins on the Umvuli River, where it frequents the grassy and rocky slopes of the adjacent ranges. On the 7th of September a nest was found with three eggs; it was placed in a slight excavation in the ground, amongst high dry grass, and was lined with soft, half-decayed grass bents, mixed with a few feathers. The eggs were slightly incubated." Mr. Andersson observes:—"I only met with this beautiful Francolin on the high tablelands of Damara and Great Namaqua Land; but there it is frequently very abundant, in coveys usually of about six or eight individuals, though sometimes as few as three birds, and at others as many as fourteen compose the covey. These Francolins invariably frequent grassy slopes sprinkled with dwarf bush; they lie very close, and, after having been once or twice flushed, are not easily found again, even with the assistance of dogs. They feed on bulbs, grass, berries, and seeds."

Mr. Monteiro states that this species is common all over Angola, but Professor Barboza du Bocage is inclined to doubt this assertion, as he has only received a single specimen from Caconda, from Senor Anchieta, during all the years in which the latter has been engaged in collecting in South-West Africa.

Forehead, upper surface of head, and back of neck, dull reddish-brown; all the feathers edged with pale rusty orange; sides of neck with two arched liver-brown bars, mottled with white, the upper

one originating at the outer feathers of the eye; the other at the base of the lower jaw, and separated from each other by a rusty orange stripe, mottled with umber-brown; the superior of these arches terminates at the base of the neck, the other joins its fellow on the opposite side, and forms a dark semicircle in front of the neck; chin and upper portion of throat, white; lower portion, breast, belly, and vent, reddish-orange, blotched on the throat, breast, and flanks with deep rusty, and on the belly with very dark brown; upper surface of back, ashy-brown, mottled with rusty, transversely barred with brown, and longitudinally streaked down the shafts of the feathers with brownish white. Length, 14"; wing, 6" 3"; tail, 3" 9". "Iris, hazel; bill, dusky brown, with the basal half of lower mandible, and portion of base of the upper one, dingy yellow; tarsi and feet, dingy yellow" (*Ayres*).

Fig. Smith, Ill. Zool. S. Afr. Aves, pls. 83, 84.

577. *FRANCOLINUS SUBTORQUATUS*, *Smith*. Coqui Francolin.

This species belongs to a section of the genus *Francolinus* where there is little more than a trace of any rufous on either the crop or the flanks, but the breast has very straight and even bars, the hind neck being pale rufous.

This Francolin was discovered by Sir Andrew Smith's expedition, and we have received specimens from the Free State. Mr. Ayres writes:—"These birds live in the open country, and are generally dispersed all over the colony of Natal; they are to be found in coveys, like the Partridge in England; they roost on the ground in any convenient thick tuft of grass, and nestle all together. These birds would be very numerous were it not for the burning of the grass, together with the hawks, wild cats, and snakes which abound here, and are their mortal enemies." Mr. T. E. Buckley procured the bird in Bamangwato, and says that, "it is found in Natal and the Transvaal, and is fairly common up to the Matabele country, but from the extreme difficulty in flushing them not often seen. When once up they go off as quickly as a partridge in September." Mr. Ayres writes:—"This is the commonest of the Francolins amongst the mountains of the Rustenburg district, and is generally to be found in coveys in the more open valleys, where the ground is dotted with scrub and trees; it is seldom far from water. They

remind me of the English Partridge in their movements and flight when disturbed; with a good dog a fair bag may easily be made." It was procured by Mr. Jameson's expedition at Matje Umschlope, on the 23rd of November, and Mr. Ayres writes, "Now in pairs; they may often be heard calling in the early morning." The following note is given by Mr. Andersson:—"I only met with this species in the neighbourhood of the River Okavango, where it is found in coveys on grassy plains interspersed with large trees and brushwood. This Francolin lies very close and is exceedingly difficult to flush without the assistance of dogs. It roosts on the ground and utters a shrill, but not unpleasant call-note in the early morning, and also towards evening. It feeds on small bulbous roots, seeds, berries, and insects; its flesh is very good."

Upper part of head, deep rufous-brown, dashed with a tinge of purple; eyebrow, ear-coverts, back, and sides of the neck, pale ochreous-red; sides of head crossed by two fine black lines, one above and one below the eye, the former terminating on the side of the neck, behind the ear-coverts, the latter, which springs from the base of the bill, descending towards the throat, and with the corresponding one of the opposite side, forming a narrow lunated collar across the throat; chest and narrow nuchal collar, vinaceous, with white shafts to the feathers; belly, flanks, and vent, creamy-white, barred with broadish black or dark-brown markings; back rusty-grey, with rufous and dark-brown transverse markings, and white centres to the feathers, resembling in the distribution of the colours *F. afra*. Length, 10"; wing, 5" 3". Irides, brown; base of bill and legs orange-yellow (*Exton*).

Sir A. Smith's description is taken from an old female. The male differs considerably: its colours are much brighter and darker on the back; the throat and chin are bright rufous; there are no signs of the black collar and stripes on these parts; the chest has the same ground colour as the lower parts, and is closely and deeply marked with black bars.

Specimens of both sexes now before us are armed with a spur on each leg; that of the male being the most developed. This armature is common to all our *Francolins*; the female assuming it as she gets old.

"Irides bright hazel; bill, dusky brown except the basal part of

the lower mandible and also the basal corners of the upper mandible, which are chrome-yellow" (*Ayres*).

Fig. Smith, Zool. S. Afr. Aves, pl. 15.

578. *FRANCOLINUS SCHLEGELI*, *Heugl.* Schlegel's Francolin.

Professor Barboza du Bocage records a single specimen procured by Messrs. Capello and Ivens during their exploration of the Quango region, between 10° and 13° S. Lat., and 16° and 17° E. Long.

The following is a translation of the description given by Professor Bocage in his "Ornithologie d'Angola."

Adult male.—Mantle and wings ashy, shaded with rufous in places and ornamented with transverse bands of rufous and black, and streaked with buff on the shafts of the feathers; sides of the head and upper part of the neck ochraceous buff, which takes on the throat a paler tint inclining to whitish; lower part of the neck, breast, and abdomen transversely barred with black on a white ground washed with grey, the breadth of the black bands being less than that of the interspaces; vent and under tail-coverts barred across with brown on a buff ground; tail-feathers barred with ashy and ochraceous buff, the buff bands bordered with black; bill yellow, with the culmen and the tip blackish; feet yellow; iris brown.

579. *FRANCOLINUS HARTLAUBI*, *Bocage.* Hartlaub's Francolin.

A female bird was sent in 1867 by Anchieta from Capangombe on the River Chimba, with the native name *Muhale*, and in the following year the same traveller forwarded a male bird from Huilla. No further specimens have since been received.

The following is a translation of the description given by Professor Bocage:—

Adult male.—Back and wings of a pale greyish brown, irregularly varied with spots and points of buff and brown, these spots less distinct on the rump; upper part of the head dark brown, with a small black space on the forehead, behind which there is a narrow white band, which is prolonged on each side of the vertex into a white superciliary band; ear-coverts brownish rufous; sides of the head, neck, and lower parts strongly streaked with blackish brown on a white ground, slightly washed with buff on the posterior part of the

abdomen and on the flanks; under tail-coverts white, with broad blackish transverse bands; quills pale brown, minutely spotted with buff on the outer webs, and towards their inner margin; tail-feathers blackish, barred and tipped with white; bill extremely stout, brown, with the edges and the tip yellowish; feet pale yellowish; iris reddish.

In another individual, marked female, the eyebrows are rufous instead of white, and the lower parts are of a rufous buff without any spots; the throat is paler in tint; the sides of the neck and upper part of the breast are varied with buff on a grey ground, but these traces of the first plumage will disappear later on, for the buff tint which occupies the centre of the feathers begins to show traces of vanishing.

580. *COTURNIX COTURNIX* (L.).

Common Quail.

The common Quail arrives at this, the most southern limit of its migration, about the end of August (sometimes as early as the 15th), in great numbers. At first, if the corn crops are not sufficiently high to afford it the necessary cover, it frequents the grassy plains and stunted bushes. It breeds in the standing crops, depositing its eggs in a mere depression of the soil, sometimes without even a few shreds of grass to protect the eggs from the ground. The eggs, from six to twelve in number, are of a yellowish ground, more or less spotted and blotched with dark-brown: axis, 1" 3"; diam., 12". The young birds run the instant they are excluded, and are attended by both parents, who will feign lameness and tumble about before the dog, or hunter, in order to draw him from their brood. The male generally begins this manœuvre, while the female leads off the little chicks; but should he not succeed, she will perform the same tricks with tenfold more boldness, and frequently falls a prey to her maternal solicitude. We have had in our aviary a female thus captured, with two of her brood. We have observed from these birds that the migratory desire is evidently strongest at night. At this season, though perfectly quiescent during the day, our birds fly up and dash themselves against the wires at all hours of the night, particularly during moonlight. This could not have been from any terror, as they were quite tame at the time, feeding from our hands, and scratching on our palms to obtain some desired seed that their little quick eyes discriminated in the mass thus offered

to them. Some Quails remain with us all the year round. On Robben Island, for instance, ten or twelve brace may be shot any day in the year. Why they should choose this barren spot, eight or ten miles from land, in the mouth of Table Bay, I cannot conceive. The farmers declare that every seven years the numbers of Quail exceed those that visit us during the intermediate six. During one of these "years of plenty," we bagged forty brace in one day, and lost many more.

It occurs near Port Elizabeth and East London, according to Mr. Rickard, and we found it common near Grahamstown in March, 1870. Captain Trevelyan writes:—"The Common Quail is supposed to arrive about Kingwilliamstown in August, September, or October. I fancy, however, that their arrival depends to a very great extent on the rains. In the rainy season of 1873 there was no rain to speak of, but in January and February, 1874, fine rains fell. The Quails came in great numbers, and I had the best shooting I ever had in the colony." In another letter the same gentleman observes:—"The Quail comes to the lands about Kingwilliamstown as a rule during the months of September, October, and November, and remains about a month or six weeks. In 1872 they arrived about the beginning of October, and left at the beginning of the following month. 1873 was an exceptional year; there appeared to be a kind of false flight in July, but the regular flight did not put in an appearance till January, 1874 (the rains did not come till about this time)."

The following note is given by Majors Butler and Feilden and Captain Reid:—"Without attempting to explain the migrations of this well-known bird, as far as Natal is concerned, we will merely give in detail the various occurrences that came under our notice. Reid saw five at Sunday's River, on the 6th May; Lieut. Giffard saw one near the Leo Cop Mountain, on the 9th July; Butler shot one near Newcastle about the same date; they appeared in considerable numbers in the district early in October, when many specimens were obtained; and in the Maritzburg country they were simply swarming in November and December. As many as one hundred couple were shot here in one day by a party (though they were breeding abundantly at the time). On the 2nd December, Colonel Russell, 14th Hussars, informs us, his dogs flushed two sitting birds from nests containing eggs. Are these the birds that breed in

North Africa and the South of Europe in the summer months? If so, how is it that the thousands of birds that visit India in the cold weather do not breed there? In one case it looks as if they bred twice in the year, and in the other as if they only bred once." Mr. Ayres states that in Natal a few of these birds are to be "found all the year round, nesting in the open country amongst the thick grass, but the greater part migrate here in large numbers during the autumn, in the months of April, May, and June, leaving again in the early spring." The Quail is found, according to the same gentleman, but not plentifully, in the vicinity of Potchefstroom. Mr. Barratt writes:—"I have shot this Quail in the Chalumna district, British Kaffraria, where it arrived in great numbers about the end of August. In the Transvaal it is widely distributed. I have shot it near Pretoria, Rustenburg, Nazareth, and many other places. I received my last from the Marico district."

Mr. Andersson states that the Quail is not uncommon in middle and southern Damara Land, but it has not occurred to Senor Anchieta in South-West Africa.

Above brown, variegated with grey and black; the shafts of many of the feathers with a broad white stripe; head dark brown, with a light buff stripe down the centre, and over each eye; throat and chest, deep rufous; the former in the male with a black patch down the centre, the latter with faint-whitish lines down the shafts of the feathers; flanks longitudinally richly variegated with dark brown, black, and pale buff; belly light yellowish brown, immaculate. Length, 5" 8"; wing, 3" 9"; tail, 1" 7".

Fig. Dresser, B. Eur. vii. pl. 476.

581. COTURNIX DELEGORGUEI, *Deleg.*

Harlequin Quail.

Coturnix histrionica, Layard, B. S. Afr. p. 275.

As was the case with *Turturæna delegorguii*, the French traveller who discovered that bird and the present one, appears to have been determined that there should be no question as to the fact of both these birds bearing the names of their discoverer, so he took the precaution of naming them both after himself, a proceeding happily almost unique in the annals of ornithology.

In the colony it appears to be principally found in the eastern districts, as several specimens have been obtained near Grahamstown, and we have also received it from Natal. Count Castelnau likewise

purchased a specimen out of a collection made near Swellendam. Captain Trevelyan reports it from Kingwilliamstown, and says, "The first Quail of this species I saw was in the last part of 1870, or the beginning of 1871. I did not again see them till the early part of 1874, when I killed some six or seven brace." Mr. Ayres has met with the species in the Transvaal on one occasion, and they were shot by him in the open glades along the banks of the Mariqua River, the only place where he had met with them. Their flight resembled that of *C. coturnix*. The same gentleman observed them on the Makara River during Mr. Jameson's expedition, on the 22nd of January, where they were plentiful and breeding. Mr. Chapman obtained it at Lake N'gami, and Mr. Andersson met with it in Ondonga on the 30th of March, 1867. Senor Anchieta has also procured it at Capangombe, and on the River Chimba in the interior of Mossamedes.

Above, fuscous cinereous, with black and white transverse markings; feathers of the back and the wing-coverts marked with longitudinal white patches, bordered and centred with black; top of head and back of neck brown; eyebrows, and a little mark on the top of head, white; a short band between the nostrils and the eye, and others beneath the eyes, black; throat and fore-part of neck white; the centre spot black, and anchor-shaped; the greater part of chest black; belly intense rufous, the larger spots black; under tail coverts rufous; under the wings white; bill black; legs yellow; irides yellow. Length, 7" 2"; wing, 8" 8".

Fig. Hartl. Beitr. Orn. W. Afr. pl. 11.

582. *COTURNIX ADAMSONII*, *Verr.*

Adamson's Quail.

The only record, as far as we are aware, of the occurrence of this species in South Africa has been supplied us by our friend Captain Trevelyan, who shot one near Kingwilliamstown in July, 1876, and informs us that two others were killed there about the same time. It is a West African species, hitherto known from Gaboon and the Gold Coast.

The following is a translation of the description given by Dr. Hartlaub in his "Ornithologie West-Afrikas:"—

Upper surface leaden grey, the head varied with brownish; cheeks white, surrounded by black; chin and throat circumscribed black; plumes of the rump, leaden blue, with the shafts glossy grey;

under surface of the body varied with greyish blue and rufous; tail leaden grey; upper wing-coverts rufous; scapulars marked with a central line of white; greater series of under wing-coverts white; quills pale brown; bill blackish; feet yellow. Total length, $4\frac{1}{2}$ inches; wing, 2.95.

Female.—Above brownish rufous, the crown with scaly marks of buff; back varied with black, each plume with a central streak of white; underneath pale fulvous, with scaly marks of dusky blackish.

Fam. TURNICIDÆ.

583. TURNIX HOTTENTOTTA (*Temm.*). South African Hemipode.

The Hemipodes are small game-birds like the Quails, but are easily distinguished by the absence of the hind-toe.

This handsome little bird (Riet-Quartel and Sand-quail of the colonists) is found sparingly throughout the colony, evidently in the most southern part of the continent, taking the place of the next species, *H. lepurana*. We never saw more than two together, rarely even that. It frequents grassy places, and reeds in dry vleys, whence its name. When flushed, it flies a short distance, drops into cover, and instantly decamps, running with great rapidity. It feeds on seeds and insects, and is usually very fat. It remains with us all the year round, and we are told breeds in vleys, laying from seven to ten eggs, like those of the common Quail, but smaller, and only minutely spotted.

Mr. W. Atmore writes: "I have taken several nests of this bird; one was on a rocky head (koppie) near Swellendam, the others on the kuggeas. I never saw one in a vley. Eggs 5, much pointed and very like those of the Ring Dotterel (*Ægialitis tricolor*)." He is not far wrong in the similitude. They are very abruptly pointed and densely covered with small dark brown spots. Axis, 18"; diam.; 9". It occurs, according to our correspondent Mr. Rickard, near Port Elizabeth and also near East London, and Captain Trevelyan tells us that in the neighbourhood of Kingwilliamstown one or two of this species are generally shot during a day's Quail shooting. Captain Shelley says that he found this species fairly plentiful in the long grass about Pinetown in Natal.

Above, variegated black, brown, and white: the colours so disposed on each feather as to make the bird appear scaly; sides of the head, chin, throat, and breast, clear rufous, the sides of the latter variegated with a few black and white bars; belly and flanks albescent; vent, pale-rufous. Length, 6' 4"; wing, 3' 4"; tail, 1½". "Beak flesh-colour, shaded on the culmen with pale brown; irides white; legs flesh-colour" (*Shelley*).

584. TURNIX LEPURANA (*Smith*). Kurrichane Hemipode.

Discovered to the north of Latakoo, in grassy valleys, feeding on seeds and small insects. Like the colonial species, *T. hottentotta*, they seem difficult to flush a second time, and are never to be found in any numbers.

Mr. Rickard writes from Port Elizabeth:—"In April, 1868, I saw several of these birds, and one was procured by a friend." It does not occur in Captain Trevelyan's lists, but Mr. Ayre's states:—"These beautiful little birds appear in Natal with the common Quail, but by no means in such numbers. The sportsman will seldom flush more than two at once of these birds, while of the last-named species ten or twelve will frequently rise together." Mr. Buckley states that he saw it on several occasions in the Matabele country.

It has apparently not yet been forwarded from the Transvaal, but during Mr. Jameson's expedition to Mashoona Land it was obtained at Palatswie Pan, on the 18th of December. Mr. Andersson writes:—"This species is not uncommon in Great Namaqua Land during the rainy season; but I have never found many of these birds together, and it is rarely that more than one of them is flushed at a time. Their favourite resorts are rank grassy spots in the neighbourhood of temporary rain-pools and periodical water-courses; here they run about with great celerity, and, when hard pressed, lie so close as almost to allow themselves to be trodden on before they take wing, after which it is really impossible to flush them a second time. They feed on insects and seeds." It has also been procured by Senor Anchieta, at Caconda, in the interior of Benguela.

Male.—Above, ground colour, intermediate between pale rufous and light chestnut; upper surface of head barred with brown; on the neck, back, and shoulders, numerous slender, blackish brown bars, or

irregular crescents; eyebrows, sides of head, and stripe between base of bill and nape of neck, rusty-white; chin and throat dull white; middle of breast, pale Dutch-orange, with a few minute brown dots; sides of breast and belly, white, with a yellowish tinge; each feather with an arrow-shaped brown spot near the point. Length, 4" 6"; wing, 2" 10"; tail, 1". "Iris very pale yellow; bill bluish horn-colour, with tip black; tarsi and feet pale" (*Ayres*).

Fig. Smith, Ill. Zool. S. Afr. Aves. pl. 16.

ORDER GERANOMORPHÆ.

Family RALLIDÆ.

585. *RALLUS CÆRULESCENS*, *Gm.* Caffre Rail.

This Rail has reached us from several different places in the colony; but it seems to be nowhere plentiful. Mr. Cairncross has sent it from Swellendam; Mr. Jackson from Nel's Poort; Mr. Arnot from Colesberg. Mr. Rickard states that it is found near Port Elizabeth, and is not uncommon in the Swartkops, while Captain Trevelyan tells us it is by no means rare near Kingwilliams-town. In the Transvaal Mr. F. A. Barratt observes that it is considerably abundant, and he has shot them as they flew among the rushes and reeds bordering the Mooi River. Mr. Ayres writes:—"This is the commonest Rail we have in the Transvaal and a most noisy little fellow, making wonderfully loud and startling cries for its size. Stomach of one sent contained legs of a crab." Mr. Andersson's work on the Birds of Damara Land contains the following note:—"I found this Rail plentiful at Omanbondé; and it is not uncommon in marshy localities in Damara Land and the parts adjacent, more especially in the central and northern portions of the country; it frequents reedy thickets bordered by other rank aquatic herbage, amongst which it searches for the insects, worms, and seeds of water-plants which constitute its food. It runs with great swiftness, but does not refuse to take wing when pursued." Senor Anchieta has met with it at Caconda in Benguela, where it is called by the natives *Xitenguëtengue*.

Upper parts of head, neck, and body, reddish-brown; the chin, fore-part of neck and breast, pale slate-colour; the flanks transversely striped with black and white. Length, 10"; wing, 4½"; tail, 1".

586. *RALLUS AQUATICUS*, *L.* European Rail.

Mr. Gurney has recorded the occurrence of this European species

in Natal, and the author has received one specimen from the same colony from Mr. Windham. In the "Ibis" for 1868, p. 261, Mr. Gurney also mentions his having seen a Damara specimen, but the species is not mentioned in his edition of Andersson's "Birds of Damara Land." The editor has never seen an example from South Africa, and is somewhat inclined to doubt the correctness of the above identifications.

Throat whitish; sides of head, neck, breast, and belly, ashy lead-colour; the feathers on the upper parts of the body reddish-brown, with a deep black mark in the centre of each; flanks black, transversely rayed with white bars; under tail-coverts white; bill red, shaded with brown at the tip; irides orange. Length about 12".

Fig. Dresser, B. Europe, vii. pl. 489.

587. CREX CREX (L.).

Corn-crake.

A specimen of the Corn-crake was killed on the Cape Flats near Wynberg, by Mr. H. Dumbleton, in 1864, and Dr. Edwin Atherston informs us that it was very plentiful in the neighbourhood of Grahams-town, near the sea-coast, in April, 1869. Mr. Rickard procured one near East London, and saw several in the month of January. Captain Trevelyan writes:—"Rare near Kingwilliamstown; several were killed after the rainy weather in the beginning of 1874. It is possible that they may be more numerous than is generally supposed, as not much shooting is done as a rule at the commencement of the year." In a letter he says, "I also saw four Land-rails during the first months of 1875, and killed three." Mr. T. E. Buckley shot a specimen in the Drakensberg, on the 19th of December. Mr. Ayres gives the following note on the species in Natal:—"These birds are scarce on the coast, but become more plentiful inland. They are only found here during the summer months. Having been once flushed, it is a difficult matter to put them up a second time out of the long grass; for, besides running with great swiftness, they have a curious method of evading the dogs by leaping with closed wings and compressed feathers over the long grass some three or four yards, and then, running a short distance, they leap again. The scent being thus broken, they generally evade the most keen-scented dogs; and so quickly are these strange leaps made, that it is only by mere chance that the birds are seen. The flesh of these birds is extremely delicate. Their food consists almost entirely of insects.

Their flight is weak, and seldom sustained for more than fifty yards." Mr. F. A. Barratt mentions one specimen procured in the Lydenburg district, and the late Mr. Frank Oates records one from Tati in the Matabele country, while a single specimen was obtained by Mr. Jameson's expedition at Palatswie Pan in December.

All the feathers on the upper parts of the plumage, dark-brown, edged with pale-ferruginous; wing-coverts and quills, deep-chestnut; fore-parts of neck and breast, pale-cinereous; belly yellowish-white; sides, thighs, and vent, rufous, marked with white bars. Length, $9\frac{3}{4}$ "; wing, $5\frac{1}{2}$ "; tail, $1" 5"$.

Fig. Dresser, B. Eur. vii. pl. 499.

588. *CREX EGREGIA* (*Peters*).

Greater African Crake.

A single specimen of this bird was killed in Natal and sent to us by Mr. Windham. Mr. Ayres has met with one specimen in the Transvaal, shot "whilst trying for Snipe in a marsh close by Potchefstroom. It must be exceedingly rare here." Mr. Frank Oates obtained the species at Gubulewcyo; "shot in marsh by 'Spruit,' December 26th, 1873." Professor Barboza du Bocage has only recorded it from localities to the north of the Quanza.

Feathers of the upper parts black, with a broad border of brown, giving the bird a scaled appearance; markings on the head very minute; line from bill over the eye white; cheeks and sides of head grey; chin and throat white; chest grey; sides of the same greenish, rest of under parts barred black and white. Length, $7" 6"$; wing, $4" 8"$; tail, $1" 3"$. "Irides orange, eyelids bright red; bill pale bluish horn-colour, dusky on the ridge, and pale at the base of the under mandible; tarsi and feet dusky pale" (*Ayres*).

589. *CREX MARGINALIS* (*Hartl.*).

Olive-margined Crake.

Mr. Andersson has recorded five instances in which he procured this bird in February and March, 1867, at Ondonga, in Ovampo Land. The eggs were brought to him on the 23rd of February; they were of a yellowish ground colour, almost hidden near the thicker end by a broad zone of light brownish red. On the 1st of March he himself found a nest containing four eggs, situated just on the edge of a marsh in a dry tuft of grass. Two of Mr. Andersson's specimens were sent home in his last collection, one of which is now

in the Leiden Museum, where it was examined by Mr. J. H. Gurney, who refers it to the present species, which was hitherto known only from Gaboon.

The following is a translation of Dr. Hartlaub's original description.

Above blackish, the feathers margined with olive with a white lateral edge; head grey; under surface of body ashy; the throat and abdomen whitish; vent and under tail-coverts pale rufous; under wing-coverts ashy, varied with whitish. Total length, $7\frac{3}{4}$ "; bill, 8"; wing, $3" 10''$; tarsus, 13"; middle toe, $1" 10''$. Mr. Andersson gives the soft parts as follows:—"The iris is brown tinged with reddish yellow; the eyelid yellow; the basal part of the bill green, merging into bluish at the extremity; the ridge of the upper mandible dark brown; legs and feet dusky green with a slight bluish tint on the upper portion of the uncovered part of the tibia."

590. PORZANA PORZANA (*L.*).

Spotted Crake.

This European species has to our knowledge occurred but once within our limits, Captain Shelley having recorded one specimen as obtained by Mr. Jameson's expedition at Selenia Pan on the 29th of December, and Mr. Ayres adds:—"This is a rare bird in all parts of South Africa I have visited."

The large size of this species as compared with Baillon's Crake ought to distinguish it at once, but in order to identify it clearly we give a copy of the description given by Mr. Dresser in his "Birds of Europe."

Adult male.—Forehead, crown, sides of the face, chin and upper throat deep blackish slate-grey, the throat and head in front of the eyes unspotted; crown closely marked with black and dark reddish brown; lores and feathers at the base of the bill nearly black; nape, hind neck, and upper parts generally dark reddish brown with an olivaceous tinge, on the neck closely dotted with white, and on the rest of the upper parts marked with short stripes and spots of white and tolerably regularly blotched with black; quills and tail olivaceous brown, the first primary externally narrowly margined with white; under parts deep slate-grey, the centre of the abdomen nearly white, the breast spotted, and the flanks spotted and barred with white; under tail-coverts warm ochreous

buff; bill orange colour, except at the base, where it is red iris dark reddish brown; legs green with a yellowish tinge, the joints tinged with leaden blue. Total length about 8·5 inches; culmen, 0·85; wing, 4·1; tail, 2·2; tarsus, 1·45; middle toe with claw, 1·7.

Fig. Dresser, B. Eur. vii. pl. 496.

591. PORZANA BAILLONI (*Vieill.*). Baillon's Crake.
Ortygometra minuta, Layard, B. S. Afr. p. 338.

Common in a few favoured localities. At Swellendam we shot several in one small vley near the Buffeljagts River. They are very difficult to flush, and fly heavily when on the wing. A pointer will stand to them as to Snipe, and the bird often rises from under his nose. They feed on minute crustaceans, a little *Succinea* (*S. Delalandi*), which abounds in its favourite haunts, water-weeds, and worms. Mr. W. Atmore writes: "Eggs six to eight, rather long, dirty white, with pale brown spots at the large end." Mr. Ayres has procured it in the Transvaal, where he says it is not common, but is occasionally put up while Snipe-shooting.

Mr. Andersson writes:—"This pretty species is an inhabitant of the few marshes existing in Damara Land. At Omanbondé, where it breeds, I found it plentiful; it is also common in the marshy districts about Lake N'gami, and on the rivers Teoughe and Okavango; and I likewise obtained a specimen in Ondonga. It frequents alike the rank vegetation of the stagnant pools and the more scantily sheltered rills, searching industriously for insects, worms, slugs, snails, &c. When surprised it takes wing more readily than most of its congeners, but flies only for a very short distance, and drops amongst the aquatic herbage at the first convenient spot, from whence, if needful, it prolongs its retreat by running. This Crake constructs its nest of pieces of stalks of reeds, rushes, and other vegetable substances. The eggs are six or seven in number, of a brownish-buff or olive-brown colour, closely spotted with obscure markings of a darker hue, and are rather larger than the eggs of the Starling. The flesh of this species is very tender and delicate." One specimen has been sent by Senor Anchieta from Capangombe, on the Chimba River.

Upper parts brown, variegated on the back with black and white;

chin whitish; sides of the head, neck, and chest, light slate-colour; flanks, thighs, and belly, brownish-black, crossed with white bars; irides red, according to Mr. Atmore, dark-brown. Length, 7"; wing, $3\frac{1}{2}$ "; tail, 1".

Fig. Dresser, B. Eur. vii. pl. 497.

592. CORETHRURA PULCHRA (*Gray*). White-spotted Crake.

A single specimen of this little species was sent to us by the late Mr. G. Rex from the Knysna. It must be very rare, as it has not since occurred to us in twelve years' observation. Mr. J. C. Rickard has obtained two specimens at East London, one of which was caught in a rat trap! Captain Watson shot it on the Umgene in Natal. Captain Trevelyan says that it is rare near Kingwilliamstown and he has only procured one specimen there.

Head, neck, and breast, bright-rufous; tail, dull rufous barred with black; the rest of the plumage above and beneath, black, spotted with white below, and fulvous above. Length, 6"; wing, 3" 3"; tail, 1" 7".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 22.

593. CORETHRURA DIMIDIATA (*Temm.*). Rufous-chested Crake.

This elegant little Gallinule is not unfrequent among reeds, and appears widely distributed. It is difficult to flush, preferring to skulk among the dense rushes and tangled herbage; if, however, it does take wing, it quickly relinquishes its weak, butterfly-looking flight, and drops into the grass again, from which it will suffer itself to be captured by the hand rather than rise. Mr. Atmore sent us an egg taken from the abdomen of a female shot by him, which is pure white: axis, 13"; diam., 10".

Mr. Ayres has found it in Natal and in the Transvaal; in the latter country he says that it "inhabits the Snipe-grounds, but is scarce and difficult to flush." Mr. Andersson writes:—"I have only found this species at Omanbondé, where it is not uncommon and breeds. It frequents stagnant waters, thickly fringed and studded with aquatic herbage, amongst the ever progressive decay of which it loves to disport itself and to search for food. It is very shy and retired in its habits, seldom going far from effective cover, and gliding through the mazes of the rank vegetation with astonishing

case and swiftness." Senor Anchieta has found it at Caconda where it is not common; it is called by the natives *Xitinguetingue*, in imitation of its cry.

Male.—Head, neck, breast, and shoulders, chestnut; body black, streaked with white; plumage very lax. Length, 6" 6"; wing, 3"; tail, 2". The female is blackish-brown, minutely spotted with light-buff spots; chin white; centre of breast, dirty-buff.

Fig. Smith, Ill. Zool. S. Afr., Aves, pl. 20.

594. *CORETHURA RUPICOLLIS*, Gray.

Jardine's Crake.

Of this rare little Rail we have seen but few specimens. The female has been described as a distinct species by Mr. Swainson. His type specimen is in the Cambridge Museum. Mr. Windham obtained it in Victoria County, Natal: he describes its flight as very low and awkward, and only sustained for a short distance. It frequents long grass. Mr. L. C. Layard sent us a female caught on her eggs also transmitted, four in number, pure white, rather sharply pointed at the thin end. They were taken at Grootevadersbosch. Mr. G. Rex also obtained it at the Knysna, and one specimen fell to our own gun high up among some rocks, among the French Hoek Mountains, June 11th, 1869. At Port Elizabeth Mr. Rickard informs us he has seen several, but all females, and at East London also one female was procured. It is rare near Kingwilliamstown, according to Captain Trevelyan, but he thinks that these small Rails are much over-looked.

Male.—Head, posterior portion of neck and tail, bright-rufous, chin white; the rest of the body dark grey-brown, variegated with numerous white stripes; plumage very lax. Length, 5" 6"; wing, 2" 9"; tail, 1" 8".

Female.—Above, blackish, varied with numerous undulated, transverse lines of light fulvous-brown, which assume the appearance of stripes on the head and neck; beneath whitish, with black stripes on the neck and breast, and bands on the flanks and body; tail and tail-coverts black; banded with ferruginous lines.

Fig. Smith, Ill. Zool. S. Afr., Aves, pl. 21.

595. *COTURNICOPS AYRESII*, Gurney.

Ayres' Crake.

This is a very interesting discovery of Mr. Ayres'. Hitherto only

two species of the genus were known, one, *C. noveboracensis*, being found in North America, and the second *C. exquisita*, of Swinhoe, from China. All the species are remarkable for the white patch on the secondaries. At present we only know this species from the Transvaal, where Mr. Ayres gives the following note on it:—"This pretty little fellow we call the White-winged Rail, from the white patch on the wing, which is very distinct when it is flushed and making away. I have only noticed this species here these last two seasons. It is very scarce: the two sent are the only specimens I have obtained, though I have seen one or two others. The bird shot on the 4th of October contained water insects in its stomach.

The following is Mr. Gurney's description.

Adult female.—Crown of head and back of neck blackish brown, interspersed with dark rufous-brown spots, which are more numerous on the neck than on the head; sides of head mottled with pale and dark brown, the former slightly preponderating; sides of neck rich rufous-brown, with narrow blackish brown tips to the feathers; back black, with narrow white edgings to the feathers; an outer edging of olive-brown perceptible; similar but more conspicuous brown edgings occur on the feathers of the greater and median wing-coverts, which, with this exception, are blackish brown, as are also the least coverts, all the coverts being more or less spotted with white; the primaries dull brown, the fifth and subsequent ones being slightly tipped with white; all the secondaries pure white, except a brown shaft-mark, slightly spreading on to the webs at the base and the tip, and excepting also the last feather, which is slate-coloured, mottled with white; upper tail-coverts transversely marked with alternate bars of dark rufous and blackish brown, the latter being the broader; chin white, slightly tinged with rufous; and the throat the same, but with the feathers very narrowly edged with blackish brown; breast rufous brown, but paler than the sides of the neck; flanks and abdomen mingled black and white, the black predominating on the flanks, the white on the abdomen; tibiæ resembling on the sides the coloration of the flanks, and on the front that of the abdomen; under tail-coverts transversely and alternately barred with pale rufous and black; wing-linings white, slightly mottled about the edges of the wing with blackish brown; axillaries white mingled with slaty brown.

Immature female.—Resembles the above, but shows more of the

olive-brown edgings to the feathers of the mantle, and wants the rufous tint on the breast and sides of neck, the former being a dirty white, the latter two shades of brown, the centres of the feathers being darker than the edges. Mr. Ayres has given the following notes on the birds in the flesh.

Female (apparently adult), shot 24th November. Total length, $6\frac{1}{4}$ in.; bill, $\frac{9}{16}$; tarsus, $1\frac{5}{8}$; wing, 3; tail, $1\frac{3}{4}$; irides, ashy hazel; bill dusky, under mandible pale; tarsi and feet dusky.

Female (apparently immature), shot 4th October. Total length, $6\frac{1}{4}$ in.; bill, $\frac{1}{2}$; tarsus, 1; wing, 3; tail, $1\frac{1}{2}$; bill pale dusky, darkest on the ridge; tarsi and feet dusky pink.

Fig. Gurney, Ibis, 1877, pl. 7.

596. LIMNOCORAX NIGER (*Licht.*).

Black Crake.

Not uncommon in vleys and among the sedges along the river banks. The Museum taxidermist, Mr. Butler, shot a fine specimen, from which the description was taken, close to Cape Town, in the Black River. In Natal, says Mr. Ayres, "these birds much resemble the Jacanas, frequenting sedgy swamps and pools, walking with ease on the lilies and light weeds which grow on the surface of the water, in search of the softer snails, insects and seeds, on which they subsist. On being disturbed, they run immediately amongst the rushes, from which it is then almost impossible to dislodge them. They do not fly with such ease as the Jacanas; their habits appear to be solitary." The same gentleman observes:—"These Gallinules are common along the Mooi River, and are exceedingly fond, on sunny days, of issuing from the reeds and hunting for insects on dead reeds across the stream; they then look exceedingly pretty with their red legs, green bill, and chaste plumage." Mr. Andersson's notes on the species are as follows:—"I have not unfrequently met with this species in Damara Land in suitable localities, such as Otjimbique, Schmelin's Hope, Omanbondé, &c.; and it is by no means uncommon on the rivers Okavango and Teoughe, and in the Lake-regions, though, from its exclusively shy habits and its partiality for dense reedy thickets, it is difficult to obtain. The surest way of procuring specimens is to lie in ambush near one of their favourite haunts; but even thus success is not always certain."

Mr. Monteiro states that it is common on the waters of Angola,

and Senor Anchieta has forwarded specimens from various localities in Benguela and Mossamedes.

General colour, deep black, shining-brown if held in certain lights; bill bright yellow; eyelids and feet red, changing in death, the first to a dirty green, the latter to a light brown; irides dark crimson. Length, $7\frac{1}{4}$ " ; wing, $4\frac{1}{4}$ " ; tail, $1\frac{3}{4}$ ".

Fig. Swainson, B. of W. Afr. ii. pl. 28.

597. PORPHYRIO SMARAGDONOTUS, *Temm.*

Green-backed Purple Gallinule.

Porphyrio erythropus, Layard, B. S. Afr. p. 341.

The "Blue Gallinule" "or Konig Reit-haan" (*lit.* King Reed-Fowl) is generally distributed throughout the colony, frequenting vleys and large ponds. It breeds in the marshes and vleys about the Berg River and other such places among reeds in September, forming a large nest of sedge, and depositing from six to ten eggs, of a ruddy-brown, spotted with dark purplish-brown: axis, 2" 2"; diam., 1" 6".

Writing from Port Elizabeth, Mr. Rickard says that he has not procured it himself, but has seen it from Uitenhage. Mr. Gurney records it from Natal.

In one of Mr. Gurney's papers on the birds of Natal Mr. Ayres observes:—"This beautiful species is found, though not abundantly, in the more extensive swamps and lagoons in the colony of Natal, and seems to be pretty generally distributed, though, in consequence of its close and shy habits, it is not easily obtained. These birds generally remain amongst the high rushes and reeds; but during the winter, in the mornings and evenings, they often leave their cover to catch the first and last rays of the sun, and they are then frequently to be found perched on a clump of rushes or reeds. They make many extraordinary noises, most unmusical and quaint. Their food consists of the inner and soft parts of the shoots of reeds and of other water-plants; these may be found in their stomachs chopped up like chaff by their powerful bills, which no doubt are expressly provided for peeling off the outer bark and hard parts of the plants they feed upon."

Later on he writes from the Transvaal:—"The specimen sent, shot 20th June, is the only one I have been able to get lately. This species is decidedly not so plentiful in the neighbourhood of Potchefstroom as it used to be some years back: whether the gradual

decrease of rain in this country the last few years has had anything to do with this, I cannot say; but it is very possible, for the swamps have had less water in them, and have become more overgrown with weeds. Ducks, too, are getting scarcer year by year."

Mr. Andersson's notes on the species in South-Western Africa are as follows:—"This splendid bird is rather scarce in Damara and Great Namaqua Land, but is pretty abundant in the lake regions and on the rivers Teoughe and Okavango; it is also not uncommon, during the rainy season, in Ondonga, where the inhabitants call it 'King of the Waterhens,' and declare that the moment it utters its deep guttural notes every Water-hen within hearing immediately responds by its own peculiar cry. The only spot in Damara Land proper where I found this species at all common was the great reedy marsh of Omanbondé; but there it was very timid, and consequently most difficult to approach. It seldom ventured into the open, but would warily skirt the dense reedy recesses which formed its favourite haunts, and into which it would precipitately retreat on the slightest sign of danger. At Lake N'gami and on the River Botletlé I found it less difficult to obtain, probably on account of its greater abundance. It lies close during the day, and is usually only to be seen in the early morning and in the cool of the afternoon. Its food is very various, and consists of aquatic plants, mollusks, fish, eggs, and, I have no doubt, even young birds. In a domesticated state it will eat meat readily. If captured young it becomes very tame, and may be trusted at large, when it will freely associate with common poultry. This species has a heavy unwieldy flight, and has recourse to its wings only as a last chance of making its escape. It dives when in water deep enough to allow of its doing so, and it runs with great rapidity amongst the tangled reedy brakes of its native haunts." According to Professor Barboza du Bocage it regularly frequents the coast of Mossamedes, and he has received from Senor Anchieta a number of specimens from this district and from the Rio Coroca, where it is called by the natives "*Kukulixiri*."

Head, hind part of neck, and wing-feathers, glossy-violet; back and rump, dull glossy-green; cheeks, throat, fore-part of neck, and under part of body, violet-blue; tail, dull green; vent-feathers pure white. "Iris red; bill and frontal shield blood-red; thighs, tarsi, and feet dark pink" (*Ayres*). Length, 17"; wing, 9"; tail, 3".

Fig. Daubent. Pl. Enl. 810.

598. PORPHYRIO ALLENI (*Thomps.*). Allen's Purple Gallinule.

This is a much smaller species than the preceding bird, measuring in the flesh, according to the late Mr. Andersson:—Total length, 10·6; wing, 5·8; tail, 2·9; bill, 1·0; tarsus, 2·0. A pair were shot by his friend Axel at Ondonga in Ovampo Land on the 5th of February, 1867, and Senor Auchieta has found the species at Humbe, on the Cunene River—native name "*Cambonja-anganga.*" The same naturalist has also procured it in Loango, and it has been seen from other parts of Western Africa. The late Mr. Frank Oates also had a specimen in his collection procured somewhere during his journey to the Zambesi, but the exact locality was not recorded.

The following is a translation of Prof. Bocage's description:—Upper surface of the body olive-brownish, shaded with green; neck and breast bluish violet; head, belly, and thighs, deep black; under tail-coverts white, the shorter ones black; quills blackish, with the outer webs olive-green; centre tail-feathers like the back, the others black, edged with olive-green: "bill, legs, and toes bright red."

Fig. Dresser, B. Eur. vii. pl. 502.

599. FULICA CRISTATA, *Gm.* Red-Knobbed Coot.

The Crested Coot is abundant on all ponds and sheets of water. It also frequents deep holes and still reaches in rivers, concealing itself amid the herbage during the day, and feeding morning and evening about the banks. It wanders at these times several hundred yards from its lair, and on being alarmed, scuttles away on its feet, aided by its wings, until, a sufficient impetus being attained, it rises in the air, and will not unfrequently fly a very long distance. It swims well and boldly, and we have seen it alight on the waters of Table Bay and breast a considerable sea. It constructs a nest in September of sedge usually floating among the rushes, and lays seven eggs, of a cream-coloured ground, covered with dark-brown spots: axis, 2 " 1"; diam., 1 " 6". The young when first hatched are little black balls of soft down, but they swim and dive almost from the moment of leaving the egg.

Mr. Rickard informs us that it is found near Port Elizabeth, being common in the Swartkops, sometimes found in small vleys. In Natal, writes Mr. Ayres, "these Coots inhabit the lagoons, and are

generally in companies. When disturbed, instead of attempting to hide, they immediately take wing and fly a considerable distance round and round, when, from their appearance and strong flight, they may easily be mistaken for a flock of black Ducks. The stomach contained weeds, seeds of water-plants, and insects."

Mr. F. A. Barratt writes:—"The Crested Coot is by no means rare, frequenting the same places as *G. chloropus*. It is very quick in its movements, and can run very rapidly on its feet as well as being a swift swimmer. I have seen the young ones swimming with the egg-shell still attached to them; and it is curious to see the manner in which they disappear when alarmed. Towards the mouth of the Mooi River, near the Vaal, I found them in great abundance. I have shot them a few hours north of Pretoria;" and Mr. Ayres gives the following note:—"These birds are much more abundant in the Transvaal than in Natal, and also not nearly so shy. In Natal they are very shy, and maintain a flight for a length of time, examining their ground well before re-alighting; but in the Transvaal they seem to trust more to hiding and diving for safety, and, when flushed, fly but a short distance. Frequently have I stood up to my middle in water listening to some cunning old bird within a few yards of me, and vainly trying to catch a glimpse of him, where there was not enough cover, apparently, to hide a rat. Either these birds must possess the power of ventriloquism, or they must remain under water with perhaps just their bills out; one thing is certain, that they are expert divers."

Mr. Andersson's notes on the species are the following:—"This species is common in suitable localities in Damara and Great Namaqua Land, but is more abundant in the Lake regions. These Coots may often be observed congregated in large numbers on open sheets of water, where they might easily be mistaken for a flock of Ducks, except that they do not 'pack' like wild fowl. If disturbed they will sometimes, if near a reedy brake, seek safety by hiding there; but more frequently they have recourse to their wings, when they exhibit great powers of flight. They build their nests of, and amongst, reeds, rushes, and grasses, usually selecting the most retired spots, though I have also found their nests in most exposed situations. A few old reed-stalks serve as a footing for the nest, which is roughly but firmly constructed, and is raised, though sometimes only a few inches, above the surface of the water."

Senor Anchieta has forwarded specimens from Mossamedes and the Rio Coroca (native name "*Kitudi*").

The entire plumage (with the exception of the head and neck, which are quite black) is a dull, dark slate colour; bill livid; frontal shield pure white, and surmounted by two singular knobs of a deep reddish chestnut colour, which shrivel up and become quite brown in death; irides red; legs green, with a pink garter just under the feathers of the thigh. Length, 16"; wing, 9½"; tail, 2½".

Fig. Dresser, B. Eur. vii. pl. 504, fig. 1.

600. GALLINULA CHLOROPUS (*L.*). Moor-hen.

The "Waterhen" or "Moorhen" is not uncommon in the colony, frequenting the same places as the Crested Coot. Most of the specimens received by us came from Mr. Atmore, who shot them about Swellendam. It is common at Zoetendals Vley, where he met with it in November. Mr. T. Atmore also found it breeding about Grahamstown.

Mr. Gurney has recorded the Moorhen from Natal, and Mr. Ayres found it frequenting the reedy banks of the Mooi River, but not plentiful.

Mr. Barratt met with it near Pretoria in December, and along the Orange River, as well as in the Transvaal as far as Lydenburg. Mr. Ayres has also shot the species close to Potchefstroom. Mr. Andersson observes:—"This species is common in all suitable localities in Damara Land and the adjacent countries. It breeds in February and March, usually forming its nest amongst the rank vegetation bordering on its favourite resorts, which are stagnant pools and other still waters overgrown with weeds and aquatic plants. This species swims and dives with great expertness, and may be observed nodding its head first on one side and then on the other as it swims in the more open parts of the water, picking up vegetable substances, insects, and other food as it passes onwards. In the early morning and in the evening it may be seen away from the water searching amongst the grass for worms, slugs, and larvæ, in addition to which it also feeds on grass and seeds. When on land it frequently twitches and jerks its tail, exhibiting the white under-coverts; and if suddenly disturbed will occasionally take wing for a short distance, flying with its long legs hanging downward; but more frequently prefers to seek its safety by running to,

and concealing itself in, the nearest suitable reedy or marshy thicket."

Prof. Barboza du Bocage states that it is not rare in Angola, and particularly in the maritime region of Benguela as far as the mouth of the Cunene River. Anchieta has sent numerous specimens from the Coroca River, Mossamedes, and Quillengues in the interior.

Upper parts, dull greenish brown; under parts, dark slate colour; head and neck darkest; vent white; as are also some stray feathers on the flanks and in the centre of the belly. In some specimens the slate-coloured feathers of the under parts are edged with dirty white; the throat is also spotted with it; tip of bill rich yellow; base and frontal shield, bright red; legs green, with a red and yellow garter. Length, 11"; wing, 6" 9"; tail, 3".

Fig. Dresser, B. Eur. vii. pl. 503.

601. *GALLINULA ANGULATA*, *Sund.* South-African Moor-hen.

We have received one specimen of this elegant little Water-hen from Mr. W. Cairncross, of Swellendam, who procured it in that neighbourhood. Mr. Ayres has met with it in Natal, and records it from the Umschali Lakes, not many miles this side of the Zulu border, and within three or four miles of the coast. The late Mr. Frank Oates procured two specimens during his expedition through Matabele Land, one killed at Dry River in February, and another at Tibakai's Vlei in December. Mr. Ayres, who was with Mr. Jameson's expedition to the Mashoona country, met with this Moor-hen at Selenia Pan in December, and again at Spalding's on the Hart River, in February. He writes:—"This bird is scarce, but widely distributed over South Africa. The pans, which are the resort of so many Waders during this portion of the year, are entirely dried up during the winter rainless months, and the surrounding country so parched that travelling becomes difficult."

Mr. Andersson's work on the Birds of Damara Land contains the following note:—"I find the Lesser Water-hen literally swarming in all the vleys of this country, where it breeds most abundantly. Its flesh is much esteemed by the natives, who make up great hunting parties to chase these birds out of the water on to the dry land, where, as they unwillingly take wing and try to conceal themselves in the bushes and grass, they are easily secured, being sometimes shot with arrows, and sometimes taken alive. The eggs

of this Water-hen are from five to six in number, of a yellowish white, freely covered with small spots of light brown, with here and there a blotch of the same colour. The nest is a mass of grass, with its foundation laid on the water, and composed of standing stalks bent downwards, with some loose ones added; the hollow in which the eggs are laid is three or four inches deep, and has somewhat the appearance of a shallow inverted sugar-loaf: after the nest has been completed, the bird binds the tops of the surrounding grasses and ties them together so as to form a partial shelter against the sun, as well as to afford concealment."

Senor Anchieta has forwarded numerous examples to the Lisbon Museum from Humbe on the Cunene River.

Upper parts, dark olive-green; wings cinereous, the outer edge white, the inner rufous; chin and centre of belly light cinereous, almost white; the flanks and chest darker; outermost tail-coverts of the under side white; the inner black; a few white feathers are scattered along the flanks; frontal shield and top of the bill near the tip, bright crimson; the rest bright greenish-yellow; legs and feet the same. Length, 8"; wing, 5"; tail, 2½".

Mr. Ayres gives the following account of the soft parts:—"Iris light-red; bill greenish-yellow, frontal shield bright red, tarsi and feet drab." Mr. Frank Oates states that in the male bird killed by him the iris was crimson, with a narrow circle of tawny-yellow within the iris near the outside. In a female bird the same gentleman found the iris "pale crimson; the bill yellow with a scarlet stripe on the top of the upper mandible, the inner one tipped with scarlet; the legs being pale yellowish-brown."

Fig. (Young) Sclater, *Ibis*. 1859, pl. 7.

Fam. HELIORNITHIDÆ.

602. *PODICA PETERSI*, *Hartl.*

Peters' Fin-foot.

(Plate xii.)

This curious bird does not occur in the western parts of the colony, but our correspondent, Mr. Rickard, has met with it near East London, and notes that the wing is armed with a sharp-curved spine; while Captain Trevelyan tells us that it is not so uncommon

as is generally supposed, a good number inhabiting the banks of the Buffalo River, but very hard to obtain. In Natal, writes Mr. Ayres, it is "rare and exceedingly shy. It frequents the rocky streams of the interior of the country; can scarcely rise from the water; generally flies along the surface, aiding itself with its feet, which are lobed; when disturbed it hides under a bank like the Moor-hen in England. It feeds on freshwater shrimps and small fish." During Mr. Jameson's expedition it was obtained on the Elands' River in the Rustenburg district of the Transvaal on the 11th of May. Mr. Ayres writes again respecting it: "The crop contained insects. This is a very scarce bird, and exceedingly shy and retiring in its habits. We never met with them in any of the Matabele or Mashoona rivers."

A specimen was contained in Andersson's last collection, but without any particulars attached, so that its occurrence in South-West Africa needs confirmation. Senor Anchicta has not seen it in the course of his travels, but it has been met with in the Congo district by Messrs. Lucan and Petit.

Fam. GRUIDÆ.

603. *GRUS CARUNCULATA*, *Gm.*

Wattled Crane.

This great Crane is only found in a few favoured localities, scattered over the country. A single pair take up their haunts and maintain it for years, breeding constantly in the same nest, which is repaired as occasion requires. We had the pleasure of watching a pair, through our binoculars, engaged in this proceeding: both birds contributed to the work, stopping now and then to do a little courting, like an ordinary sparrow or canary, but surely undignified in so grave a bird! It suggested to us the possibility of an Archbishop or a Lord-Chancellor making love! Still "something came of it," for our friend Hugo took two glorious eggs out of that self-same nest, and presented them to us, and they now form part of the treasures of the South African Museum. They are of a dull olive-brown, irregularly blotched throughout with reddish-brown, closely resembling those of *Anthropoides virgo* and *A. stanleyanus*. Axis, 4" 3"; diam., 2" 9".

Mr. Rickard writes to us from East London:—"I believe I had the pleasure of seeing one of these birds through my glass on 30th May. The neck was white—carried straight out—and all the other parts seemed to be black: the legs were extended behind. It came from over the Buffalo and went away to the south-west. It is called the Bell Crane here in allusion to the Wattles." In Natal, writes Mr. Ayres:—"The Caffre Cranes are plentiful inland, but are seldom, if ever, seen on the coast. They may be found on the open plains, sometimes singly, at other times twenty or thirty in a flight. They appear to feed on grain and insects, preferring the former when attainable. They fly with neck and legs outstretched, the beat of their wings being very quick, considering the size of the bird; and during their flight, if in sufficient numbers, they form the usual letter V, like swans and geese. My friend, Mr. G. A. Phillips, found a nest of this Crane containing two eggs, which were on the point of hatching, in a very large lagoon near the Vaal River. The nest was about five feet in diameter, and of a conical form; it was composed of rushes pulled up by the birds, and was placed in water about five feet deep, the eggs being well out of the water."

In the Newcastle district Majors Butler and Feilden and Capt. Savile Reid say that "this Crane is not so numerous as the Stanley Crane or the Crowned Crane, but is seen occasionally, in pairs." Mr. Ayres likewise records the species as having been seen, but not procured, in the Mashoona country in September and October. Mr. Andersson says that this Crane is found very sparingly in Damara Land during the rainy season. He has also observed it on the rivers Okavango, Teoughe and Dzouga, as well as at Lake N'gami. In Angola, where it is called *Panda* by the natives, Mr. Monteiro relates that it is common in the interior of Benguela, and Senor Anchieta has procured it near Humbe on the Cunene River.

General colour above, grey-slate, darkest on the back, at the end of the wings, and top of the head; neck pure white; the rest of the plumage black. In the male, the fore-half of the head is bare, wrinkled, and of a red colour; in the female this is much reduced in size, and the dark mark on the top of the head is indicated by a few dark spots only; below the chin depend two flaps of skin, covered with short dense feathers; legs black; bill red; irides red. Length, 4' 7"; wing to the end of drooping feather, 3'; tail, 13".

Fig. Gray and Mitch. Gen. B. iii. pl. 149.

604. ANTHROPOIDES PARADISEA, *Licht.*

Stanley Crane.

Anthropoides stanleyanus, Layard, B. S. Afr. p. 303.

The "Stanley" or "Blue" Crane is not abundant in any locality, but seems very generally distributed. We fancy that certain pairs frequent the same district for the whole term of their lives, and may always be found within a certain radius, as we saw it thus continually at Nel's Poort, and at the Knysna. It is wary, and difficult to approach within gunshot; but may always be got with a rifle. It goes in pairs, male and female, the latter being considerably the smaller. It becomes very tame when in confinement, and feeds readily from the hand, eating bread, fruit, vegetables, &c. Its harsh, rattling, guttural cry may be heard at an immense distance. In a state of nature it feeds on fish, reptiles, locusts, and small mammalia, and is often found permanently inhabiting the Karroo country at a great distance from water.

Mr. Arnot has forwarded eggs from Colesberg, and informs us that it breeds in that neighbourhood in some abundance. The eggs resemble those of *G. carunculata* in every particular. Mr Ortlepp writes:—"Their principal food is small bulbs. When they have the chance they pass the night sleeping in the water knee-deep; in the winter months they are frequently found with their legs frozen fast in the ice!" It is not uncommon near Port Elizabeth, according to Mr. Rickard, who has no doubt of its also occurring near East London, though he never himself saw the species there. Capt. Trevelyan also states that it is not rare near Kingwilliamstown. Majors Butler and Feilden and Capt. Savile Reid say that this Crane is very common on the "veldt" all about Newcastle in pairs and small parties. They were informed by "an old sporting Boer farmer that these birds scratched a hole and laid their eggs, like a Bustard, on the open veldt, and never constructed nests in the 'vleys,' like the other Cranes." This mode of nesting, it will be observed, is different from that given by Mr. Ayres.

Mr. Barratt observes:—"The Stanley Crane is generally distributed throughout the Transvaal and Free State; and I have met with it in great quantities between Bloemfontein and Potchefstroom. In the winter I have seen as many as fifty in a flock, besides many more in the neighbouring vleys; they are difficult to approach, but they can be shot with a rifle. They breed in the reeds, and I have received eggs from the district of Potchefstroom. Their long

drooping feathers are readily bought by traders from up the country, who sell or exchange them to the native tribes. They become very tame in confinement, and will eat out of the hand and follow one about. I have so far never shot them further north than within a few miles south of Lydenburg." Mr. Ayres also writes from the Transvaal:—"These Cranes are not at all uncommon in this country. In the summer months they are generally seen in pairs, stalking about the open flats in search of insects; in winter they congregate in certain localities and live sociably together. One of these spots is on the Mooi River, about ten miles above its junction with the Vaal River, and another is on the banks of the Vaal River, about twenty miles below Bloemhof. These birds feed on seeds and roots as well as on insects, and their flesh is not at all bad eating; slices from the breast, fried with butter, are scarcely to be distinguished in taste from excellent beef. Blue Cranes (as this species is locally called) sometimes rise to an immense height in the air, uttering their peculiarly loud guttural note. When on the ground they frequently amuse themselves by dancing round each other, with wings extended, bowing and scraping to each other in a most absurd manner, not a little curious to see." It was observed by Mr. Jameson's expedition in the Mashoona country, in September and October.

"This very graceful Crane," says Mr. Andersson, "is not uncommon in Damara and Great Namaqua Land during the rainy season, but migrates on the return of the dry. It is found in the open country, as well as in the moist beds of periodical streams, and always in pairs. It is rather a timid bird, and is rarely to be obtained, except with the rifle. The stomachs of the few individuals I have opened contained nothing but insects and a large quantity of gravel." It is not recorded from South-Western Africa by Professor Barboza du Bocage.

Entirely of a leaden-blue, with the exception of the upper portion of the head, which is white, and the ends of the long drooping plumes of the wings, which are black. Length, 4' 4"; wing, 3' 10" (including the drooping plumes); tail, 1' 2".

Fig. Gray, Knowsl. Menag. pl. 14.

605. BALEARICA CHRYSOPELARGUS (*Licht.*). Southern Crowned Crane.
Balearica regulorum, Layard, B. S. Afr. p. 304.

The "Crowned" or "Kafir Crane" is more common in the

eastern frontier of the colony, than about the western extremity, perhaps owing to the latter being more settled and cultivated, as it is found in considerable numbers to the north and north-west.

Mr. Arnot sent a magnificent egg of this species, procured in Mahura's country. It is of a dull pale brown tinged with green, and obscurely marked with faint reddish brown, confused blotches chiefly at the obtuse end, with here and there a dark mark standing out prominently. Axis, 3" 6"; diam., 2" 5".

At East London, Mr. Rickard informs us, it is not very common in the immediate neighbourhood, but becomes more numerous towards the Kei. It is called "Mohimo." Near Kingwilliamstown, Captain Trevelyan says, it is not uncommon. Messrs. Butler and Feilden and Capt. Reid state that in Natal they frequently observed this Crane in the more open veldt, generally not far from a "vley" or marshy spot. It appears to breed in the neighbourhood of Newcastle, though no nests were found. Reid met with a family party in the Ingagane Drift in June and July. It is called "Mahem" by the colonists, from their note; but Captain Reid says that he was squatting in a vley within ten yards of a party of them for a quarter of an hour, and after listening to their notes all this time, he could only make these out to resemble "aan-aan—nor-aan," uttered very softly and plaintively. From the Transvaal Mr. Ayres writes:—"These handsome Cranes are generally, though sparsely, distributed over the country, and have much the same habits as the Stanley Cranes, with which they occasionally associate, as flocks of each may be seen feeding together on the banks of the Vaal River below Bloemhof." The nest was found in an extensive swamp on the banks of the Mooi River, about twenty miles from Potchefstroom, and was composed of rushes pulled and placed in a conical form on the rank long grass, which fell over from its own weight and formed a thick carpet of vegetation, often more than a foot thick; the rest was built where the water was about ankle deep, and contained two eggs only.

Mr. F. A. Barratt gives the following note:—"In the district of Potchefstroom this bird is not at all uncommon. I have seen them between Potchefstroom, Bloemfontein, and Pretoria. In the winter they may be seen half-a-dozen together; but in the time of nidification they are only found in pairs. I have never seen two pairs breeding together in the same vley, but always some distance apart;

and they can be heard a long way off, calling out 'mahem' with a delightful mellow note. At the present time I have four living, which I brought over from the Orange Free State and Transvaal. They all, with the exception of the young one, have the white cheek; I have seen birds from the western coast with it red; but I have never seen them so from the Transvaal. All I have shot, heard of, or seen, have had the cheek white. The eggs I have always found to be white with a bluish cast; some state, however, that they are spotted; but I have never found them so. I have seen these birds a few miles north of Pretoria."

It was observed during Mr. Jameson's expedition in the Mashoona country in September and October, and Professor Barboza du Bocage states that he has received two specimens from the Zambesi. Mr. Andersson writes:—"I have never observed this handsome bird in Great Namaqua or Damara Land; but I have met with it at Lake N'gami, and also on the rivers Botletlé, Teoughe, and Okavango. In Ondonga it is very common during the dry season, but leaves the open plains when the wet season returns. It is met with singly or in pairs, and sometimes in small flocks, and presents a very graceful appearance as it stalks leisurely about in search of its food, which consists of various insects, of the smaller reptiles, and, it is said, of fish also."

Senor Anchieta has only procured the species at Humbe on the Cunene River.

The eggs were found in the Transvaal by Mr. T. E. Buckley, who describes them as white, slightly tinged with blue, and Canon Tristram also describes the egg as white, with a green lining membrane, its texture glossy, and its size about that of the egg of a Goose.

The Messrs. R. B. and J. D. S. Woodward in the "Zoologist" (vol. 33, p. 4509) record the occurrence of the Demoiselle Crane (*Anthropoides virgo*) in Natal, where it is said to be the commonest of the Cranes in that colony. The bird intended is doubtless the present species, as the name "Kafir Crane" is given as belonging to it, but the description appears to suit the Demoiselle, and was perhaps taken from some book. The latter species inhabit South-Eastern Europe and India.

Upper parts, leaden-grey; lightest on the hackle-shaped feathers of the throat; top of the head, velvety black; chin black; back of

head ornamented with a curious tuft of wiry bristles, radiating from an elongated centre, each bristle about $3\frac{1}{2}$ " long, flat, and twisted throughout its entire length, one side being white, the other yellow, thus causing the bristle to appear ringed with white and yellow; tip black; beneath and behind the eye, and below the back of the chin, a bare red spot; outer feathers of wing white, the inner red; and covering them, when the wing is closed, are some elongated, decomposed yellow plumes; tail black; under parts leaden grey. Length, 3' 8"; wing, 1' 9"; tail, 1".

Fig. Gray, Knowsl. Menag. pl. 13.

Fam. OTIDÆ.

606. OTIS KORI, *Burch.*

Kori Bustard.

Eupodotis Kori, *Layard*, B. S. Afr. p. 283.

The "Gom-Paauw" is pretty generally distributed in favourable localities, open plains dotted with mimosa jungle in the northern and eastern parts of the colony. It is a noble bird, and when seen stalking about in its proper haunts, affords a sight to a hunter's eyes never to be forgotten. It is migratory, as are all our *Otidae*, and is more plentiful in some years than others; their numbers depending on the drought of the Interior, whence they come. In habits and food it resembles the rest; but it is never found far from the mimosa jungle that skirts the rivers. It can swallow a lizard or snake of considerable size; and a female shot by our late friend Mr. A. V. Jackson and ourselves disgorged the largest chameleon we had ever seen; besides this, its crop contained a mass of locusts, small insects, &c. His brother, Mr. Henry Jackson, sent us the first egg of this species which we had ever seen: it measured—axis, 3" 4"; diam., 2" 5". It was of a pale fawn-colour, unevenly spotted and blotched with brown and faint purple markings of various sizes and shapes, chiefly at the obtuse end. He tells us that they lay two eggs, but Mr. Kotze says that at the Berg River they only lay one. This Bustard is called at Saldanha Bay "Duive Paauw."

Capt. Trevelyan tells us, that on the Fish River he has known of one of these Bustards being killed which weighed 42 lb. Mr. Ayres states that although he has often heard of "40 lb. Bustards" being shot, he never saw one of anything like this weight, and a male he sent to

England, with the throat pouch developed, and therefore an adult bird, only weighed 16 lb. On the other hand the late Mr. E. C. Buxton informed Mr. Gurney that one shot by him, near the Lambomba mountains, weighed "nearly 40 lb." Majors Butler and Feilden and Capt. Reid state that it is common in the more open country, between the Buffalo and the Drakensberg, but not obtained in the vicinity of Newcastle, where its place is taken by *O. ludwigii*. Several were found in the Leo Kop district and on the Buffalo Flats. Reid found them plentiful in the former district, and they undoubtedly breed there, as well as between the Ingagane and Dundee.

Mr. T. Ayres writes:—"This splendid bird is not uncommon in the Transvaal, living principally amongst the scattered mimosa bush; it is exceedingly fond of the gum which exudes from the mimosa, and which much resembles gum-arabic, on which account it has received from the Dutch inhabitants the name of 'Gum-Paauw.' I never saw more than three of these birds together, and they are generally found singly, though sometimes in pairs. The flesh of this species is too coarse and oily to be good eating. Two fine eggs of this Bustard were brought me by a Kafir, from whose description I identified them. He stated that no nest whatever was formed, but the eggs laid on the bare open ground on a strong ridge." The late Mr. Frank Oates procured a specimen near the Palatswe River in May, 1874, and it was observed in Mashoona Land in June, during Mr. Jameson's expedition. Mr. Andersson gives the following notes on this Bustard:—"It is found throughout the year in Damara and Great Namaqua Land, and is common as far as Ondonga, but is partially migratory. Personally I have never seen one beyond 30 lb.; but I have been assured on good authority that in some parts of the Free States and the Transvaal districts individuals are sometimes shot weighing from 60 to 70 lb. The spread of the wings is 8 ft. 4 in. The flesh is excellent eating. This Bustard is usually found in pairs; but sometimes three or four are to be found together. Its flight is heavy, but nevertheless very rapid; and at night, when changing its feeding-ground, it may be seen flying at a very great height. It feeds on insects, berries, &c., and is partial to the sweet gummy exudations of the low mimosa thorn so plentiful in Damara Land."

Senor Anchieta has obtained two specimens at Humbe on the Cunene River, where it is called *Ditua* by the natives.

Male.—General colour above, ashy-grey, with a tinge of rufous in some examples; paler on the wings (white in some), all profusely mottled; the wings with large black blotches; wing-feathers black; head and neck grey, transversely barred with black; top of head black, much crested; breast and belly white; a half-collar of black between the grey of the neck and the white of the chest; legs yellow. *Female*.—Much smaller and duller coloured than the male, which weighs from 30 to 35 lb. *Male*: Length, 56"; wing, 31"; tail, 16". *Female*: Length, 44"; wing, 23"; tail, 14".

A male, according to Mr. Ayres, had the following soft parts:—"Iris light tawny-brown; the upper mandibles dusky, except the side edges, which, with the under mandible, were dingy white, which was also the colour of the thighs, tarsi, and feet. The stomach of this bird was crammed with locusts." A bird obtained by Mr. Frank Oates, and supposed to be a young female, was marked as follows:—"Iris hazel, dark round the pupil, but becoming very pale towards the outside; upper mandible black; under one greenish white, tipped with black; legs and feet pale greenish white; claws dusky."

607. OTIS CAFFRA, *Licht.*

Stanley Bustard.

Eupodotis caffra, Layard, B. S. Afr. p. 283.

This bird is common in the northern portions of the colony, particularly about Beaufort and that neighbourhood. It rarely comes to the sea-coast, where its place is supplied by *O. ludwigii*. The food of the two species is similar—seeds, insects, and small reptilia; nor is there any difference in their habits, both frequenting open plains. The males, when "playing" before the females, expand the feathers of the throat and strut about, uttering a loud booming noise, which can be heard at a great distance. Like *O. scolopacea*, they will squat and lie close to the ground, to avoid detection, and thus may be approached and killed with a charge of No. 7 shot.

It lays two large eggs, of a reddish-olive ground, spotted with brown and indistinct purple blotches: axis, 3"; diam., 2" 2". In the fine season of 1869, it hatched near Ceres on the 20th of April.

Major Bulger thus writes of two young birds in his possession:—"Feb. 9, 1864. Batho had two young *Paauws* given him to-day. I have no idea what their age is, but they are as large as a chicken, and completely feathered. Their irides are a light-yellowish brown.

They make a most extraordinary low, plaintive noise, like one of the high notes on a glass flute, or still more like the sound produced by moving your finger rapidly round the rim of a tumbler: their note is a semitone so soft and sweet, that it is almost impossible to imitate it. They also make a sort of clucking or barking noise, apparently when alarmed. As yet they have voluntarily eaten nothing. Batho took them out in the garden, and one of them immediately squatted like a partridge; the other wandered about."

Capt. Trevelyan informs us that this Bustard, as well as *O. ludwigii*, appears on the Frankfort Flats (about fifteen miles from King-williamstown) in July, and remains till about November. Mr. Ayres in his lists of the birds of Natal mentions the bird three times. He says:—"These birds frequently breed amongst the rocks and stones on the top of some hill: the nest is merely a slight excavation scratched in the ground, with perhaps a handful of grass. The eggs are two in number; and the old bird sits so close that she will almost let one tread on her before she rises." He also states that he has killed one of the weight of 20 lb., but another recorded by him weighed only 9 lb., while Captain Trevelyan tells us that he has shot them with a weight of only 6½ lb. Mr. Ayres has sometimes found good-sized snakes and lizards in their crops. He says that all the Bustards in Natal are excellent eating. "They breed in the interior of the country, only coming towards the coast as the winter approaches: they always prefer ground from which the grass has been recently burnt, to hunt for their food. They are exceedingly shy, and yet stupid, for although there is no cover, if the sportsman take a large circle round and round, gradually nearing the bird, the Bustard will frequently squat down with his head to the ground, thinking he will be passed unnoticed, when the sportsman may run up to within easy shooting distance."

Mr. Ayres has likewise shot the present species near Potchefstroom. It did not occur to Mr. Andersson in Damara Land, but Senor Anchieta has procured it at Huilla in Mossamedes and at Humbe on the Cunene River.

Above, ashy black, waved and streaked; eyebrows, chin, nape, band on sides of neck and belly, white; crown, quills, and tail, white, with three black bands. The male has the throat slate-coloured; and the female has a black, waved, band on the crown and throat. Length, 38"; tarsi, 6".

Mr. Ayres gives the following soft parts:—"Iris light hazel, upper mandible dusky, under one yellowish; tarsi and feet dingy yellowish-white."

608. OTIS LUDWIGII, Rüpp.

Ludwig's Bustard.

Eupodotis ludwigii, Layard, B. S. Afr. p. 284.

This Bustard comes to us in its migrations, apparently from the westward; at least most of them that we have seen have been procured on the north-western side of Cape Town. In its habits it resembles the preceding species. Its eggs, two in number, are similar in size and appearance to those of *O. caffra*, but are usually of a lighter and greener ground.

Mr. H. Jackson says that it only lays one egg, but Mr. Atmore writes:—"All the nests (if a very shallow hollow in the ground can be so called) that I have found have had two eggs, if they were incubated. I have, of course, found them with but one, but then it was not 'sotten on,' as we say in Norfolk."

Captain Trevelyan states that, like *O. caffra*, the present species come to the Frankfort Flats (about fifteen miles from Kingwilliamstown) in July and remains till about November. Mr. Ayres writes from the Transvaal:—"I took the eggs of this Bustard from the top of a low stony range of hillocks. I happened to be at a farmstead about thirty miles from Potchefstroom, when a young Boer told me he had found a *Paauw's* nest; so I immediately started with him to the spot, rather late in the afternoon; after a smart walk of about five miles we came to the stony ridge, and there lay the two eggs, quite warm, the old bird having evidently just left the nest and crept away amongst the stones on our approach; they were laid on the bare ground, without any appearance of a nest. We sat down to rest for a quarter of an hour or so, when my Hottentot, whom I had taken with me, suddenly, but in a whisper, said that he saw the bird, and pointed to a spot within a few yards of us; but I could see nothing, so I handed him my gun, and he immediately killed the bird as she lay crouched amongst the stones within ten yards of us, and would, no doubt, there have lain until we left the place." Majors Butler and Feilden and Captain Reid found this Bustard not at all scarce on the undulating hills near Newcastle, where it breeds. The crop of one shot by Feilden contained beetles and grasshoppers.

Adult (male).—General colour of back ochraceous, profusely

variegated with minute dark brown wavy lines; top of head black; eyebrows and chin white; front of neck and chest white, tinged more or less with slate colour; ruff at back and side of neck rufous, under parts white; wings, when closed, appearing mottled black and white; tail white, with four broad black bars; legs and bill yellow. Length, 3' 6"; wing, 23"; tail, 13".

The female much resembles the male, except that she is smaller, has only a corona of black round her head, and is altogether less highly coloured.

Fig. Rüpp. Mus. Senckenb., 1837, pl. 14.

609. OTIS SCOLOPACEA, *Temm.*

Pink-coloured Bustard.

Eupodotis scolopacea, Layard, B. S. Afr. p. 284.

The *Vaal Knorhaan* is common on the Karroo, about Beaufort West and Zoetendals Vley. It is usually found in pairs, and prefers running among the scanty herbage, and trusting to its dusky plumage to effect its escape, to taking flight. If it fancies itself unobserved it will suddenly squat, and, unless the spot is correctly marked, so great is its similarity to the soil and stones among which it is found, that it is next to impossible to detect it. It is so well aware of this, that it will remain immovable till the sportsman walks direct towards it, on which it instantly takes flight; but if it is approached in a series of concentric circles, it remains until the sportsman is within a few paces.

It feeds on seeds, insects and small reptiles, constructs no nest, but deposits its two eggs in a depression of the soil in the open veldt. The eggs vary much in colour—some are olive, some light brown, and others rich nankin. All are, however, more or less spotted and blotched with brown and indistinct purple. Axis, 2" 8"; diam., 1" 10".

General colour, cinereous, here and there passing into rufous, minutely mottled with dark brown and black; quill feathers black, with the inner webs more or less isabella-coloured; chin and top of throat jet black, surrounded by a pale yellow edging; a black half-moon-shaped mark at the back of the head, which is slightly crested. The whole of the body plumage in the live bird is glossed with a beautiful pink lustre, which fades after death; each plume, on being withdrawn, shows a delicate ferruginous and very lax web

throughout two-thirds of its basal portion. Length, 20"; wing, 14"; tail, 8".

Fig. Temm. Pl. Col. 576.

610. OTIS CÆRULESCENS, *Viell.* Blue Bustard.

Eupodotis cærulescens, Layard, B. S. Afr. p. 285.

This beautiful bird, the Blue Knorhaan of the colonists, is locally distributed. We have received it from Riversdale, and from the neighbourhood of Hanover, and have been told that it is plentiful on the eastern frontier in certain favoured spots. Mr. Windham sends it to us from the Free State.

Mr. T. E. Buckley found it common throughout the high country of the Transvaal, but not met with in the bush. This bird, he says, goes in small families, three or four being found together; but, from their habit of running, they rarely all rise on the wing together.

From Natal Mr. Ayres writes:—"These Bustards are found more along the banks of streams and valleys than is the case with *O. afroides*; but they are also often found amongst stony hills. They are also less noisy than that species, and, I think, also more difficult to approach, being seldom seen till flushed." The late Mr. Frank Oates procured a male bird near Sunday's River in May, and Capt. Reid also met with it in the same locality. It was found by him and Majors Butler and Feilden to be the commonest Bustard from Ladysmith and Newcastle. After describing the best way of stalking these birds by walking round them in a gradually lessening circle, Major Butler adds:—"When they get up they utter a harsh note, resembling the words 'kuk pa-wow,' repeating the call several times as they fly away."

Upper parts, ferruginous, minutely mottled with dark brown and black; less on the wings, the quills of which are black, in some places edged with blue; the ends of the tail-feathers are also black; top of head, black, and lower portion of front of neck, breast, belly, and vent, blue; forehead, eyebrow, spot under the eye, and upper part of throat, black; a white patch arising on the chin extends backwards to the hinder part of the head; a similar but smaller patch extends from the forehead, and joins it over the ears; "iris dusky, with the outer wing tawny; bill dusky, but pale at the base; tarsi and feet yellow" (*Ayres*). Length, 20"; wing, 13"; tail, 7".

Fig. Temm. Pl. Col. 532.

611. OTIS SENEGALENSIS, Vieill. Senegal Bustard.

Eupodotis senegalensis, Layard, B. S. Afr. p. 285.

Several pairs of this handsome Bustard were procured in the Free State by Mr. Arnot, and in Natal Mr. Ayres says that the species is found in similar situations to *O. afroides* and *O. cærulescens*. He has found it breeding in the Transvaal, where it lays two eggs, which are generally placed in the open country under shelter of some high tufts of grass. The eggs of different individuals appear to vary much in shading and blotching. Dr. Exton procured it at Kanye in the Matabele country.

General colour above, bright rufous, variegated with black; tail barred with four cross bars, that near the point being the broadest; top of head black in the male, rufous in the female, minutely mottled, and changing into light ash-colour at the back; cheeks and chin, white; throat, and crescent-shaped mark at back of head, jet-black; lower part of throat and breast rufous, with here and there a bluish tinge; large wing-feathers black, the rest bright rufous; under parts white. Length, 16" or 17"; wing, 10½"; tail, 5".

On the variation of plumage in this species, see Mr. Gurney's remarks (*Ibis*, 1880, p. 266).

The soft parts in the male are given by Mr. Ayres as follows:—"Irides pale tawny, gradually passing into dusky amber round the pupils; bill yellowish pale colour, with the ridge dusky; tarsi and feet dingy yellowish white."

612. OTIS RUFICRISTA, Smith. Red-crested Bustard.

Eupodotis ruficrista, Layard, B. S. Afr. p. 286.

Sir Andrew Smith procured this beautiful Bustard between Latakoo and the Tropic, but it seldom occurs within the colony; it is found beyond the Orange River. Mr. Chapman obtained it as far as the Great Lake. Messrs. Arnot and Ortlepp have forwarded it from Colesberg. Dr. Exton procured it at Kanye, and writes:—"The colour of the crest in the recent specimen is as if stained with port wine, which fades after death. The fine down at the base of the feathers, as well as the skin itself, have also the dark stained appearance."

Mr. T. E. Buckley states that he found it common from the north

of the Transvaal to the Matabele country, where it is a bush-loving species. It breeds about October or November, and lays either one or two eggs. Mr. Ayres writes:—"I met with these Bustards, but not plentifully, throughout the Marico bush; they appear to be solitary in their habits, lie close, and rise very silently. In the evening they utter a melancholy note, 'goo, goo,' often and slowly repeated. When I first heard this note, I thought it must be that of some Owl; but on cautiously approaching, up flew a fine cock Bustard, the skin of which I now send. My brother and I came across a few of these birds on the Eland's River, in the Rustenburg district. They appear to be scarce and local, frequenting low thorns and other pretty thick cover." During Mr. Jameson's expedition to the Mashoona country, Mr. Ayres states that they were not uncommon from Rustenburg to the Umvuli River. "On the 14th of November a nest of these birds was found at Matje Umschlope in the Matabele. The eggs, two in number, were laid on the ground, and partially hidden by a tuft of grass, and were very much incubated. They were much pointed, resembling in shape Plover's eggs. In colouring they were greyish creamy-white, much spotted and blotched with dark colour. One measured 2.25 inches by 1.5 inches; the other 2" by 1.5"."

Mr. Andersson observes:—"I have met with this species pretty frequently in Great Namaqua Land, and also, but less frequently, in Southern Damara Land, to the north of which, I believe, it does not extend. It is usually found on open ground, thinly covered with dwarf bush."

Mr. Monteiro says that it is common in the littoral region of Angola, but it has not occurred to Senor Anchieta.

Top of head, neck, and upper part of chest, blueish-ash, darkest on the head; ground colour of back, deep rufous, mottled with deep brown and black; the prevailing marking on this part is of a rufous colour, V-shaped, with a black centre; chin and sides of head dirty white; head crested; crest deep ferruginous; under parts all black. Length, 17"; wing, 11"; tail, 7". The female wants the crest on the head, and is otherwise less brightly coloured. "Iris dusky, tawny brown; bill yellowish ash, the culmen dusky; tarsi and feet nearly white" (*Ayres*).

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 4.

613. OTIS MELANOGASTER, Rüpp.

Black-bellied Bustard.

Eupodotis melanogaster, Layard, B. S. Afr. p. 286.

This Bustard has only once, that we are aware of, been found within the colony, Mr. Rickard having informed us of a single instance of its occurrence near East London. Dr. Hartlaub, on the authority of M. J. Verreaux, gives South Africa as a habitat; and it is included by Mr. J. H. Gurney as among the birds received from Natal. Messrs. Fellowes and Watson obtained it in Zululand and Natal, and Mr. Chapman procured it towards the Zambesi. Mr. Ayres writes: —“This very scarce and solitary bird is only occasionally met with in the Mashoona country; and we did not see it in Matabele Land. I have shot them many years ago on the coast of Natal, but have not seen them since. In fact I saw in this part of Mashoona Land many of the Natal coast-birds.” Senor Anchieta has procured specimens from Huilla and Caconda in Benguela, the native name at this latter place being “*Quela*.”

Above, fuscous yellow, transversely streaked, and with large longitudinal black markings down the centre of many of the feathers; cheeks dirty-white; chin, throat, a long line extending down the neck, breast, belly, and quill-feathers of wings and tail, black; a band of the same colour springs from above each eye, and joins at the occiput; shoulder and large portion of the wing, white. Length, 24"; wing, 13" 4"; tail, 6".

Fig. Rüpp. Neue Wirb. pl. 7.

614. OTIS AFRA, Gm.

African Black Bustard.

Eupodotis afra, Layard, B. S. Afr. p. 286.

The Knorhaan (lit. *Scolding-Cock*) is abundant throughout the whole colony, frequenting the open country. It feeds on insects, small reptiles, and seeds. The female deposits her two eggs in a depression of the soil, in which she places a few bents of grass. They are of an olive-green or brownish ground, spotted and blotched with brown and indistinct purple: axis, 2" 3''; diam., 1" 8'''. It breeds at the Berg River in September, usually laying one egg, but sometimes two.

It usually goes in pairs, and when followed by the sportsman always endeavours to evade pursuit by swiftness of foot rather than by flight. In this way we have seen it run before a pointer for

several hundred yards, squatting at intervals, but all the time keeping a careful watch on its approaching enemy.

Captain Trevelyan writes to us:—"Layard says that the Knorhaan is abundant throughout the whole colony. There are none about Kingwilliamstown; but about twenty-one miles from Grahamstown, on the Dikkop Flats and all along the valley of the Fish River, except where the bush is too thick for them, they are in fair numbers."

Mr. Ayres writes that during Mr. Jameson's expedition to Mashoona Land, none were met with to the north of Mangwato; but southward they became more and more numerous, and on the Moloppo and Hart Rivers they were very plentiful. Mr. Andersson observes:—"I have frequently met with this bird to the south of the Orange River, and at no great distance from it; but I have never met with it to the north of that stream."

Top of head, back, part of wings, and tail, brownish black, varying in intensity, and crossed with irregular streaks of rufous, paling into white; stripe over the eye, reaching to the back of the head, ear-coverts, half-collar on back of neck, and part of wings, pure white; the rest of the plumage deep black; legs bright yellow. Length, 19"; wing, 12"; tail, 5". The female differs from the male in having the whole of the head, neck, and breast of the same colour and markings as the back.

The soft parts are given by Mr. Ayres:—"Male.—Iris dusky tawny brown; bill horny ash at the tip, yellowish at base; tarsi and feet yellow. Female.—Iris light hazel; bill brownish horn-colour; tarsi and feet as in the male."

Fig. Lath. Gen. Syn. B. pl. 69.

615. OTIS AFROIDES, *Smith*.

White-quilled Bustard.

Eupodotis afroides, Layard, B. S. Afr. p. 287.

According to Sir Andrew Smith, this Bustard frequents the country to the north of the Orange River, and is rarely seen south of it. Its call differs considerably from that of *O. afra*, but in most of its habits they closely resemble each other. Dr. Exton has sent us eggs which differ in no way from those of *O. afra*. Mr. Ayres writes:—"These fine birds are only to be found in the upper districts of Natal, and not plentifully. In the Free State and Transvaal they are, however, very plentiful. The male birds are

very noisy, uttering notes something like 'knock-me-down, knock-me-down;' and their apparent wishes are very often acceded to. These Bustards are somewhat wary, and are not always easy of approach in the open country; they, however, prefer land well-studded with thorn-bush, and there they are more easily got at. They generally run, on the appearance of danger, with great swiftness, and hide in the long grass. In the morning and evening they are often to be seen sunning themselves, perched on some ant-heap."

Mr. T. E. Buckley states that it is common throughout the north of the Transvaal. "During the breeding season the male flies about making a most peculiar noise, something like a small drum being beaten with one stick."

Mr. Andersson observes:—"This is perhaps the most common Bustard in both Great Namaqua Land and Damara Land. On taking wing or when disturbed the male becomes outrageously noisy and will rise vertically and to a great height, often descending as abruptly. This is a great nuisance to the hunter, who is frequently done out of his quarry by the Bustard's sudden and noisy apparition."

Adult.—Resembles the preceding in every respect, except the one great distinguishing mark, viz.: on opening the wings the quill-feathers of this species will be found with a large blaze of *white* on them, while those of *E. afra* are entirely *black*. Mr. Ayres gives the following soft parts:—

Male.—Irides dusky, tawny on the outer edge; bill ashy at the tip, the ridge dusky, base and gape reddish pink; tarsi and feet yellow. In the immature birds the irides are hazel.

Fig. Smith, Ill. Zool. S. Afr. pl. 19.

616. OTIS RUEPELLI, *Wahlb.*

Rüppell's Bustard.

This is a bird of South-Western Africa. Mr. Andersson writes:—"This species is plentiful in Great Namaqua Land and is not uncommon in some of the more open parts of Southern Damara Land; it is partial to slightly undulating ground abounding in boulders and loose stones, and is usually found in pairs. When disturbed it utters a succession of quick harsh notes, and crows not unlike a Corncrake on taking wing, but in a much louder strain." Mr. Monteiro, whose specimen was described as a new species by

Dr. Hartlaub under the name of *Otis picturata*, states that it is "found abundantly all along the littoral region of Angola, becoming more so in the vicinity of Benguela." Senor Anchieta does not, however, appear to have come across the species as yet, though Prof. Barboza du Bocage gives the following description of it.

Male.—Above clear fulvous, vermiculated with blackish; crown ashy blue rayed with brown; eyebrow, and a malar streak, nape, middle of the throat and a longitudinal median band on the forepart of the neck, black; sides of head white; lower parts dirty white; first and second quills blackish, rufous white near the base, the others buffy white, with the tip blackish.

Fig. Hartl. P. Z. S. 1865, pl. vi.

ORDER LIMICOLÆ.

Fam. CHARADRIIDÆ.

617. *ÆDIGNEMUS CAPENSIS*, *Licht.* South African Thick-knee.
Ædignemus maculosus, Layard, B. S. Afr. p. 288.

The "Dikkop" is found in Kaffraria and Cape Colony generally, and Natal, frequenting open, unwooded country. It feeds on seeds, insects, and small reptiles, and lays, in a mere depression of the soil, unprotected by stone or bush, two eggs of a light fawn-yellow ground, profusely spotted and blotched throughout with brown of various shades: axis, 2" 1"; diam., 1" 6".

Mr. Ortlepp says that about Colesberg they are migratory, appearing in flocks sometimes numbering fifty individuals, and feeding only at night. It is met with both at East London and Port Elizabeth, according to our correspondent Mr. Rickard, and Captain Trevelyan tells us that it is migratory near Kingwilliamstown, being common at times. Mr. Ayres states that it is generally dispersed over the colony of Natal, appearing on the coast with the Bustards in the month of June. "Like the Bustards," he observes, "they will almost invariably try to hide themselves from the sportsman by crouching on the ground. When on the wing, the legs are extended straight out behind, similarly to the Herons." Majors Butler, Feilden, and Captain Reid remark that they found it commonly near Newcastle on stony flats or slopes among the low hills. Mr. T. E. Buckley says that he found this "Dikkop" both in the bush and open country throughout Natal and the Transvaal, and Mr. Ayres has procured the species near Potchefstroom. He says that it is sparsely distributed all over the Transvaal. Dr. Exton met with it at Kanye in the Matabele country, and Mr. Jameson's expedition at Matje Umschlope in November, and Spalding's, on the Hart River, in February.

Mr. Andersson writes:—"This bird is partially migratory in Namaqua and Damara Land, and, though uncommon, is nevertheless

very local, so that numbers of them may be found in one small spot, whilst the country far and wide around does not produce a single individual. This species prefers broken ground sparingly covered with dwarf bush; it is comparatively tame and easy of approach, and seems to be chiefly on the move after dusk." Senor Anchieta has forwarded specimens to the Lisbon Museum from Mossamedes, Benguela, and from Humbe on the Cunene River.

Ground colour, pale rufous, fading on the belly and part of the wings into white, everywhere (with the exception of the chin, and upper part of throat, which are pure white) mottled with dark brown blotches, which become longitudinal stripes on the neck, chest, and flanks; under tail-feathers, rufous and immaculate; wing-quills, deep brown, approaching to black, the first three crossed near the tips with a white bar; a few of the others tipped with white; base of bill and legs yellowish-green; eye yellowish-green, and very large. Length, 16" to 17"; wing 9" 6"; tail, 5".

Fig. Temm. Pl. Col. 229.

618. *ÆDIGNEMUS SENEGALENSIS*, *Sicains*. Senegal Thick-knee.

This species may be recognized, as we are informed by our friend, Mr. J. E. Harting,* from *Æ. capensis*, by the more uniform colouring of the dorsal plumage, and by the narrower striping of the under parts, which form a strong contrast to the vigorous dark blotches on the under surface of *Æ. capensis*. It differs from *Æ. crepitans*, to which it is more nearly allied, in having no white line across the shoulder. The only specimen of this Thick-knee that has reached our hands was shot by our friend Hendrick van Breda at his place, Zeekoegat (Bredasdorp), in the Strandveldt. Victorin is said by Grill to have also met with the species at the Knysna on the 25th of March, and Mr. Ayres has procured it in Natal. He writes as follows:—"These birds are gregarious, and found amongst the mangroves at the head of the bay. In June and July they appear to be most plentiful, and are not to be found in the summer; they are very shy, and run out of sight amongst the low trees with great swiftness, and are, on the whole, difficult to get. I believe they feed at night."

* This gentleman has very kindly helped us much in the editing of the *Limicole*, on which group of birds he is so well known an authority.—*Ed.*

Head, neck and all the upper parts of the body pale tawny brown; down the middle of each feather a dark streak; fore part of neck and breast paler; belly, thighs, and vent pale yellowish white; above each eye a pale streak, below the same, extending to the bill; throat white; tail with a dark band across each feather; tip black, the rest white; length, 13"; wings, 8".

According to Mr. Ayres, the female is of the same size as the male, but duller in plumage. "Iris, light yellow; eye, very large; bill black, with the exception of a patch over each nostril and the base of the lower mandible, which parts are yellow" (*Ayres*).

619. ÆDICNEMUS VERMICULATUS, *Cab.* Vermiculated Thick-knee.

A specimen of this Thick-knee is said by Drs. Finsch and Hartlaub to be in the Stuttgardt Museum from the Orange River, and they give the authority of the late Jules Verreaux for its occurrence in Namaqua Land.

It is an East African species which appears to come into the northern parts of our present limits for this work. Mr. Ayres says that he saw it on several occasions in the sandy bed of some parts of the Umvuli. He has not met with the species out of Mashoona Land, and did not see any after leaving the Quae Quae River. Prof. Barboza du Bocage has received it from localities to the north of the Quanza, and also from the Cunene River. At Quillengues and Humbe it is said by Anchieta to arrive along with *Æ. capensis*, and both species bear the same native names, being called in Quillengues *Lungungua*, at Humbe *Kilubio* and *Soca-soca*.

The following description is translated from Professor Barboza du Bocage's "Ornithologie d'Angola":—Plumage above, pale ashy brown, striped with blackish, and varied with brown vermiculations, more distinct on the feathers of the back and scapulars, the streaks of the anterior part of the back more strongly marked and larger; throat and a band below the eye from the base of the bill to the region of the ear-coverts white; lower part of the back dirty white, washed with buff; the breast and the flanks streaked with blackish; under tail-coverts rufous; an oblique band of black on the wing-coverts, bordered above with whitish, and followed by a large space of clear ashy streaked with black; quills black, the three first primaries crossed with a complete white band; centre tail-feathers coloured like the back, the latter ones rayed with brown and white,

and blackish at the tips; bill dark brown, yellow at the base; feet greenish yellow; iris yellow, dotted with brown.

The female, according to Professor Bocage, is exactly like the male in size and colour.

Fig. Cab. in Von der Decken Reis. iii, tab. xvi.

Fam. PARRIDÆ.

620. *PARRA AFRICANA*, *Gm.*

African Jacana.

This Jacana is decidedly rare in the colony, though we have received specimens from several different and widespread localities. Mr. Rickard states that they are occasionally to be seen on the Swartkop. Near Kingwilliamstown it is said by Captain Trevelyan to be rare. He killed two specimens after some rainy weather in 1876, and saw another which had been shot in the neighbourhood. "In Natal," writes Mr. Ayres, "they are to be found in considerable numbers in the lagoons and pools along the coast; their food appears to consist entirely of the seeds of water-plants and small insects, which they find amongst the leaves of the water-lilies and other weeds. Walking with ease on the floating leaves of these beautiful plants, they feed more or less throughout the day, and are active in their habits, apparently having constant feuds with each other, and chasing one another about on the wing. If disturbed they always fly to cover, unless very close to it." It has not apparently been recorded from the Transvaal, but during Mr. Jameson's expedition to the Mashoona country it was met with at Kooroomoorooi Pan, and Mr. Ayres says, "although there were several on this pan, we only succeeded in shooting one, owing to their cleverness in hiding amongst the water-grasses thinly growing in the shallow water." Mr. Andersson gives the following note:—"I have never seen this curious species in Great Namaqua Land; and it is a comparatively scarce bird in Damara Land, but pretty common on the rivers Okavango, Teoughe, and Botletlé, and also at Lake N'gami. It is found in pairs or in small flocks, frequenting stagnant pools or still waters on the sides of lakes and rivers, where it runs about on the decayed semi-floating herbage, and also on the large-leaved lotus plants, which generally abound in

such situations—a feat which it accomplishes without sinking, by means of its long and wide-spreading toes. These birds are of a lively disposition, and frequently chase one another about. When they have not been previously disturbed they are generally easy to approach; and their vivacious habits, elegant forms, and handsome colouring add much to the interest of the scene.”

According to Mr. Monteiro, the present species is common on all the fresh, still waters of Angola, and Senor Anchieta has procured it on the Coroca River and at Mossamedes and Humbe.

General colour, rich cinnamon-brown; back of head and neck black, tinged with green; chin and front of neck white, darkening into shining-yellow on the chest, which is divided from the cinnamon of the body by a narrow dark line; front of head bare, which together with the basal half of the bill is blue in life; the tip is horn-coloured; legs dark-green; claws horn-coloured; “bill bluish black, pinkish at the tip, the frontal shield and skin at the base of the upper mandible light slate-colour; shanks, tarsi and feet slate or ash-colour, the feet being rather darker than the legs” (*T. Ayres*). Length, 10”; wings, 5½”; tail, 1¾”.

The female, according to Mr. Ayres, is considerably larger than the male.

Fig. Lath. Gen. Syn. pl. 17.

621. *PARRA CAPENSIS*, *Smith*.

Lesser African Jacana.

Sir Andrew Smith procured a single specimen of this bird near Algoa Bay, and the only other specimens which we have heard of in the colony were two which Captain Trevelyan shot near Kingwilliamstown in 1876, after some heavy rains; these are the only two which came under his notice during his residence in South Africa. In Natal, Mr. Ayres “found numbers of these beautiful birds on the Sea-Cow Lake. In habits they much resemble the larger kind, running with ease on the weeds which appear on the surface; they are rather shy. If, on searching for food, they happen to approach a larger Jacana (*Parra africana*), they are immediately chased away; and as both kinds are plentiful in that locality, and feed all day long, there is constant squabbling amongst them. There is one habit they have which I have not noticed in the other Jacanas—viz., the dipping the head up and down, like some of the smaller Plovers.”

Mr. Andersson says:—"This Jacana is common in the Lake-regions and on the Okavango, where it breeds; but it is very rare in Damara Land, and, I believe, is never seen in Great Namaqua Land."

Forehead yellow; eyebrow white; crown of the head, a narrow bar on each side of the base of the neck, sides of the body, and tail, deep reddish-orange; back of the neck black; sides of the necks and breast pale greenish-yellow; chin, throat, breast, belly, and under tail-coverts white; wings and back grey-brown; bill yellowish-brown; legs and feet greenish-yellow. Length, 7" 3"; wing, 3" 9"; tail, 1" 10".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 32.

Fam. GLAREOLIDÆ.

622. GLAREOLA MELANOPTERA, *Nordm.* Black-winged Pratincole.
Glareola nordmanni, Layard, B. S. Afr. p. 291.

This Pratincole differs from the European bird, and may at once be distinguished from it by the under side of the wings, which in this species is *black*, in the other *rufous*; it has also a longer tarsus and shorter toes and tail. It appears in great numbers on the eastern frontier and Natal during the visitations of the locusts, upon which it feeds. We are informed that it hawks about the clouds of the destroying insect, now and then darting into the mass, and never failing to secure a victim. It is said to run and fly with great swiftness.

Mr. Rickard has met with this species near Port Elizabeth and East London. He writes:—"I have frequently seen 'Locust Birds,' but never where there were any locusts. I have also seen swarms of locusts, but always unattended by *G. melanoptera*." Captain Trevelyan records it as migratory near Kingwilliamstown, coming at times in large numbers.

Mr. Ayres has obtained it in Natal, and Major Feilden observed it in large flocks on the way up country in March. Major Butler and Captain Reid state that "the first pair was seen by them near Newcastle on the 19th of October. In November they were most abundant in flocks in the neighbourhood of Ladysmith and Colenso,

and numerous specimens were obtained on our homeward march down country." Mr. Barratt met with the species near Pretoria, and in the Transvaal Mr. T. E. Buckley found it very common on his return journey where it was in large flocks on the high ground. Near Pochefstroom, Mr. Ayres states that it is occasionally plentiful but at uncertain intervals. Mr. Andersson met with the species near Otjimbingue in Damara Land, and according to Drs. Finsch and Hartlaub, it occurs both in Great and Little Namaqua Land.

The "Locust Bird," as it is called by the colonists, is well known in South Africa as a friend of the farmer, and, as Mrs. Barber informs us, it always builds its nest in the neighbourhood of the swarms of young locusts, so that they may have plenty of food for their young ones, for young locusts remain long near the spot where they were hatched. An excellent account of the bird's habits is recorded by Mr. Gurney in his edition of Andersson's "Birds of Damara Land," being extracted from *The Field* of February 26th, 1870. The author, whose name does not transpire, is stated to have been engaged in a survey near the Fish River under the Colonial Engineering Department. His account is as follows:—"The principal enemy of these great swarms (of locusts), and the valued friend of the Cape farmer, is the small locust-bird, *Glareola melanoptera*. These birds come, I may say, in millions, attendant on the flying swarms of locusts; indeed, the appearance of a few of them is looked upon as a sure presage of the locust-swarms being at hand. Their mode of operation, as I saw it, was as follows. They intercept a portion of the swarm and form themselves into a ring of considerable height, regularly widening towards the top, so as to represent the appearance of a revolving balloon or huge spinning-top. They thus fly one over the other, and hawking at the locusts within its limits. As their digestion, like that of all insectivorous birds, is very rapid, the form in which they thus enclose their prey is admirably adapted to enable the lower to escape the droppings of the upper birds. When they have consumed this portion of the swarm, they follow up the main body and commence another attack, and so on, until night sets in and the birds happen to lose the swarm or the locusts are all devoured. I should not forget to mention that the beak of these birds is exactly of such a shape and such dimensions that when they seize the locust the snap cuts off the four wings, and a passer-by sees

a continual shower of locusts' wings falling on the ground. At another time, when I was stationed at Fort Peddie, and the country was suffering from the effects of a long drought and was overrun with unusual quantities of ants and grasshoppers, we were visited by thousands of these birds, which remained many days devouring these pests. Though the locust-birds are excellent eating, no one ever thinks of destroying them, and they were so fearless that, though I often rode or ran amongst them to test their tameness, only a few in my immediate vicinity would rise, the rest continuing to feed; but every ten minutes or so the whole mass would rise of their own accord and fly, first a few yards to the right, and then to the left, in a slanting direction, presenting alternately a black and white wave of birds some miles in length, a sight never to be forgotten by the spectator."

General colour above, cinereous brown, glossed with green; this shade extending over the wing-feathers, which are black; throat tawny-white, with faint brown streaks, and separated from the breast, which is cinereous, by a crescent-shaped collar; belly, vent, and rump, white; tail long and forked, the two outer and longest pair of feathers white, tipped with black; the rest white at the base, brown at the ends; legs black in a dried skin, but reddish in a fresh one; eyelids and cere at base of bill also red. Length, 10"; wings, 7" 3"; tail, 4" 3".

Fig. Gurney, Ibis, 1868, pl. 8.

623. *GLAREOLA PRATINCOLA, L.*

Red-winged Pratincole.

The only specimen of this species which has come under our notice in the colony was shot by Mr. S. Gird, near George, in 1870, and Mr. Ayres has forwarded a single example from Natal. Mr. Andersson has likewise recorded it as not uncommon near Lake N'gami; but as Mr. Gurney well points out, it is quite probable that at the time he wrote Mr. Andersson was not aware of the occurrence of *G. melanoptera* in South Africa, and had not distinguished between the two species.

This Pratincole may be distinguished from the preceding bird by the chestnut colouring of the under wing-coverts, the same parts in Nordmann's Pratincole being black.

Fig. Dresser, B. Eur. vii, pl. 513, fig. 1.

Fam. CHARADRIIDÆ.

624. CURSORIUS RUFUS, *Gould.*

Burchell's Courser.

Cursorius burchelli, Layard, B. S. Afr. p. 289.

This and *C. bicinctus* are not uncommon in the Karroo, in the neighbourhood of Nel's Poort and Beaufort. They are usually seen in small flocks, varying in number from five to twenty or more, running along with great rapidity between the tufts of stunted herbage which cover these extensive plains. They have a curious habit of swaying themselves to and fro on their long thin legs, when halting after a run, as if they had overshot themselves, and were trying to recover their balance. They feed on seeds and small insects. Mr. Ortlepp says, "In summer I have often seen them perch on small bushes, but I believe this was done for the sake of taking their feet off the burning hot ground."

Specimens have also been sent from Colesberg, and Mr. Rickard has procured the species at Port Elizabeth, while we are informed by Capt. Trevelyan that near Kingwilliamstown it is migratory and not uncommon. Mr. T. C. Atmore met with them near Hopetown in May, 1871.

In Natal it is recorded by Majors Butler and Feilden and Capt. Reid as extremely common all over the Veldt, in pairs and small flocks, apparently breeding in November. Near Potchefstroom it is common, according to Mr. Ayres, in flocks in winter, and the same gentleman says that near Rustenberg it is not nearly so common as in the Potchefstroom district, but a few are occasionally to be met with.

Sides of neck and fore part of head rufous; nape cinereous; crown bordered (behind the eye) with a pointed white collar, margined by black; upper and under plumage fawn-coloured; rump cinereous; tail the same, the outermost feather more or less white; two next with a black bar and white tip, the rest tipped with black only; chin, vent, and thighs white; legs clothed with white scales; in the centre of the belly, a blackish patch; larger wing-feathers, black, the rest broadly tipped with white, which appears most when the bird is on the wing. Length, 7' 4"; wing, 4' 7"; tail, 1' 9".

Fig. Gould, *Icones Avium*, pl. 10.

625. *CURSORIUS SENEGALENSIS*, *Licht.* Senegal Courser.

This species may be distinguished from *C. rufus* by its smaller size, and by the absence of white on the secondaries. It is generally distributed throughout the colony, and has been sent from Natal by Mr. Ayres, who says that it is scarce there. "They frequent the open country, and are to be found after the grass has been burnt off, when, I have no doubt, they more easily find their food. These birds run with extraordinary swiftness, much faster than any of the other kinds of Plovers here, notwithstanding their small size." Captain Reid met with several small flocks on flats near the Tugela, at Colenso. In the Lydenburg district of the Transvaal Mr. Ayres says that it is scarce. A single specimen was obtained by Mr. Andersson at Ondonga, in Ovampo Land, and Senor Anchieta has sent it from many localities in Mossamedes and Benguela.

Mr. Gurney states that this Courser may be distinguished from its ally, *C. rufus*, by its "slightly smaller dimensions, by the somewhat brighter tint of the rufous portion of the plumage, by the greater size and intensity of the blackish abdominal patch, by the absence of grey from the occiput, and by the less extended white tipping of the secondary feathers of the wing."

Fig. Swains. B. West Afr. ii, pl. 24.

626. *CURSORIUS BICINCTUS*, *Temm.* South African Two-banded Courser.

We procured what we took to be, from the anxiety of the birds hanging about the place, two eggs of this species. They are of a light nankin-yellow ground, densely covered with thin compressed streaks of dark brown, so closely distributed as almost to hide the ground-colour. Axis, 14"; diam., 12".

Mr. Atmore sends several eggs, and confirms us in my opinion of the parentage of the eggs I took. He writes:—"It lays one egg only on the bare ground, without even scratching a hole; prefers bare grey places by road-sides. I picked up nearly twenty on my road home from the Nieuw Veldt, by watching them run away from a small flock of sheep, in September and October." It has been found near Grahamstown and in the Free State by Mr. Windham. Mr. T. C. Atmore forwarded a pair to us from Hopetown. Mr. Barratt writes: "I first found this little bird running rapidly along between the herbage growing on the flats near Sandy River, Orange

Free State. I have often watched the waggon-drivers run after them with their whips; and the birds would run a long way before flying, and then only for a few yards. I have seen them further north, but do not remember having seen them close to the Lydenburg Gold-fields." Mr. Ayres has found it breeding near Potchefstroom, and says that "these birds frequent open ground, and are to be found, though not plentifully, about six miles from Potchefstroom, down the Mooi River, and thence right away down the Vaal." During Mr. Jameson's expedition to the Mashoona country, it was observed on the Siklogolo River and at Spalding's, on the Hart River. Mr. Andersson writes:—"This Courser is not uncommon in various parts of Great Namaqua and Damara Land, chiefly during the wet season. I frequently found it plentiful in the neighbourhood of Otjimbinque, and comparatively tame. It sometimes occurs singly, at others in pairs, and occasionally in small flocks, each flock probably consisting of an entire family. This species runs with considerable celerity."

Upper parts, variegated rufous, black, dirty white, and brown; each feather being the latter colour at the base, more or less tinged with rufous; then follows an indistinct black mark, extending in a point down the shaft to the tip, which is dirty white, tinged more or less with rufous; throat dirty white; chest and belly rufescent, separated by two black crescent-shaped bars; the feathers of the throat and chest have each a dark brown line down their centres; on the belly only the shafts of some of the feathers are of this colour; vent and rump white; the first three pair of outer tail-feathers the colour of the belly; the rest brown; legs long, covered with hard white scales. Length, 9" 6"; wing, 6" 3"; tail, 3" 3".

Fig. Jard. and Selby, Ill. Orn. pl. 48.

627. *CURSORIUS BISIGNATUS*, *Hartl.*

Hartlaub's Courser.

This species was discovered by the late Mr. Monteiro in Benguela, but has not since been met with by any traveller.

It is said by Dr. Hartlaub to be allied to *C. bicinctus*, but differs in the following points:—(1) by its much smaller size; (2) by the scarcely perceptible black band on the hind neck; (3) by the much paler colour of the back; (4) by all the secondaries and the fifth to the tenth primaries being for the most part pale rufous; (5) by the

belly from the throat downwards, the under wing-coverts and under tail-coverts being pure white; (6) by the inner webs of the quills being rufous white below; (7) by the outer tail-feather being entirely white.

Fig. Hartl. P. Z. S. 1866, pl. vi.

628. *CURSURIUS CINCTUS*, *Heugl.*

Heuglin's Courser.

This rare species was discovered by Baron von Heuglin at Gondokoro on the White Nile, and the late Mr. Andersson obtained a pair at Ondonga in the Ovampo country in January, 1867. Senor Anchieta has collected specimens at Humbe on the Cunene River.

The following is a translation of the description given by Professor Bocage:—

Upper part of the head dark brown with the edges of the feathers tinged with buff; forehead, lores, and auricular spot white washed with buff; the feathers of the upper surface of the body brown with broad edges of grey washed with rufous or buff, and inclining to white on the wing-coverts; upper tail-coverts white; a white band bordered with black on each side of the head, commencing above the eye, and uniting in a point with that of the opposite side; throat, sides of the neck and fore-neck and the lower parts white; a band of maroon brown, commencing behind the eye, skirts the auricular spot and forms with that of the opposite side a V-shaped mark on the fore-neck; behind this band keeping to a great extent parallel with it a black band loses itself on the sides of the breast in a space varied with brown and buff; two transverse bands on the breast, one black, the other rufous, separated by an intervening space of white; primary quills blackish; tail pale brown shaded with rufous, marked near the tip with an indistinct black band; the outer tail-feather white, the next one with the outer webs varied with white; bill blackish yellow at the base; feet greyish; iris brown.

Fig. Heugl. Ibis. 1863, pl. 1.

629. *CURSURIUS CHALCOPTERUS*, *Temm.*

Bronze-winged Courser.

We have never seen a specimen of this Courser from the colony, though Mr. Jules Verreaux assured us that when he was in South

Africa in the early part of the century, it was generally distributed, but rare.

Mr. Ayres has met with it once in Natal, where it was excessively rare in the parts in which he collected. Capt. Reid obtained one specimen at Colenso on the 20th of November in thick dwarf mimosa bush, to which it kept close. Mr. Ayres likewise procured a single example in January on the banks of the Rhinoster River. It seems, however, to be more plentiful in South-Western Africa, for Mr. Andersson writes: "The Violet-winged Courser arrives in Damara Land in small flocks at the beginning of the rainy season. On their first arrival they keep exclusively to the bush, but later disperse themselves more over the open. The cause of their first seeking cover is explained by the circumstance of their reaching Damara Land in a moulting condition, or about to change their plumage, when of course the bush affords them a better chance of escape and concealment from their natural enemies. They are not particularly wild, yet often very difficult to obtain, as they stick to the cover with great tenacity, and when suddenly flushed the bird just darts behind the nearest bush or tree, when it alights and continues its flight by hard running, only using its wings in its utmost need. During the heat of the day they remain nearly stationary. This species feeds on insects of various kinds. The flesh is very dark-coloured but excellent eating."

Senor Anchieta has met with it at Capangombe and Humbe, where it is always found near the water-courses and marshes.

Light brown above; front, throat, rump, and body beneath, white; quills black, tipped with shining violet; breast pale brown, with a black band; "bill black, the base of the lower mandible crimson; gape scarlet; legs crimson-pink; toes blackish; iris dark brown; eyelid thick and orange scarlet" (*Reid*). Length, 10"; wing, 7" 9".

Fig. Gray and Mitchell, Gen. B. iii, pl. 143.

630. CHARADRIUS PLUVIALIS, *L.*

Golden Plover.

Dr. Hartlaub has given South Africa as a habitat of this species, and the late M. Jules Verreaux assured us that he had shot it at Zoetendals Vley during his residence at the Cape. It has been met with in Gaboon, but has not yet been recorded from Angola. We ourselves procured it at Lamo, on the east coast of Africa.

In winter, upper parts brownish-black, spotted with yellow; cheeks, neck, and fore-part of breast greyish, variegated with brown; throat and abdomen white. In summer, upper parts black, spotted with bright yellow; fore-part of neck and breast black; forehead, line over the eye, band bordering the black of the lower parts, and lower tail-coverts, white.

Fig. Dresser, B. of Europe, vol. vii, pls. 515, fig. 1, 518, figs. 1, 2.

631. *SQUATAROLA HELVETICA* (L.).

Grey Plover.

The Grey Plover is, of course, only a winter visitant to the African continent, and many young birds occur which, from the golden spotting on the back, might be mistaken for the preceding species, *C. pluvialis*. They may, however, always be told by the black axillaries (these being white in the Golden Plover), and by the presence of a hind toe as in *Vanellus*. The late M. Jules Verreaux told us that he procured it at Zoetendals Vley, in the non-breeding dress, and we have ourselves met with many specimens. Mr. Ayres has shot it on the Monocusi River in Natal. Mr. Andersson says: "This Plover is rarely seen inland in Damara or Great Namaqua Land, but is very common on the coast. It is found singly or in small flocks, searching for its food (which consists of small crustacea, insects, and worms) where the tide has receded, and sometimes wading into the water up to its belly. It runs with very great rapidity, and is of a wary and suspicious disposition, becoming extremely difficult to obtain if at all pursued. Its flesh is palatable. This species takes its departure on the approach of the breeding season; and I have never seen it in such dark plumage as it is represented as attaining in Europe at this season." Senor Anchieta has sent specimens from the River Coroka in Southern Mossamedes. We may mention that we ourselves procured a considerable number of specimens on the east coast of Africa as far as $1\frac{1}{2}^{\circ}$ S. lat.

Adult male in summer plumage.—Fore-part of head, neck, chest, and belly, deep brownish-black, bordered by a white line, which blends into the ground of the back and top of the head, both of which are more or less mottled with dark brown and black; vent and thighs pure white; tail white, transversely barred with brown-black. The plumage in winter is dark grey, variegated with light markings, the black plumage disappearing entirely. The female is

similar to the male in winter dress. Length, 12"; wing, 7" 10"; tail, 3" 6".

Fig. Dresser, B. of Europe, vii, pls. 515, fig. 2, 518, fig. 3.

632. *ÆGIALITIS CANTIANA* (*Lath.*). Kentish Sand-Plover.
Charadrius cantianus, Layard, B. S. Afr. p. 296.

The only specimen of the "Kentish Plover" which has fallen under our notice occurred in a collection of birds made by the late Mr. Villet at the Knysna. We purchased the specimen, which is now in the South African Museum. Mr. Andersson has also met with it in Damara Land. He writes: "This is rather a scarce bird in Damara Land, and hardly to be found except on the sea coast, in the neighbourhood of which it seeks its food on open ground slightly interspersed with grass and aquatic herbage. It feeds on worms and insects, and also on the sand-hoppers which abound on the beach at Walwich Bay, and of which it seems to be particularly fond. I have invariably found it in pairs, but have never met with its nest."

Adult, with the upper parts light brownish-grey; the forehead with two bands, a white and a black; the hind part of the head light brownish-red; the loreal space and a band behind the eye, black; the throat, and a band crossing the hind neck, white; a large patch of black on each side of the lower part of the neck; bill black; the lower mandible flesh-coloured at the base; feet dusky; claws black. Young, without black on the head; the bands on the sides, and the patches on the neck, brown; feathers of the upper parts margined with whitish. Length, 6" 9"; wing, 4" 6"; tail, 2".

Fig. Dresser, B. Eur. vii, p. 523.

633. *ÆGIALITIS MARGINATA* (*Vieill.*). White-fronted Sand-Plover.
Charadrius marginatus, Layard, B. S. Afr. p. 298.

This little Sand-Plover is common along all parts of our coast, and on any extensive inland pieces of water. It breeds with us in the month of November, generally laying two eggs, of a fawn or nankin colour, profusely spotted with black, sometimes streaked, and sometimes the spots form a circle at the obtuse end: axis, 16"; diam., 11".

The young run immediately on their exclusion from the egg. They are covered with white down, and on being pursued, cover

down with such success among the rounded white pebbles, which they closely resemble, that if once the eye is taken off them, it is a mere chance if they are again detected. Captain Reid noticed several small flocks of this bird on the beach outside Durban Harbour in August and December. Mr. Andersson gives the following account of the Plover in Damara Land: "This species is very numerous at Walwich Bay, and at many intervening points of the coast between that locality and the Cape, but I do not recollect having seen it inland. It can hardly be said to go in flocks, although a considerable number of individuals may be found scattered over a small extent of beach in close proximity to each other. It runs along the sand with great swiftness; and, unless very hard pressed, it prefers making its escape by trusting to its legs rather than by taking wing; when it has not been previously disturbed it is easy of approach. It utters a low plaintive cry, and feeds on small sandflies and other minute insects, which it generally catches by running rapidly in pursuit of its prey. Its flesh is very palatable. This Plover breeds sparingly at Walwich Bay, scooping a small round hole in the sand, but without any lining. The female lays two eggs in the month of April or early in May; these are of the usual Plover shape, but sometimes rather blunt at the smaller end; they are of a yellowish-brown colour, prettily variegated with numerous irregular spots and streaks of a dark liver-brown."

Above, cinereous-brown; the edges of the feathers rufescent; forehead white; nuchal band faint rufous; lores black; below all white; wing-coverts brown, with white shafts; webs of inferior wing-feathers margined and tipped with white; four middle tail-feathers brown; those at the side white. A specimen shot April 29th, 1863, measured: length, 7"; wing, 4" 9"; tail, 2½". Irides brown; bill black; the base livid; legs and feet livid-blue.

634. *ÆGIALITIS HIATICULA** (L.). Common Ringed-Plover.
Charadrius hiaticula, Layard, B. S. Afr. p. 298.

This species is stated to have been procured at the Knysna by M. Victorin, and Mr. L. C. Layard shot a specimen in full plumage

* We copy entire the descriptions of *Æ. hiaticula* and *Æ. cantiana* from Macgillivray's work on the birds of Britain, in order that the two species may readily be distinguished from each other. We also use his excellent descriptions for such of our birds as belong to this class, as none can exceed them for clearness and accuracy.

at Salt River Mouth, near Cape Town, in April, 1865. At that time, however, we were not aware of the occurrence of *Æ. intermedius* in South Africa, and a re-examination of the specimens above recorded is desirable. Mr. Rickard tells us that he has met with it both at Port Elizabeth and East London. Mr. Andersson states that it occurs at certain seasons at Walwich Bay, but only very sparingly elsewhere in Damara Land.

Adult, with the upper parts greyish-brown; the forehead with two bands, a white and a black; a dark brown band under the eye; a ring of white including the throat, succeeded by a broader ring of brownish black; bill orange at the base, black at the tip; feet orange; claws black. Young, without the black band on the forehead, the other bands lighter; the feathers of the upper parts margined with pale-brownish; the bill entirely black in the young, yellow at base in the old bird; the feet dull greenish-yellow; the claws black. Length, 8" 6"; wing, 5" 4"; tail, 2" 8". Bill, 6"; tarsus, 1".

Fig. Dresser, B. of Eur. vii, pl. 525.

635. *ÆGIALITIS INTERMEDIA* (*Ménétr.*).

Intermediate Ringed Sand-Plover.

We shot this species on the Keishkamma River in March, 1870, and a specimen from the Orange River was shown to us by Dr. Bradshaw, who shot it in that locality.

It exactly resembles the preceding bird, but is much smaller. Length, 6" 7"; wing, 5" 2"; bill, 5"; tarsus, 9".

636. *ÆGIALITIS VARIA* (*Vieill.*).

Kittlitz's Sand-Plover.

Charadrius kittlitzii, Layard, B. S. Afr. p. 297.

This little Plover is common about the chain of lagoons formed by the "Salt River," and along the sea-shore near Cape Town. We have also seen it in the month of September on the rocks at Green-Point and on Robben Island, and it is abundant near Zoetendals Vley. It breeds at the Berg River in September. The eggs are laid in a little depression in the dry mud, which is heaped up a little round them. The eggs are olive-brown, profusely and confusedly marked with fine lines and spots of black throughout. Axis, 1" 2"; diam., 10". On leaving the nest the female, with a few rapid motions of her feet, covers the eggs with mud and runs to some

distance before taking wing. When driving in a troop of fifty or one hundred mares Mr. Kotze often discovered their nests by the courageous little bird facing the whole troop, flapping her wings, and assuming a threatening attitude; the galloping mares would divide right and left and avoid the small atom, and she thus preserved her nest. In the Transvaal, Mr. Ayres says: "These birds frequent the muddy flats, and run with considerable swiftness, stopping suddenly, and bobbing the head, as many of the Plovers do." In a further note he observes: "This species migrates to this part of the country during the present month for the purpose of breeding; it is found sparsely in pairs, frequenting stony and tussocky ground, where vegetation is scanty, and generally at no great distance from water; it disappears during the winter months. The stomachs of this bird and its mate (killed at the same time) contained insects, principally a species of white ant." Mr. Andersson writes: "This pretty little Plover is not uncommon in Damara Land; but I do not think that it breeds there. It is to be seen in flocks, often composed of a considerable number of individuals, and feeds on the small insects which are to be found in the moist and humid localities to which it is partial. At some seasons I found it very abundant at Otjimbingue, but I do not recollect having ever observed it on the sea-shore." Senor Anchieta has procured it in Benguela, where it is called *Kanhiapraia*.

General colour above, ashy-brown, variegated with light ash; forehead, semi-circular band round the back of the head, chin, throat, and vent, white; a black band extends across the head, just behind the white of the forehead, through the eyes and behind the white collar; a black patch extends from the bill to the eye; wings black; chest and belly, isabella-yellow; four lateral tail-feathers on each side, isabella-yellow, tinged with grey, the rest dark ashy-brown; bill and legs black. Length, 6" 6"; wing, 4" 5"; tail, 1" 9".

Fig. Harting, Ibis, 1873, pl. 8.

637. *ÆGIALITIS TRICOLLARIS* (*Vieill.*). Treble-collared Sand-Plover.

This pretty little Plover, the *Strand-looper* of the colonists, is common throughout the colony, frequenting equally the sea-shore, the natural vley, artificial dam, or river. We found it abundant in the water-holes of the Karroo rivers, and equally so on the sea-shore

of the coast. It is a solitary species, never appearing more than a pair, male and female, at once; and though five or six pairs may often be found within a few hundred yards from each other, they keep to their respective puddles, and always return to them if driven up by a passing foot. They run with considerable rapidity, often squat behind a stone, or amid tufts of grass, to evade detection; but when on the wing, fly strongly and well. They breed on the sea-shore or along the banks of streams and vleys, never far from water. Their nest is a mere depression in the soil, unprotected by stone or bush; and their eggs, enormous for the size of the bird, are two to five in number, of a dirty-white ground, profusely and minutely covered with hair streaks, having a tendency to run in zones, there being always one at the obtuse end: axis, 15"; diam., 11". Their food consists of minute crustaceans, shells, and insects. Mr. Chapman, who found the bird at the Zambesi, states that this is the companion of the hippopotamus and warns him of danger. Mr. Bradshaw met with it in the Orange River, and we are informed by Mr. Rickard that it is common both at Port Elizabeth and East London. In Natal, writes Mr. Ayres, "these pretty little Plovers are by no means common; they are mostly found on the muddy banks of creeks, amongst the mangroves, either singly or in pairs; at first sight they might easily be mistaken for Water-Wagtails, their movements and appearance being very similar; their flight is rapid; they feed on small marine insects, and swallow a very fair share of pebbles to aid digestion." Mr. Frank Oates procured a specimen at Durban, and according to the observations of Majors Butler and Feilden and Capt. Reid it was abundant in all the vleys in the part of Natal visited by them, being seen in parties of seldom more than three or four together, and not associating in flocks. Mr. T. E. Buckley also found the species common throughout Natal and the Transvaal, frequenting the banks of streams. Mr. Ayres writes: "I found a pair of these birds breeding on an island in the centre of the Vaal River in the month of November. The eggs, two in number and much incubated, were laid on the bare sand, exposed to the heat of the sun, which, one would think, was enough to cook them. The nest was formed by a few very small whitish and white stones in a slight excavation. The eggs were of a creamy white, much marked throughout with dark umber-brown lines, which were especially numerous

in two zones, one of which was about the middle of the egg, and the other and darker zone near its obtuse end; they were exceedingly large for the size of the bird, measuring respectively $1\frac{9}{32}$ by $\frac{29}{32}$ and $1\frac{6}{32}$ by $\frac{28}{32}$ inch." The following account is given by Mr. Andersson: "This species is pretty commonly dispersed over Damara Land and Great Namaqua Land, both on the coast and at inland waters. It is generally seen in small flocks, and exhibits comparatively little fear of man. It feeds chiefly on small insects, and also, at the inland rills in Damara Land, on a species of aquatic worm. Its flesh is palatable. In the egg of this Plover the ground-colour is almost hidden by a profusion of thickly clustering spots and fine eccentric lines of grey-brown and sepia-brown; in some instances these markings are arranged in a ring round the thicker end of the egg." Senor Anchieta has met with it in considerable numbers at Benguela, Quillengues, and Humbe: it is called at the latter place *Quicobequelababa*.

General colour above, brown, glossed with green; forehead white; a white line extends from thence over the eye, and unites behind the head, at the base of the occiput; throat grey; this is succeeded by a black collar, next by a white space, and that again by a broad black one; from this to the end of the tail it is all pure white; wing-feathers black and dark brown; the latter with the secondaries tipped with white; bill black; base yellow; cere round the eye and bill, red; iris hazel. Length, 6" 3"; wing, 4" 7"; tail, 3".

Fig. Heugl, Orn. N. O. Afr., pl. xxxiv, fig. 5 (head).

638. *ÆGIALITIS GEOFFROYI* (*Wagl.*). Geoffroy's Sand-Plover.

We shot a single female of this Plover on the Salt River, near Cape Town, in 1858. It was along with a flock of Sandpipers feeding in the marsh. The late M. Jules Verreaux also mentioned it to us as the bird which he himself had shot near Cape Town. Mr. Rickard has also procured it near Port Elizabeth, on sandy plains near the sea, and it is a well-known visitor to other parts of Africa.

General colour above, greyish-brown, each feather slightly margined with pale-rufous; a white line springs from the nostril and passes over the eye, but does not extend to the back of the head; throat, and all under parts, white; loreal space, greyish-brown, as are also patches on each side of the lower part of the neck, which nearly

meet across the chest, and form a collar; tail-feathers all brown, the outer pair almost white; under side of wings, white; upper side of quill feathers, very dark brown; bill robust, black, thickened towards the point, flesh-coloured at the base; legs (apparently) flesh-coloured. Length, 8"; wing, 5" 9"; tail, 2" 9"; tarsus, 1" 6"; middle toe, 11".

Fig. Harting, Ibis, 1870, pl. 11.

639. EUDROMIAS ASIATICUS (*Pall.*). Asiatic Dotterel.
Charadrius asiaticus, Layard, B. S. Afr., p. 278.

Mr. Arnott, who first forwarded specimens to us from the neighbourhood of Colesberg, writes as follows: "Found together in flocks of fifteen or twenty, very far away from water. They are scarce, and I only see them after showers of rain, which bring out small coleoptera and animal life of that sort, on which these birds seem to feed, and get enormously fat." We have seen specimens from the Knysna, and also from Grahamstown. Captain Trevelyan informs us that they are migratory near Kingwilliamstown, but not uncommon. Majors Butler and Feilden, and Captain Reid saw several about the mouth of the Umgeni River, near Durban, on the 26th of December, and Mr. Ayres records it from the Transvaal. He writes: "One day, as I was trudging down to the river to have an afternoon's fishing, I found four of these Plovers on the open flats outside Potchefstroom. They had somewhat the appearance of Burchell's Courser when on the ground, but did not run so fast. They ran and then suddenly stopped, with their bodies horizontal, ready for flight, and, being much the colour of the ground, were not easily seen. They uttered a short 'chuck' whilst rising. I bagged two at one shot. On a subsequent occasion I saw two others, which I did not obtain." In a male shot on the 19th of September the "stomach contained beetles and other insects. These Plovers make their appearance in these parts at this season, about the time when the first heavy rains fall, and are pretty plentifully scattered along the valley of the Mooi River, frequenting the bare grass-lands, which at this time of the year are all but devoid of herbage, in flocks of from six to twenty or more. On rising they have much the appearance of *Glareola melanoptera*, and utter much the same short stridulous note of alarm; they run with considerable swiftness." Mr. Andersson observes: "Small flocks of this Plover

may at times be seen in Damara Land ; but it is never common, and very shy. All my Damara specimens were procured at Otjimbingue, in the moist bed of the river Swakop." Senor Anchieta has procured one young specimen at Benguela.

Above, greenish-brown, the edges of the feathers buff ; forehead, before the eye, chin, and throat, white ; chest deep buff-coloured, followed by a black band ; all the rest of the under-parts white ; tail-feathers tipped with pale-buff. Length, 9" ; wing, 5" 9" ; tail, 2½".

Fig. Harting, Ibis, 1870, pl. v.

640. *LOBIVANELLUS SENEGALUS* (L.). Senegal Wattled Plover.
Chettusia lateralis, Layard, B. S. Afr. p. 292.

The members of the genus *Lobivanellus* may be distinguished by having a spur on the wing, four toes, and by having the bill lobed. Only one species is ordinarily met with in South Africa, and it does not appear to be found in the western parts of the colony. Mr. Rickard, however, informs us that it occurs near Port Elizabeth, but is very scarce there. Mr. Buckley met with it once in the Transvaal in November, and Mr. Ayres says that a few of these Plovers occasionally find their way to Potchefstroom and the neighbourhood ; they are, however, very rare visitants. It was seen in Mashoona Land during Mr. Jameson's expedition. Mr. Andersson gives the following note : "I have met with this large Plover on the rivers Okavango and Teoughe, at Lake N'gami, and in Ondonga in the rainy season, when it is occasionally to be found in small flocks, though more frequently in pairs or singly. It frequents the banks of streams and the sides of marshy places ; but though it appears to find its food, consisting of insects and small mollusca, in the immediate neighbourhood of such localities, I have never observed that it approaches the water very closely." Mr. Monteiro met with the species in Benguela, and several examples have been procured by Anchieta at Caconda, Huilla, and Humbe. Professor Bocage states that it also occurred in a collection made by Messrs. Capello and Ivens at Quango, where it is known to the natives by the name of *Moko*.

Front of head white, with a brown bar extending over the vertex ; back of the neck, back, and rump, brown, tinged and glossed with green ; wing-feathers black ; tail white, with a broad black bar across the apical half ; chin white ; throat black ; neck streaked with

blackish-brown ; breast and belly, dove-colour ; flanks and thighs, dark grey-brown ; vent white ; a yellow wattle tinged with orange-red extends upwards and downwards from before the eye ; bill greenish-yellow, tipped with black ; legs greenish-yellow ; wings armed with a spur. Length, 13" 6" ; wing, 9" ; tail, 4".

Fig. Smith, Ill. Zool. S. Afr. pl. 23.

641. *LOBIVANELLUS ALBICEPS*, *Gould*. White-crowned Wattled Plover.

Hoplopterus albiceps, Layard, B. S. Afr. p. 293.

In Dr. Hartlaub's "Ornitologie West-Afrikas" the locality "Buffels River" is given on the authority of Alexis Verreaux, but Mr. Harting and other good authorities have doubted this occurrence, and think that *H. speciosus* may have been mistaken for it. It must be mentioned, however, that Mr. Ayres records a specimen as having been shot by him in the neighbourhood of Potchefstroom, of which he forwarded the skin to England ; unfortunately it was stolen during the voyage. Sir John Kirk procured a single specimen on the Zambesi during the first Livingstone expedition.

Head, throat, middle of the wing, rump, belly, and vent, white ; sides of head and neck, cinereous-purple ; back brownish ; scapulars, three external feathers, and apical half of the tail, black ; bill greenish-yellow ; tip black ; wattles yellow, attached at right angles to the beak, pendulous, narrow, pointed, 1"·6" long ; wing-spur about an inch long. Length, 13" ; wing, 8" ; tail, 4".

Fig. Fraser, Zool. Typ. pl. 64.

642. *HOPLOPTERUS SPECIOSUS* (*Wagl.*).

Black-and-white Spur-winged Plover.

Forwarded in some abundance from Colesberg by Mr. David Arnot, who describes their habits as similar to those of *C. coronata*. It occurred constantly in all the collections formed in the interior by our several contributors. From Natal Mr. Ayres writes : "These Plovers are plentiful in our bay during the winter, but I believe they are not here in summer. They congregate in large flocks and are very shy, but they are also frequently found solitary. They feed on the mud banks when the tide recedes, together with the herons, sandpipers, &c. ; their flight is very rapid, and they run with considerable swiftness." In the Transvaal, the same gentleman observes : "These Plovers are plentiful about Potchefstroom ; they frequent the borders of swamps and snipe-grounds, and are some-

times found in companies of a dozen together, though generally not more than two or three are met with. They fly about the intruder on their haunts with loud screams of disapprobation, and keep up a constant clatter to the annoyance of anyone intent upon Snipes or other feathered game, among which they thus produce a state of unwished-for watchfulness. The eggs of this Plover are generally from two to four in number; the nest is simply a slight excavation on the bare open ground, with a thin layer of grass-roots, and is generally placed from fifty to a hundred yards from the edge of some swamp. The birds breed in August and September, and are at this time exceedingly bold, darting at the heads of any cattle that happen to come too near their nests, and actually driving them away by their incessant noise and annoyance." Mr. Barratt says: "I met with them in suitable places close to Lydenberg, and in the greater part of my journey from Bloemfontein to the Gold-fields. I found them also on my trip to Rustenberg." The late Mr. Frank Oates procured this species on the Shashe River in October, 1874, and on the 19th of January it was met with by Dr. Jameson's expedition at the Great Chine Pan, but Mr. Ayres states it was not so plentiful here as in some parts of the Transvaal, especially along the Mooi River. Mr. Andersson gives the following note: "This is a common Plover in Damara and Great Namaqua Land, at Lake N'gami, and on the Rivers Teoughe and Okavango. It is a somewhat local bird in Damara Land on account of its partiality for water; indeed I have never seen it far from the water, but generally in the immediate neighbourhood of springs, marshes, lakes, and streams. It is always found in small flocks, and, where not disturbed, is comparatively tame; when flushed it rises with short rapid jerks of the wings, but never flies far at a time. It is very noisy when on the wing, and hence probably is derived its Sechuana name of 'Setula tsipi,' *i.e.*, 'iron-hammer' or 'blacksmith;' for its cries have a peculiarly metallic, ringing sound. This Plover feeds on insects and worms; and its flesh is palatable. It breeds in Damara Land, as, although I have not met with its nest myself, one of my friends discovered one at Omanbondé, and presented the two eggs which it contained to the Cape Museum. These eggs are buff-coloured, profusely spotted with dark brown; their length is 1" 6", and their breadth 1" 1"." Senor Anchieta has collected it both on the Coroca River in Southern Mossamedes, as well as

in the interior at Huilla and Humbe, where it bears the name of *Kukolekole*.

General colour, black; top of head, and forehead, patch at back of neck, lower front of belly, vent, and basal two-thirds of tail, white; lesser wing-feathers grey; legs and bill black; wing armed with a sharp spur. Length, 12"; wing, 8' 7"; tail, 4" 6".

Fig. Temm, Pl. Col. 526.

643. HOPLOPTERUS CRASSIROSTRIS, *De Filippi*.

Thick-billed Spur-winged Plover.

A single example of this rare species was obtained by Mr. Fellowes at Ihluhlu Bay, a little inlet in Santa Lucia Bay, but we have seen no other specimens.

Front two-thirds of the head—centre of neck, wing (with exception of three first quill feathers), basal half of tail, sides, belly, and vent, pure white; back of head and neck, chest, three first wing-feathers, shining jet black; base of back of the neck and back, and wing secondaries, grey-brown; apical portion of tail black; legs and base of bill red; point black; cere of eye red. Length, 13"; wing, 7" 8"; tail, 4" 6"; wing spur, 3"; irides, black.

644. CHETTUSIA MELANOPTERA, *Rüpp.*

Black-winged Lapwing.

Hoplopterus melanopterus, Layard, B. S. Afr., p. 204.

The genus *Chettusia* is recognizable by its three toes and by the absence of a spur on the wing and of the facial lobes. Procured in certain circumscribed localities in the neighbourhood of Mossel Bay by Messrs. Atmore. Mr. Glanville informs us that several have been shot near Grahamstown on the Commonage, and Mr. T. Atmore has forwarded it from Eland's Post. Mr. Rickard tells us that it is very common at Port Elizabeth and East London, and forwarded an egg which he took out of a bird shot on the 23rd of August, 1869. It is very unlike that of *H. coronatus*, being of a pale grey-green ground, spotted throughout with rather small blotches and spots of various shades of brown and light purple, rather thickest at the obtuse end. Axis, 1" 9"; diam., 1" 2".

In British Caffraria, says Capt. Trevelyan, "it is common, but to the west of the Fish River its place appears to be taken by *C. coronata*. It is said to have occurred in Natal.

General colour of back, brown, with a purple gloss; forehead,

chin, rump, thighs, vent, and stripe along the wing, white; wing-feathers and band across the chest black; back of head, neck, and chest, grey; basal half and tip of tail-feathers, white. Length, 10" 6"; wing, 8" 9"; tail, 3" 8".

Fig. Cretzschm. in Rüpp. Atlas, pl. 31.

645. *CHETTUSIA CORONATA* (*Temm.*). Crowned Lapwing.
Hoplopterus coronatus, Layard, B. S. Afr. p. 294.

The "Kiewit" is scattered throughout the country in small parties, and frequenting grassy places, where it subsists on worms and small insects. Its nest, usually a mere depression in the soil, contains two, and sometimes three eggs, of a deep greenish-brown ground, blotched with rather coarse brown and indistinct purple, chiefly in a ring at the obtuse end: axis, 1" 9"; diam., 15". Mr. Atmore has seen five eggs in a nest; Mr. Kotze never saw more than two. During the day this bird does not stir about much; but as soon as the cool shades of evening fall on the earth, the "Kiewit" makes known its presence by its loud plaintive call. This, with the pipe of the "Dikkop" (*Æ. maculosus*), and the wail of the jackal, are nearly the only sounds that break the silence of the night about the solitary dwelling of the Cape farmer. Mr. Rickard tells us that it is rather rare near Port Elizabeth and East London, and Capt. Trevelyan says the same respecting its occurrence in British Caffraria, replacing *C. melanopterus* to the west of the Fish River. In Natal, according to Mr. Ayres, this species is not found near the coast districts, but he met with them first under the Drakensburg. Majors Butler and Feilden and Capt. Reid state that it was abundant everywhere on the "veldt" in small flocks. No nests were found, though the birds were evidently breeding in October and November. Mr. Ayres has found it nesting in the Transvaal. Mr. Frank Oates procured the species at Tati in the Matabele country, and it was met with at Spalding's, on the Hart River, by Mr. Jameson's expedition.

The following note is given in Andersson's work on the birds of Damara Land: "This handsome species is widely diffused throughout Damara and Great Namaqua Land, in the Lake regions, and on the River Okavango; it was very plentiful at my late residence at Otjimbingue, where a flock or two were generally to be found throughout the year; and I have no doubt that it breeds there, as I have found young birds in almost every stage of plumage. It is a

gregarious species, not unusually associating in flocks of from thirty to forty individuals, sometimes frequenting the moist beds of periodical streams, but more often haunting districts away from the water, and of the driest and most arid character. I have often been charmed with the presence of these birds in such localities, where there was nothing else to break the monotony and the dreariness of the desolate scene. The long stilt-like legs of this species enable it to run with great celerity; and if pursued, it invariably trusts to its legs for safety, and only takes to the wing as a last alternative; but this is not from any want of power of wing, for it flies well, and its flight is very similar to that of the European Lapwing. These Plovers fly by moonlight as well as by day; and when flapping about, either by day or night, they utter shrill cries which may be heard at a great distance. The food of this species consists of insects; and its flesh is excellent eating." Prof. Bocage states that it is common at Humbe on the Cunene River, occurring in large flocks: native name *Kilokuenke*.

General colour above, grey-brown, glossed with purple; paler on the throat, and darkening on the breast, to a bold black bar, which is succeeded by the pure white of the belly and vent; top of the head black, divided into two portions by a pure white crown streak, which springs from the forehead, and passes round to the back of the head; a white line extends down the closed wings, the quills of which have their inner webs more or less white; tail-feathers white, broadly barred at the ends with black; extreme tips white. Length, 13"; wing, 8"; tail, 4" 6".

Fig. Daubent. Pl. Enl. 800.

646. STREPSILAS INTERPRES (*L.*).

Turnstone.

The Turnstone is a constant resident on these shores, extending upwards as far as the Equinoctial Line. It frequents rocky places in preference to sandy beaches, feeding on small crustaceans, shells, and the various insects which infest the decaying seaweed. They usually keep in small families of from four to eight; do not appear to mingle with the sand-pipers; and are wary and difficult to approach. We fancy it must breed on Robben Island, among the rocks at the northern end, having seen young birds in that neighbourhood. We have, however, never seen it in the breeding dress except in one example in Andersson's collection, shot in

Walwich Bay. Dr. Bradshaw procured a specimen on the Orange River in December, 1881, and Mr. Ayres has met with it in Natal frequenting the sea-shore. Sir John Kirk found it on the shores of Lake Nyassa, and Mr. Andersson observes, "The Turnstone is pretty common all along the south-west coast of Africa, and is found either in pairs or in small flocks. I never met with the nest of this species in Africa, although I was acquainted with its mode of nidification from having seen its nests on the coast of Sweden."

General colour of the upper parts, dark brown, glossed with green and purple, the feathers edged with pale brown; fore-part and sides of the head, brownish-white, mottled with black; throat white; a band on each side from the lower mandible, the side of the head behind the ear-coverts, and the fore-part of the neck, black; the feathers slightly edged with whitish; the rest of the lower parts pure white, as on the hind part of the back and the upper tail-coverts, some of the rump-feathers, however, being black; the tail is white at the base, brownish-black towards the end, edged externally with light-brown, the outer web of the outer, and the tips of all, excepting the two middle, white; legs and feet orange; claws black, as is also the bill; the lower mandible tinged with red at the base. Length, 9" 9"; wing, 6" 4"; tail, 2" 9".

Fig. Dresser, B. Eur. vii, pl. 532.

647. *HEMATOPUS CAPENSIS*, *Licht.* African Black Oyster-Catcher.
Hæmatopus moquini, Layard, B. S. Afr. p. 300.

The "Oyster-Catcher" is not uncommon along the shores of South Africa, extending far towards the Line on both sides of the continent. It is generally found in pairs, and feeds on small fish, mollusca, &c., which it picks up along the margin of the retreating tide. The colours of all the naked parts change considerably after death. It breeds with us; and we have been favoured with eggs, collected by Mr. Hugo, of Simon's Town, who procured them along the shore towards Cape Point. The eggs are generally two in number, laid in a simple depression in the sand, in the debris accumulated just beyond high-water mark. They are of a greyish cream-coloured ground, generally, but rather sparsely covered with coarse, irregular wavy black and dark brown broken lines: axis, 2" 6''; diam., 1" 9''. Mr. L. C. Layard found it breeding on Robben Island about Christmas, 1865. Mr. Rickard has found

the species at Port Elizabeth and East London, but it is not plentiful at either place; he found them breeding on Cove Rock near East London. Mr. Ayres says: "These curious birds are very scarce in Natal; they frequent the sea-shore, are active in their habits, and run with considerable swiftiness; they feed along the sandy beaches; on the receding of a wave they run quickly into the shallow water, and inserting their wedge-shaped bill up to their heads in the sand, haul out small crabs, which having secured, they run high and dry to devour at leisure." Mr. Andersson writes as follows: "This species is not uncommon on the mainland of the South-west African coast, as well as on the adjacent islands, in which latter localities it breeds. It is usually observed in pairs; but I have seen it in considerable flocks at Walwich Bay late in October and early in November: the birds composing these flocks are always too shy to be approached within gunshot; they rise with a shrill cry, which is continued during their flight; and they generally soar to a great height before re-alighting, sometimes, indeed, taking their departure altogether, on which occasions they generally steer to the northward. This species feeds on worms, insects, and mollusca, searching for the latter in crevices and under stones; and whilst thus engaged it sometimes swims a short distance from rock to rock. It makes no nest, but deposits its eggs on the shingle of the beach; these are four in number, of a drab colour, with eccentric streaks and spots of very dark brown. I have been told that the flesh of this Oystercatcher is excellent, but have not myself tasted it."

All over a deep black; bill and cere round the eyes in life, coral red; legs deep crimson; bill, 2" 8" long, flattened throughout, and very much compressed at the point.

Fam. SCOLOPACIDÆ.

647. RECURVIROSTRA AVOCETTA (L.).

Avocet.

The Bonte Elsje, *lit.* "pied cobbler's awl," occurs periodically in the colony in small flocks. It does not appear to be very shy, as many have been yearly procured on Zeekoe Vley, on the Simon's Town and Wynberg road; among them several specimens in very young plumage. Mr. Henry Jackson killed two or three specimens near Nel's Poort in February, 1866; at the same time, Mr. W. Keal procured some near Beaufort.

Mr. Ortlepp found it breeding on some vleys near Colesberg. Mr. J. C. Faure procured it at Cape Town, and we saw them in great numbers at the Berg River. Here we obtained numerous nests and eggs. The former are slight depressions on the summit of some slightly-raised hummock in the soil which is always very damp and generally flooded, being in fact the marshes at the mouth of the river. The crust is lined with dry sedge or grass, and the eggs, usually four, are placed with the thin ends together in the centre. The young run and take to the water, swimming beautifully within a few minutes of their exclusion, as we have witnessed, and the parent birds are deeply solicitous for their welfare. The eggs are pale greenish nankin, spotted sparsely throughout with black spots of rather a large size, and abruptly pointed at the thin end. Axis, 1" 9" ; diam., 1" 3".

Mr. Rickard met with the Avocet once at Port Elizabeth, when he procured two specimens, but the species was not seen afterwards. Lieut. Stokes shot one near Newcastle early in October, but we have no records of its occurrence from any of our other correspondents. Mr. Andersson writes: "This handsome and peculiar bird is occasionally found on the south-west coast of Africa, and also occurs, though less frequently, inland. In the Cape Colony, however, I have found the case, as regards its distribution, slightly reversed. I may mention as inland localities for this species Otjimbingue, where I have seen it once or twice, and Ondonga where it was shot by Axel. At certain seasons the Avocet is not uncommon on the coast, at Walwich Bay, Sandwich Harbour, Angra Pequena, &c.; but it usually disappears from Damara Land during the breeding season, though I have little doubt that a few pairs remain to nest there, as I have occasionally met with very young birds during the dry time of the year. The Avocet is generally observed in small flocks, and is on the whole a shy and wary bird. It is an interesting object to the ornithologist, to whom its graceful figure, as it quietly skirts the glassy pool or wades amongst the shallows on the sea-shore, never fails to be a source of pleasure. It feeds on insects, worms, thin-skinned crustacea, &c., which it seeks when they are left exposed on the mud or sand by the receding tide, and also by wading knee-deep in shallow water." Senor Anchieta has forwarded two specimens from Mossamedes to the Lisbon Museum. Sir John Kirk states that on the Zambesi the Avocet is not unfrequent.

Upper part of head and hind-neck, for half its length, black; the rest white, excepting some of the scapulars, the smaller wing-coverts, and the primary quills and coverts, which are black; legs and feet black, the latter partially webbed; bill black, very long, slender, and turned considerably upwards. Iris red. Length, 18"; wing, 9" 3"; tail, 3" 3"; bill, 3" 3".

Fig. Dresser, B. Eur. vii, pl. 534.

648. HIMANTOPUS CANDIDUS, *Bonn.*

Black-winged Stilt.

But one specimen has been obtained near Cape Town. It was killed on the Cape Flats by Mr. Dumbleton, to whom we are indebted for many rare birds, shot by his own hand. A pair were observed, but the other escaped. We have seen this species very abundantly in Ceylon, in the tanks scattered throughout the jungle. It is usually in small companies, wading up to the extent of its long legs, and even swimming across small holes or depressions which it may encounter while wading. It feeds on small crustaceans, worms, and shells, and is easy of approach, till it learns to fear the presence of man. On being flushed, the flock flies round and round, each bird uttering a loud cry of "wheet-wheet-wheet," in a different key, the whole forming a pleasing music, as agreeable to the ear of the naturalist as the cry of a pack of hounds is to that of a fox-hunter. To our great astonishment we found this bird in abundance at the Berg River, breeding in company with the preceding from which in its nesting it is undistinguishable: the eggs also much resemble those of *R. avocetta*, but may be known at once by the practised eye. Breeds in September, and is called *Roodepoot Elsje*, *lit.* "red-legged cobbler's awl." The likening of the bills of these two birds to an awl is not bad!

Mr. Andersson writes: "This species is sparingly met with in the middle and northern parts of Damara Land, but more frequently in the Lake regions, and on the River Okavango. I have always found it singly or in pairs. It feeds on insects, snails, shells, &c., and is a conspicuous and interesting object, being lively and graceful in its actions, both when running (which it does with considerable celerity) about the sides of marshes and streams, and when wading quietly in shallow water." Senor Anchieta has met with the

species on the Coroca River in Southern Mossamedes, and the late Mr. Sala procured a single specimen at Katumbella in Benguela.

General colour, pure white; wings black; back with a small brown patch near the shoulders; tail tinged with brown; in some phases of plumage the head and neck are also tinged with the same. This bird may at once be distinguished from all our waders by the disproportionate length and slenderness of its legs, which are of a bright pink colour. Length, 15"; wing, 8" 9"; tail, 3" 6"; legs, 10".

Fig. Dresser, B. Eur. vii, pl. 535, 536.

649. GALLINAGO NIGRIPENNIS, *Bp.*

Black-quilled Snipe.

This fine Snipe may be easily distinguished from the Common Snipe of Europe by the larger size, and by the blackness of the dorsal plumage, as well as by the greater number of tail-feathers, which in the last-named bird are only fourteen in number.

It is distributed throughout the colony, migrating from place to place, according as the waters dry up. It prefers muddy swamps to clear streams, crouching amid the rank herbage. Its flight, compared to that of the Common Snipe, is slow and heavy, but is sufficiently rapid to puzzle the Boer with his long flint gun, who never dreams of firing a charge of shot at so insignificant a bird, which he is almost sure to miss! Both this and the Painted Snipe breed in the marsh below the Observatory near Cape Town. Mr. L. C. Layard has captured the young birds just excluded from the egg in November and December. The eggs themselves are laid in September, and are of a deep olive green colour, spotted and blotched chiefly at the obtuse end, with brown and purple patches more or less dark, and of various sizes and shapes. Axis, 1" 9"; diam. 1" 3".

Dr. Exton says that the "drumming" noise made by this bird in its morning and evening flights have earned for it the name of *Spook Vogel* (Ghost-bird) among the Boers of the far interior. Mr. Rickard says that these Snipe are not numerous either at Port Elizabeth or East London. He has not found them difficult to shoot and has killed several with a walking-stick gun; they will sometimes fly round and settle in the same place as they rose from. Near Kingwilliamstown Captain Trevelyan states that it is common after

rains, though probably never very numerous. He writes:—"The best bag I have ever known to be made was thirteen couple. I myself once killed eight couple, but these are exceptionally good bags. I once found a nest and eggs of this species." Mr. Ayres has met with it in Natal, and Mr. T. E. Buckley shot a specimen near Pietermaritzburg. Majors Butler and Feilden and Captain Reid write as follows: "Not numerous in the 'vleys' till the middle of June, when they came in abundantly, ten couple being several times bagged by a single gun. They must breed from about December to March, for Butler heard of a nest containing fresh eggs taken at Mount Prospect in February, and of young birds being seen in the same locality in April."

Mr. Ayres writes: "Though not plentiful in Natal, these Snipe are extremely so in the swamps surrounding the town of Potchefstroom, in the Transvaal, where they afford excellent shooting, and also breed during the months of July and August. At this season the cock birds are a great deal on the wing—evidently wooing. They fly about like so many Swallows—rising in the air, and descending with a rapid sweep and beat of the wings to within a few feet of the ground, then rising again and repeating the movement, at the same time making a curious, loud, vibratory, rushing noise, which I once heard as late as midnight on a still moonlight night. The cock birds on the ground almost incessantly utter a loud 'chuck, chuck.' The hen birds are pretty silent and quiet, merely rising with the usual sharp 'quirk.' I find a great difference in the size of the females, those that are laying being much larger than those that are not."

On one occasion the same gentleman states that he shot a female bird in mid-air, in the act of making that curious neighing noise with the rapid beat of the wings which, till then, he always thought was produced by the cock bird only. On its nesting in the Transvaal he observes as follows: "Breeds plentifully in the swamps around Potchefstroom, principally in August. The bird sits exceedingly close, and the nests are not easily found; they are placed or rather formed in a stool or clump of grass, in the centre of which the bird treads down the finer blades, and thus forms a sufficient cavity, well surrounded and concealed by the outer blades, which curve over and afford both shade from the sun and shelter from the cold winds."

Mr. F. A. Barratt says: "This Snipe is distributed through the greater part of the Transvaal; and they breed in considerable quantities in the swamp below Potchefstroom. In the winter months (May, June, and July) they appear in great numbers and are shot for forwarding to the Diamond-fields, where they command a fair price." It was likewise noticed by Mr. Jameson's expedition in Mashoona Land. Dr. Kirk met with it on the Shire marshes in the Zambesi. Mr. Andersson does not appear to have met with it in Damara Land, but Senor Anchieta procured two specimens at Huilla and Caconda in Benguela, which at first Professor Bocage was inclined to separate as a distinct species under the name of *G. angolensis*, but in his latest work he considers that these specimens are referable to *G. nigripennis*.

Tail rounded, of sixteen feathers; bill twice the length of the head; two longitudinal black bands on the head, separated by a narrow medial, reddish-white band, and on each side a yellowish-white band; the upper parts variegated with black and light-red, with four longitudinal yellowish-white bands; wing-coverts tipped with white; three lateral tail-feathers on each side, white; sides transversely barred with dusky; axillary feathers white, barred with greyish-black. Length, 12"; wing, 5" 6"; tail, 2" 6".

650. GALLINAGO MAJOR (*Gm.*).

Great Snipe.

This Snipe is a regular migrant to Natal, arriving in September and October, and leaving in January and February. From Kingwilliamstown Captain Trevelyan writes: "About 10 per cent. of the Snipe killed in British Kaffraria are of this species. On one occasion, when about twenty-three or twenty-four miles from Kingwilliamstown, I came across a likely looking piece of ground, so determined to try it. I had gone but a little way, when my dog stood, and on going up to her a Snipe rose. The dog ran in and kept so close to the bird that I was unable to fire, and after a chase of about twenty or thirty yards the dog actually caught the Snipe on the wing. On looking over it I found no trace of a wound of any description, but it was extremely fat, and to this I attributed its inability to get away. I killed on this piece of ground seven Snipe, of which five were *S. major*, and these weighed slightly over 2½ lb., or rather more than 8 oz. each." In Natal Mr. Ayres states that they are generally dispersed over the country, preferring the swamps

on the flats to the hilly streams: they are usually found singly, but sometimes, when plentiful, may be put up in flights.

It also occurs in the Transvaal, and has been shot near Potchefstroom by Mr. Ayres, between September and March. The late Mr. Andersson's last collection contained a specimen shot by him at Ondonga in Ovampo Land, on the 6th of February, 1867, and Professor Barboza du Bocage records an example killed in the province of Duque de Bragança in Angola.

Tail rounded of sixteen feathers; bill twice the length of the head; two longitudinal black bands on the head separated by a narrow medial, reddish-white band, and on each side a yellowish-white band; the upper parts variegated with black and light red, with four longitudinal yellowish-white bands; wing diversified with white. Three lateral tail-feathers on each side white, sides transversely barred with dusky, axillary feathers white, barred with greyish black. Length, 12"; wing, 5" 6"; tail 2" 6".

Fig. Dresser, B. Eur. vii, pl. 541.

651. RHYNCHÆA CAPENSIS (L.).

African Painted Snipe.

The "Painted Snipe" frequents the same localities as the preceding species, and is very common at certain seasons, breeding with us in the marshy ground near Cape Town.

The eggs are somewhat like those of *G. nigripennis*, but are of a yellower ground, and the markings are more defined and of one colour, a very dark brown, almost black.

Mr. Rickard states that he has only procured it once near East London, and Capt. Trevelyan says that it is scarce near King-williamstown. In Natal Mr. Ayres also records them as very rare. Majors Butler and Feilden and Capt. Reid observe that near Newcastle it was not met with till July 20th, but it was afterwards common in the thick sedge and grass in the "vleys." No nest was found, though the birds were in pairs in November, and evidently going to breed.

According to Mr. Ayres they are scarce in the Transvaal, and Mr. Barratt writes: "This beautiful Snipe does not frequent the marshy ground about Potchefstroom in such great numbers as *G. nigripennis*; as I have never known more than five or six to have been seen in a month or so. That is about the same place where one can see thousands of *G. nigripennis*, which breeds there; but

I have never found the eggs of *Rhynchæa*." It was procured by Mr. Jameson's expedition at Inshlangen River, and at Selenia Pan, but was only met with on these two occasions. Mr. Andersson gives the accompanying note on this species: "The Painted Snipe is sparingly found in Great Namaqua Land; but in Damara Land it is very common, a pair or two being almost always to be found wherever the ground is swampy. It is also common on all the watersheds north and east of Damara Land; and it is pretty common in Ondonga, where it breeds, making no nest, but usually laying its eggs near the water; these are from three to four in number, of a very dark colour, freely blotched with black. Though partial to marshy ground this species is also found on the sides of little rills and running springs. It lies close, like a Snipe, but is very different on the wing, its flight being heavy and comparatively slow; moreover it flies but a short distance before it alights. It lives singly or in pairs; but a dozen birds may sometimes be found scattered over a small marsh within a short distance of each other. It seems to feed chiefly on insects; and its flesh is very palatable." Senor Anchieta has forwarded several specimens to the Lisbon Museum from Benguela, Capangombe, Huilla, and Quillengues: at Huilla it is called *Xiahula*.

Male.—Head brown, slightly variegated with white; a yellow stripe passes from the base of the bill over the centre of the head, to the back of the neck; a similar stripe rises immediately in front of each eye, passing to the back of the head; two smaller stripes, bordered by black, extend from the shoulders, down the back, to the root of the tail; neck greyish-brown, barred finely on the back portion with dark brown, on the anterior portion more coarsely with the same colour; it is likewise here bisected by a white collar; under parts all white; the black beautifully marked with transverse black, white, and grey bars; the wings with numerous yellow semiocelli, edged with black. When extended, they expose numerous yellow or white ocelli, also edged with black, and also numerous black wavy transverse bars, chiefly on a slate-coloured ground; the tail is similarly marked. The female, reversing the ordinary rules, is more brilliantly marked than the male. The eye-stripe is pure-white; the chin dirty-white; neck and breast deep dull rufous, succeeded by a broad black collar, and the pure white of the under parts broken only by a patch of black on each side. The plumage

of the back is much darker, and the wings, when closed, instead of showing the black and yellow markings of the male, are a shining-green transversely and minutely barred with black, all lustrously shot with metallic-green; legs green; bill red at the tip; iris hazel. Length, 10"; wing, 5" 2''; tail 2".

Fig. Shelley, B. Egypt, pl. 11.

652. TRINGA MINUTA, *Leisl.*

Little Stint.

Common in all marshes and on the seaboard. Their flight is very beautiful when in large flocks; various evolutions performed simultaneously show alternately the dark upper plumage and the white under sides like flashes of light, particularly when seen against a dull, lowering sky. Mr. Bradshaw obtained the species on the Orange River in November. Mr. Rickard says that it is not numerous near East London, and is generally seen in pairs by pools of fresh water. Mr. Ayres has met with the species in Natal, where he thinks it is only to be found in winter. He has also shot it at Reit Pan on the Rhinoster River in the Orange Free State. In the Transvaal the same gentleman says: "These Sandpipers are occasionally found in considerable flights on the mud-flats and borders of pools. They are very shy and difficult of access, and their flight is very rapid." Mr. Andersson observes: "This species is common throughout Damara and Great Namaqua Land, and also occurs in the Lake regions; it is found in small flocks, and frequents alike the sea-coast and freshwater pools, springs, and streamlets, where it eagerly seeks for the minute insects, crustacea, and aquatic worms which are more or less abundant in such localities. The flesh of this Sandpiper is excellent; and as it is a very tame bird, numbers may be bagged without much exertion." Senor Anchieta has sent it also from Benguela.

Adult in winter plumage.—Brownish-grey above, each feather with a dusky streak; the sides of the neck paler; its lower part tinged with brown; the throat, fore-neck, breast and abdomen white; the middle tail-coverts dusky; the lateral white; the tail-feathers ash-grey, edged with white; the two middle greyish-brown. In summer: the upper parts yellowish-red, spotted with brownish-black; the throat, breast, and other lower parts, white; the lower anterior and lateral parts of the neck reddish-grey, streaked with

brown; a dusky loreal band, and a whitish streak over the eye. Length, 5"; wing, 4"; tail, 1".

Fig. Dresser, B. Eur. viii, pl. 539.

653. *TRINGA BAIRDII*, *Coues*.

Baird's Sandpiper.

The late Mr. Andersson procured a single example of this American species at Walwich Bay on the 26th of October, 1863. The full particulars respecting this specimen will be found given by Mr. J. E. Harting in a note to Andersson's "Birds of Damara Land." The diagnostic characters given by Dr. Coues are summed up as follows, and we copy them here, although it is scarcely likely that a second specimen of Baird's Sandpiper will be found in South Africa.

Length about 7.25 in.; bill slender, entirely black; feathers extending on the lower mandible much beyond those on the upper; upper tail-coverts much lengthened, *black*; central tail-feathers projecting but little; the emargination of the tail slight.

654. *TRINGA SUBARCUATA*, *Guldenst.*

Curlew Sandpiper.

The Pigmy Curlew is abundant along the shores in the winter or non-breeding plumage, and we have shot some now and then, just beginning to assume that of the summer phase; but only a single specimen has ever occurred to us showing the full fine red tints of that state. This was brought alive to the South African Museum by a lad on the 26th April, 1868. He had captured it by hand. It lives in great flocks on Robben Island, and at the mouth of the Salt River.

Dr. Bradshaw showed us a specimen killed by himself on the Orange River on the 31st of August, 1881, which still retained remains of the summer plumage. "In Natal," writes Mr. Ayres, "these birds are gregarious, frequenting the Bay in considerable flights, and feeding on the mud-banks when the tide recedes. He shot a specimen in the Transvaal on the 24th November on some mud-banks in a swamp near Potchefstroom, in company with several others of this species and of other Sandpipers, including *Tringa minuta*." "The Curlew Sandpiper," writes Mr. Andersson, "is the commonest *Tringa* at Walwich Bay and all along the lagoons and shallows of the south-west coast, where it ranges southward to Table Bay. It congregates in flocks, often of many hundreds,

and not unfrequently in company with the Little Stint and the Sanderling. At some hours of the day, probably when changing their feeding-ground, and chiefly in the early morning, these birds are more on the move than at other times; and the air over the lagoon seems then literally to teem with their myriads, presenting a most animated picture as the white portions of their plumage flash with almost dazzling effect in the early tropical sunlight, especially when the brightness of the scene is enhanced by the presence in the flock of a large reinforcement of Sanderlings. In the afternoon, if, as is the case five days out of seven at Walwich Bay, the wind blows strongly from the south-east, these birds generally retire to some little distance from the water and seek a large open flat in the immediate neighbourhood. Whilst there they are excessively shy and difficult to approach; and I may add that I have heard that this temporary wildness is common to most water-birds on the Damara coast whenever a high wind arises. On ordinary occasions the Curlew Sandpiper is comparatively tame, and numbers may be bagged without difficulty. Considerable variations of plumage are to be met with, as I have shot at the same time specimens in the grey dress and others in which the plumage has been almost of a rusty red. These Sandpipers grow enormously fat, but are not desirable birds for the table, as their flavour is excessively fishy." Senor Anchieta has procured a single specimen at Benguela.

Bill half as long again as the head, considerably decurved at the end, and black. Plumage in winter: brownish-grey above, each feather with a dusky streak; the sides and fore-part of the neck, with a small portion of the breast, greyish-white, streaked with brownish-grey; the throat, breast, and abdomen white; the tail-coverts white; the tail brownish-grey. In summer: the upper parts of the body black, mottled and streaked with light-red; the sides of the head, the fore-part and sides of the neck, and the breast, bright yellowish-red; the neck faintly streaked with dusky; tail-coverts white, spotted with brown and red; the tail brownish-grey. Length, 9"; wing, 5" 6"; tail, 2".

Fig. Dresser, B. Eur. viii, p. 542.

655. *TRINGA CANUTUS* (L.).

Knot.

Said by Dr. Hartlaub to occur in South Africa, but it has never

come under our personal notice, though the late M. Jules Verreaux informed us that he had shot it in Algoa Bay and other places. The survivors of the wreck of the "Strathmore," who were cast away for six months on the Crozet Islands, state that amongst other birds they saw several hundred Knots. According to Mr. Andersson, this species is of rather rare occurrence on the coast of Damara Land; "the few that I observed there were generally associating with flocks of Sanderlings, Curlew Sandpipers, and Little Stints, along the shallows in Walwich Bay. The Knot feeds on aquatic insects, in search of which it will wade knee-deep in the water. Its flesh is good eating. One of my specimens has the breast and part of the belly rufous."

In winter, the plumage is ash-grey above, white beneath; the neck and sides streaked with dusky. In summer, the back glossy black, variegated with yellowish-red; the fore-neck and breast, yellowish-red. The young: grey above, each feather on the back with a double marginal band of black and white. Length, 10"; wing, 6" 9"; tail, 2" 9".

Fig. Dresser, B. Eur. vii, pl. 544.

656. *CALIDRIS ARENARIA* (L.).

Sanderling.

The Sanderling is found in large flocks everywhere along our sea-board, where sand patches afford it a congenial home and abundance of food. Mr. Rickard has met with it both at Port Elizabeth and East London, though it was not numerous at the latter place. Mr. Ayres has found the species in Natal, and writes: "These pretty Sandpipers are found on the sea-beach; they are gregarious, and run about with great activity when feeding, following the waves as they retire, and obtaining their food on the very edge of the water." The following note is given by Mr. Andersson: "The Sanderling is very common on the coast of Damara Land, but is only sparingly met with inland. It is found in great flocks, and associates with the Curlew Sandpiper; but whilst the latter, as it searches for its food, hunts and ranges not only along the beach, but at some distance from it, the Sanderling, on the contrary, scarcely if ever leaves the immediate edge of the water, where it is amusing enough to observe it feeding along a beach on which the surf is breaking, now running away from the threatening waters, then turning as if by instinct the moment they have spent their fury, closely following the receding

waves and rapidly seizing, amongst their foam and spray, the minute marine animals upon which this bird subsists. The Sanderlings when thus engaged appear as if they must be overwhelmed by the seething billows; but in some marvellous manner they always escape, and it is rarely that they are even obliged to have recourse to their wings to expedite their retreat. The flocks of Sanderlings afford a pretty sight on a sunny morning, when in their evolutions on the wing they eccentrically wheel and twist in the bright light, looking not unlike silver clouds against the clear blue sky. The cry of this species is a kind of chirping call, low and short, but shrill. Its flesh is very palatable, and being plump little birds, they are worth the trouble of shooting and cooking." Mr. Monteiro shot specimens on the beach at Benguela, but Senor Anchieta does not appear to have met with the species in the interior of South-Western Africa.

Adult in winter.—The upper parts pale-grey, with dusky lines; the lower white; wings black and grey, with a white band. In summer, the upper parts are variegated with black and red; the lower parts red anteriorly; white behind. Young birds have the upper parts black, and variegated with yellow and white; lower parts white; iris hazel. Length, 7" 9"; wing, 5" 2"; tail, 2" 2".

Fig. Dresser, B. Eur. viii, pl. 546.

657. MACHETES PUGNAX (L.).

Ruff.

We have shot the Ruff on the Cape flats, and have received it from Colesberg, the Knysna, Traka, &c. It seems to be generally distributed.

The habits of this bird have been so well described by numerous authors, that they need not be alluded to here—the more so as it does not assume its nuptial dress and pugnaceous feelings in this country, only visiting us during the non-breeding period. Captain Trevelyan says that he has seen these birds in small flocks in winter near Kingwilliamstown. Mr. Ayres has met with it in Natal, and says that the species is gregarious, frequenting the Bay and the coast, and feeding on the mud-banks at low water; marine insects appearing to be its favourite food. The same gentleman has procured it near Potchefstroom, and during Mr. T. E. Buckley's journey through the Matabele country he observed it in large flocks on his way down to the Transvaal. Mr. Frank Oates procured a female at Mopani Pan, near the Ramaqueban River, in November. According

to Mr. Andersson, "this bird generally appears in Damara Land with the return of the rainy season, when it is not uncommon, and leaves again before the ruff of the male bird is put forth; but I have reason to believe that it is to be met with in the Lake regions during the intervening period. It is chiefly found inland and but rarely on the coast. It feeds on insects and worms, for which it seeks in moist and humid situations; but during the rainy season, when food is abundant, it may be found almost everywhere. It is a comparatively tame bird, and is generally to be observed in small flocks of from three to a dozen individuals—such flocks generally consisting of females with perhaps now and then a male, which is easily distinguished by its greater size. This species when on the wing resembles *Tringa subarcuata*, but is larger and swifter." Senor Anchieta has procured it in various localities in Benguela and Mossamedes, and says that it occurs in South-Western Africa in large flocks during the European winter.

Male.—In winter, with the bill brown; the feet greenish-yellow; the throat and abdomen white; the fore-neck and part of the breast, pale reddish-brown, spotted with dark brown; the upper parts variegated with brownish-black and light red. *Female* similar, but with the upper parts lighter, the lower more grey; the bill and feet dusky. Male, in summer, with numerous fleshy tubercles on the face, two occipital tufts, and a very large ruff of elongated feathers on the neck; the colour of the plumage varying in different individuals, and even in the same at different periods of the same season; the bill and feet orange or yellow; iris hazel. Length, 12"; wing, 7" 6"; tail, 3".

Fig. Dresser, B. Eur. viii, pl. 545.

658. TRINGOIDES HYPOLEUCUS (*L.*).

Common Sandpiper.

The Sandpiper is rather a rare bird in this colony, and but very few specimens have been seen. The first was forwarded to us in March, 1864, by Mr. Cowen, of the Paarl; another was shot about the same time on the Cape flats; and Mr. L. C. Layard procured a third on the rocks at Green Point, Cape Town. We saw a specimen or two at Zoetendals Vley, in November, 1865, and Comenang, on the Kowie River, in February, 1870. Dr. Bradshaw procured a specimen on the Orange River on the 25th of February, 1852, and Captain Trevelyan tells us that he obtained one

near East London. It was sent from Natal by Mr. Hilliard, and was met with sparingly near Newcastle in winter and spring by Majors Butler and Feilden and Captain Reid; while, according to Mr. Ayres, it also occurs in the Transvaal, but is scarce. Mr. Frank Oates, during his journey to the Zambesi, obtained this species at Inyati in October, and at Sibanani in December, and Sir John Kirk found it frequenting open sandy places on the river bank along the Zambesi and Shire rivers.

Mr. Andersson obtained several specimens in Damara Land, and Senor Anchieta has met with it at Benguela and at Novo Redondo.

Bill dusky; feet greenish-grey; upper parts glossy greenish-brown, transversely banded and undulated with dark brown; lower parts white, excepting the fore-part and sides of the neck, which are greyish, with faint dusky lines. Young, with upper parts lighter, the feathers margined with dusky and reddish; iris hazel. Length, 8" 6"; wing, 4" 9"; tail, 2" 5".

Fig. Dresser, B. Eur. viii, pl. 549.

659. TOTANUS CANESCENS, *Gm.*

Greenshank.

Totanus glottis, Layard, B. S. Afr. p. 325.

The Greenshank is as common as the Green Sandpiper, and is found on all vleys throughout the country. Dr. Bradshaw procured it on the Orange River in December, 1851, and it occurs in Mr. Rickard's list from East London, and in Captain Trevelyan's from Kingwilliamstown. Mr. Ayres states that in Natal he found "these birds very shy, and mostly gregarious, but sometimes solitary. They generally feed and intermix with the Curlews, frequently walking into the water till it reaches their bodies. The specimen sent seemed to have the remains of shrimps in the stomach." Mr. F. A. Barratt shot this species on a vley near the Modder River, also near Kronstadt and near Potchefstroom. They are often seen with *Totanus ochropus* flying about the farmers' dams. Mr. Ayres has also procured it near Potchefstroom, and Mr. T. E. Buckley found it fairly common along the Limpopo. Mr. Frank Oates met with the species on the Inquiquesi River in September, 1873, where it was called *Tabi-tabi*; it was also seen in Mashoono Land by Mr. Ayres. Mr. Andersson writes: "The Greenshank is pretty common in Damara and Great Namaqua Land, in all suitable localities; and I have reason to believe that it is abundant in the

Lake-regions and on the River Okavango. It frequents, when inland, springs and small running streams, but is more common along the coast. It does not appear to breed in Damara Land, at least not in its middle and southern portion; from the sea-coast it generally disappears about December, reappearing in March and April. It is most commonly found in small flocks, but sometimes singly or in pairs. It is a shy and wary bird, and frequently most difficult to obtain. It runs with great celerity, and is very powerful on the wing, frequently flying at a great height; when rising it utters shrill cries, which may be heard at a very great distance. This species feeds on the fry of fish, worms, insects, crustaceans, and molluscous animals, in search of which it may frequently be seen wading up to its belly in the water. The flesh of the Greenshank is very palatable." Professor Bocage observes that it is widely spread, and very common in winter on the coasts of Loango and Angola. Anchieta has forwarded it from Novo Rodondo, Benguela, the Coroca River, Humbe, and Quillengues; at nearly all of which places it is called *Kaniapraia*, which is the common native name for most of the small waders.

Adult.—In winter, with the bill greenish-brown at the base, black towards the end; the feet greenish-grey; the head, hind part and sides of neck, greyish-white, streaked with brown; the fore part of the back, scapulars and wing-coverts, greyish-brown, the feathers edged with whitish; hind part of the back, the fore part of the face, and all the lower parts white, but with faint grey markings on the fore part of the sides, and on the lower wing-coverts; tail white, barred with greyish-brown. Adult, in summer, with the fore neck and breast marked with oblong black spots; the fore part of the back and the scapulars, black, the feathers margined with whitish. Length, 14" 3"; wing, 7" 6"; tail, 3" 2".

Fig. Dresser, B. Eur. viii, pl. 555.

660. *TOTANUS CALIDRIS*, *Bechst.*

Redshank.

The Redshank is found sparingly about the Knysna estuary and the mouth of the Salt River, near Cape Town, in both of which places we have shot them ourselves: at Zoetendals Vley they were abundant in November. Capt. Reid saw it at the mouth of the Umgeni River, near Durban, on December 26th. The species also occurred in Messrs. Chapman's collection from Lake N'gami, and a

specimen from Walwich Bay, collected by the late Mr. Andersson, is in Mr. Harting's collection.

Plumage in winter: upper parts of the head and hind-neck brownish grey; fore part of the back greyish brown, streaked with dusky; its hind part white; the tail and its coverts barred with white and dusky grey; the fore part and sides of the neck pale grey, streaked with dusky, as are the sides; the rest of the lower parts white. In summer: the lower parts are white, or less shaded with grey, and marked with decided dusky streaks, spots, and angular bars; feet and legs orange red in life. Length, 11" 3''; wing, 6" 6''; tail, 2" 10''.

Fig. Dresser, B. Eur. viii, pl. 553.

661. TOTANUS FUSCUS, L.

Dusky Redshank.

A single specimen, procured by ourselves at the Knysna, is the only example of this species which has come under our notice in South Africa.

Adult, with basal half of bill red, the other half brownish-black; the feet orange-red; the secondary quills black, barred with white. In winter the upper part of the head and hind neck brownish grey; the fore part of the back greyish brown, streaked with dusky, its hind part white; the tail and its coverts barred with white and dusky; the cheeks and fore-neck greyish white, faintly streaked with grey; the rest of the lower parts white. In summer the head, neck, and lower parts greyish black, the feathers slightly edged with whitish; those of the fore part of the back and wing-coverts blackish brown, marginally spotted with black and white; the other parts as in winter. Length, 12"; wing, 6" 9''; tail, 3''.

Fig. Dresser, B. Eur. viii, pl. 554.

662. TOTANUS OCHROPUS, L.

Green Sandpiper.

This species was common at Zoetendals Vley in November, 1865, as well as at the Knysna, and we observed it on the Kowie River in March. We have also received several examples from Mr. Arnott, procured near Colesberg, but it is curious that it does not occur either in the lists of any of our correspondents or in any of the papers published by Mr. Ayres in the "Ibis." It is mentioned by Mr. Barratt as having been found by him in company with *Totanus canescens*, but no localities are given.

Tail, nearly even, white; the four middle feathers with three blackish brown bars towards the end, the outermost feather plain; upper part of head and hind neck brownish grey; back, scapulars, and inner secondaries greenish brown, with marginal whitish and dusky spots; neck greyish white, with longitudinal dusky lines; the breast and abdomen white; lower wing-coverts, axillaries, and some of the flank feathers angularly barred with brown; bill dusky above, reddish beneath; feet greyish blue, tinged with green. Length, 11" 6"; wing, 5" 11"; tail, 2" 6".

Fig. Dresser, B. Eur. viii, pl. 550.

663. *TOTANUS STAGNATILIS*, *Bechst.*

Marsh Sandpiper.

Specimens have been procured at Colesberg by Mr. Ortlepp, and at George by Mr. Atmore, where it appears to be common. He writes, October 4th, 1869: "Not scarce here now, but in the drought not one was to be seen. I presume they breed about here by their putting in an appearance at this time of the year, probably on the margins of the vleys." We have also seen it in winter plumage shot by Dr. Bradshaw on the Orange River. From Natal Mr. Ayres writes: "The only specimens I have seen of these graceful birds have been at the edges of small pools on the roads some ten or twelve miles from the coast. If disturbed, they most frequently take a large circle and return to the same pool, just as a Snipe would. In the stomach of the specimen sent were numerous pebbles." According to Mr. Andersson, this species is nowhere common in Damara Land, but he has occasionally shot it in the valley of the Swakop, and pretty frequently at Otjimbingue. It frequents small streamlets and fresh-water springs, and is found singly or in pairs. Only one specimen has been procured on the Cunene River by Senor Anchieta.

Above pale cinereous; the margins of the feathers whitish; eyebrows, cheeks, back, and under parts pure white; neck and breast marked with brown; tail white, barred with brown. Length, 8" 6"; wing, 5" 1"; tail, 2" 5".

Fig. Dresser, B. Eur. viii, pl. 552.

664. *TOTANUS GLAREOLA*, *L.*

Wood Sandpiper.

The only place where we have observed this species ourselves has been Zoetendals Vley, and we have seen a specimen procured

by Dr. Bradshaw on the Orange River on the 5th of September. Mr. Rickard has met with it at Port Elizabeth on one occasion, and in Natal Mr. Ayres has found it frequenting small inland streamlets, and shallow pools. He states that they are found either solitary or in pairs, and rise much like a Snipe, their flight being very rapid. The same gentleman has also met with the species in the neighbourhood of Potchefstroom in the Transvaal. The late Mr. Frank Oates procured a specimen at Inyati, and Mr. Ayres obtained examples at Spalding's on the Hart River in January and February during Mr. Jameson's expedition to Mashoona Land. He writes: "The river, which is now in flood, has near its banks many soft muddy spots, where these Sandpipers abound, feeding in small flocks; and a solitary bird may here and there be flushed from the grass at the edge of the water." Sir John Kirk found the Wood Sandpiper on marshes and sand banks on the Shirè River. Mr. Andersson observes: "This is not a common bird in Damara and Great Namaqua Land, but now and then small flocks are to be met with at inland springs, streams, and marshes; in some seasons it was frequently obtained at Otjimbingue, and I also found it not uncommon in Ondonga. It occurs singly and in pairs as well as in small flocks, and unless much disturbed it is quite tame. Its flesh is very palatable." Senor Anchieta has sent it from the Coroca River in Mossamedes, and from Caconda in Benguela.

Tail, doubly emarginate, white, all the feathers barred to the base with blackish brown; the outermost feather, with the inner web, plain; upper part of head greyish brown; back, scapulars, and inner secondaries, dark purplish brown, with marginal whitish and dusky spots; neck greyish white, with longitudinal dusky lines; the breast and abdomen white; lower wing-coverts dusky, edged with white; axillary feathers, and some of those of the sides, narrowly and irregularly barred with brown; feet greenish grey. Length, 9" wing, 5" 2"; tail, 2" 2".

Fig. Dresser, B. Eur. viii, pl. 551.

665. TEREKIA CINEREA (*Guldenst.*).

Terek Sandpiper.

Mr. Ayres obtained a specimen in Natal, shot out of a flock of four or five; they are very scarce there. Mr. Andersson says: "I have obtained very few specimens of this bird in Damara Land, the only places where I remember to have met with this species being

Omanbondé, Otjimbingue, and Hykomkap on the River Swakop; those which I have observed were always solitary and were feeding on the sedgy borders of marshy places or sluggish streamlets. Their food consists of small insects."

Upper parts, brownish-grey, shot with greenish, and with a slender black streak along the shaft of each feather; forehead, chin, throat, and chest, white, mottled finely with grey streaks and spots; under parts, and bar along the wing, pure white. Length, 9" (of which the bill is 1" 9", and curved upward); wing, 4" 9"; tail, 2" 3".

Fig. Dresser, B. Eur. viii, pl. 557.

666. NUMENIUS ARCUATUS, L.

Common Curlew.

The Curlew is not uncommon on our sea-border throughout its whole extent. It maintains its characteristic shyness, and rarely falls to the gun of the sportsman. We never heard of its breeding in the colony, though it is found here throughout the year. We met with it up the whole east coast, as far as the Line. Schlegel separates our South African species from the European bird on account of its size, and calls it *Numenius major*. Mr. Rickard has observed it near Port Elizabeth and East London. Mr. Ayres observes: "There are great numbers of these birds in the Bay of Natal; and I think there are two or three species, as they vary much in size. They are exceedingly shy, and difficult to shoot; they are gregarious, and feed at low water on the mud-banks; they utter precisely the same note as the Curlew in England, and their habits appear to be the same." Single examples were occasionally met with by Majors Butler and Feilden and Captain Reid, near Newcastle, in September and October. Mr. F. A. Barratt obtained one specimen near Potchefstroom, and observes that he has never seen it farther north. Writing from the Transvaal Mr. Ayres remarks: "This is a very scarce bird in these parts, two specimens were seen last year (1876) of which I have procured one. I did not hear either of them utter the usual cry of the Curlew: both were silent." Mr. T. C. Buckley observed it on one occasion in the Transvaal. Mr. Andersson says: "The common Curlew is sparingly met with in the interior of Damara and Great Namaqua Land, but is more frequent along the coast and in the islands. It is most commonly seen in pairs, but at times in small flocks. It is an exceedingly wary bird, and, from the open character of the localities it frequents, often

defies the efforts of the sportsman. It loves flat marshy lands and the open sea-beach, where it searches for its food, which consists of small marine insects, crustacea, worms, &c. At some seasons these birds grow very fat, and they are palatable as food, especially when they have not frequented the sea-shore for too long a period. The Curlew swims with considerable ease, but appears not to take to the water by choice. Senor Anchieta has obtained three specimens on the Coroca River in Mossamedes.

Plumage of the head, neck, and fore part of the back, light reddish grey, streaked longitudinally with blackish brown; hind part of the back white, with narrow longitudinal dark marks; tail white, with twelve dark brown bars; the breast, sides, and abdomen, white, with lanceolate dark brown spots and bars; bill very long (six to seven inches) and curved downwards. Total length (of male), 25"; wing, 12" 6"; tail, 4" 6". The female is somewhat smaller.

Fig. Dresser, B. Eur. viii, pl. 563.

667. NUMENIUS PHEOPUS, L.

Whimbrel.

The Whimbrel seems to be a rarer bird in South Africa than the Curlew. Two specimens came under our notice during our residence at the Cape, one being shot by Mr. L. C. Layard near Cape Town, and the other by Mr. Butler in the same locality. Mr. W. Atmore says that they are common at the mouth of Brak River, and at the Knysna Lakes. Mr. Ayres has met with them in Natal, but says that they are not so common there as the Curlew, with which they associate. He has also shot a specimen near Potchefstroom in the month of November. Mr. Andersson writes:—"So far as my observation goes, the Whimbrel is less common in Damara and Great Namaqua Land than the Curlew, and, in fact, is but rarely met with. Its food consists of snails, shells, crabs, insects, &c."

Upper part of the head, dark brown, with a medial and two lateral whitish bands, streaked with dusky; neck, all round, pale brownish grey, streaked with brown; feathers of the fore part of the back, scapulars, and wing-coverts, dusky, with marginal whitish spots; hind part of back white; tail and coverts, greyish white, barred with dusky; chin, hind part of breast, and abdomen, white; fore part of breast streaked; sides and lower wing-coverts

barred with dusky. Length, 17" ; wing, 9" 9" ; tail, 4" ; bill, bill, 3" 2" .

Fig. Dresser, B. Eur. viii, pl. 561.

Fam. DROMADIDÆ.

668. DROMAS ARDEOLA, *Payk.*

Crab-Plover.

This curious bird frequents the whole of the east coast of Africa as low down as Natal ; but its favourite localities are sand-banks far out to sea. It feeds on small crustaceans, which it collects while walking. We never saw it take its prey on the wing. It runs with considerable swiftness. Mr. Ayres procured a specimen in Natal, and says that it was the only one that he saw. He killed it early one morning on the sea-shore, and in appearance it much resembled a long-legged Plover, taking wing immediately on his appearance, so that he had no time to observe its movements.

General colour, white, with a black patch between the wings ; wing-feathers black ; head more or less mottled with black ; sometimes a grey tint on the back and shoulders ; bill black, very strong ; legs long, black ; feet semipalmated. Length, 1" 3" ; wing, 8" ; tail, 2" 9" .

Fig. Temm. Pl. Col. 362.

ORDER GAVIÆ.

Fam. LARIDÆ.

669. STERCORARIUS POMATORHINUS (*Temm.*). Pomatorhine Skua.

Two specimens of this Skua were killed by Mr. Andersson in Walwich Bay.

The following description is taken from Dresser's "Birds of Europe."

Adult male.—Crown, nape and sides of the head from behind the eye to the base of the bill and below the sides of the lower mandible, deep blackish brown; chin, white; rest of the neck all round, white, tinged with light golden yellow, the feathers rather elongated and acuminate; entire upper parts (except the hind neck), wings and tail deep brown, the fore part of the back slightly marked with white; primaries with white shafts, and white on the basal portion of the feathers; central rectrices elongated, but not pointed; under parts white, the breast crossed by a band of dark brown markings, and the flanks marked and barred with dark brown; lower abdomen, crissum and under tail-coverts dark brown, slightly marked with white; under wing-coverts and axillaries dark brown; bill dark horn, bluish at the base; iris brown; legs blackish. Total length, about 20 in.; culmen, 1·8; wing, 13·8; tail, 8·75; tarsus, 2·0; central rectrices extending 2·7 in. beyond the lateral ones.

Young.—Head, neck, flanks, and back dark brown, barred and mottled with dirty white; crown and sides of the head less marked with white; abdomen white; crissum and under tail-coverts white, slightly barred with dark brown; wings and tail as in the adult, but the central rectrices extend only a little beyond the lateral ones.

Fig. Dresser, B. Eur. viii, pl. 610.

670. STERCORARIUS CREPIDATUS (*Banks.*). Richardson's Skua.

Stercorarius spinicauda, Layard, B. S. Afr. p. 366.

Common in Table Bay in the summer months, in the three phases of plumage marked A, B, C. They chase the lesser Gulls and Terns,

and make them disgorge their prey: but we have also seen them swimming on the water searching for their own food. Their flight is very swift, and sustained by powerful strokes of the wing, urging their bodies through the air with great rapidity: their rapid evolutions when in chase of the nimble Terns are most graceful. Mr. Andersson observes: "This bird is not uncommon on many parts of the south-west coast of Africa; and I have often killed it at Walwich Bay. It frequents the innermost shallows and lagoons on the coast, but is not equally abundant throughout the year, apparently retiring from that part of the coast during the breeding-season. This species rarely fishes for itself, but compels the timid Gulls and Terns to disgorge their captures for its benefit." Senor Anchieta has procured a single specimen at Mossamedes.

(A) Throughout, a dull sooty-black, slightly variegated on the back of the neck with brown; tail slightly pointed.

(B) Throughout, mottled brown and fulvous, the latter predominating on the neck and head; obsolete on the tail, which is much pointed.

(C) Back of head, wings, and tail, deep sooty brown; chin and under parts white; breast mottled with brown, forming a collar round the neck; vent also mottled with brown; centre tail-feathers not fully developed. Length, 16"; wing, 12"; tail, 6".

Fig. Dresser, B. Eur. viii, pl. 611.

671. STERCORARIUS ANTARCTICUS (*Less.*). Antarctic Skua.
Stercorarius catarractes, Layard, B. S. Afr. p. 366.

Several specimens of this fine Skua Gull appeared in Table Bay on the 29th of April, 1865, chasing the Solan Geese (*Sula melanura*), which flocked in to prey on the vast shoals of fish in the bay. Mr. L. C. Layard fired at one a week previous to this. They were plainly recognizable at a great distance, owing to the white spot on the wing, and their size; and while the smaller *S. crepidatus* attacked the little Gulls and Terns, they confined their attention to the Solan Geese, compelling them to disgorge their hard-earned gains.

The following is a translation of the description given by the editor in his report on the birds collected by the "Transit of Venus" Expedition.

Above sooty brown, the dorsal plumes and scapulars washed with

whitish at the ends; the feathers on the hind neck, and some of those on the back, streaked with buff down the middle; wings darker brown, narrowly margined with ashy; quills ashy brown, the shafts white; the primaries conspicuously white towards the base; lower back and rump ashy brown, the upper tail-coverts more of a chocolate brown; tail-feathers ashy brown, blackish towards the tip with the shafts white; under surface of body entirely sooty, a few of the feathers washed with dusky rust colour; some of the flanks obscurely washed with whitish; under wing-coverts dark brown, the greater series and the quills underneath ashy brown, the primaries conspicuously white at the base of the inner web: bill black; feet slaty black with a green tinge. Total length, 23 in.; culmen, 2·8; wing, 16·3; tail, 6·0; tarsus, 2·8.

Fig. Sharpe, Rep. Trans. Venus, Zool. pl. 7, fig. 1 (head).

672. LARUS DOMINICANUS, *Licht.* Southern Black-backed Gull.

The descriptions are taken from specimens killed on the 29th of April, 1865, in Table Bay, by Mr. L. C. Layard. It is an abundant species, frequenting all our coast line, and breeding in large numbers on the islands to the north-westward. Their eggs are very variable in colour and markings, but are ordinarily of a darkish olive-green, profusely spotted with brown, chiefly in a band round the obtuse end: axis, 3"; diam., 2". We had one in confinement for nearly two years, and he had only just assumed the full adult plumage. We think that it is not put on till the third year. Our friend "Jack" was quite tame, and stalked about the garden and into the house at pleasure; he fed on any garbage, and generally took his morsel to his water-tub, and washed or wetted it before swallowing. His favourite sleeping-place, when not perched on the coal-heap, was an old tree-stump standing in the garden. He was a great adept at catching mice, which he swallowed whole, after giving them a few preliminary raps on the ground. Indeed, they seemed a great *bon bouche* with him; and he would hurry from the furthest end of the garden, if we did but hold one in our fingers, or show him the trap. He was very fond of worms, but would not eat slugs. He usually washed himself morning and evening, and slept much during the day.

Mr. Rickard has procured the species near Port Elizabeth and East London. Captain Shelley states that it is common along the

coast from Cape Town to East London, and he also occasionally saw it at Natal Point.

Mr. Andersson gives the following account:—"This is a very common Gull all along the south-west coast of Africa, from Walwich Bay to Table Bay. It is a most voracious feeder, preying on the carcasses of dead whales and seals, and also devouring freely dead rats, birds, or fish, as well as worms, insects, and shell-fish; besides which it is very destructive to the eggs of other sea-fowl. I have been assured on excellent authority that it carries off whole, and with perfect facility, the eggs of Penguins and Gannets to some distant rock, where it devours them at leisure. It is also said that this Gull has the singular habit of destroying its own eggs if it finds that its nest is in danger of being robbed of them by any person who is seeking to gather them. The breeding-places of these species are the rocky islets off the south-west coast, to which it resorts for the purpose of incubation about the month of December. Its eggs vary much in colour, being of various shades of green, drab, or brown, profusely blotched and spotted with dark brown, especially at the larger end."

Back, sooty-black; quill-feathers jet black, tipped with white; near the end of the outermost a white spot; ends of the smaller wing-feathers also white; rest of the plumage pure white; bill yellow, with knob near the tip of the lower mandible scarlet. Length, 24"; wing, 17"; tail, $7\frac{1}{4}$ ". Young: throughout mottled brown and white; bill almost black; irides rich warm brown; legs livid flesh-colour.

673. *LARUS HARTLAUBI* Bruch.

Hartlaub's Gull.

Larus poiocephalus (part.), Layard, B. S. Afr. p. 368.

This species closely resembles the next in colour and size, but never appears to possess the gray hood, characteristic of the true *L. phaeocephalus*. It is extremely common in Table Bay all the year round, and extends up the west coast. It breeds in thousands on the islands in St. Helena Bay and Saldana Bay. The eggs are light green spotted with dark brown and purple, but they vary in both ground and colour of markings. Axis 1" 1"', diam. 1" 6'''.

674. *LARUS PHÆOCEPHALUS*, Swains.

African Grey-headed Gull.

Larus poiocephalus, Layard, B. S. Afr. pl. 368.

This bird never to our knowledge appears in Table Bay, where it

is replaced by *L. hartlaubi*. We killed two out of four, which we saw at Zoetendals Vley in November, 1863.

We took three broken eggs, floating on the vley, which we think can only belong to this species; they are greenish-brown, profusely spotted with brown and purple; axis, 2" 1"; diam., 1" 6".

In the fresh specimens we were much struck with the exceeding beauty of the lovely delicate roseate tint which pervaded the whole of the under side; this faded very rapidly after death; but we think it was the most lovely colour we ever beheld. We have never noticed the faintest approach to this tint in any bird killed in Table Bay, nor in the living example of *L. hartlaubi*, which we kept for a short time in our garden.

It has been found near Colesberg by Mr. Arnot, and Captain Watson saw it abundantly and obtained it at the mouth of the Umphaloose River, east of Natal. Though he was there in the winter he assured us that all the specimens he saw were hooded as in the birds he showed us. Mr. Ayres says that these Gulls "frequent the Bay of Natal, frequently alighting on stakes or dead branches of trees which may be above the water. They do not appear to be gregarious." Mr. Andersson says that in Damara Land it is found both on the sea-coast and on the inland watersheds. It is rather a scarce species at Walwich Bay, but more common at Lake N'gami. It generally occurs singly.

General colour of back, cinereous; a hood of the same colour, but lighter, covers the head, chin, and upper portion of the neck; wing-feathers black, faintly tipped with white; a white spot on the two outermost near the tip, and a broad band across some of the others towards the centre; the rest of the plumage fine white, tinted in life with a lovely pink; bill and feet, deep crimson; legs flesh-colour; irides white; cere round the eye as in legs. Length, 16"; wing, 12½"; tail, 5".

Fig. Swains, B. W. Afr. pl. 39.

675. HYDROCHELIDON HYBRIDA (*Pall.*). Whiskered Tern.

According to Mr. J. Kotze, this species used to breed regularly on a vley half way between his residence and the mouth of the Berg River. The year of our visit not a bird was to be seen for some weeks after our arrival, though we often passed the vley. At last one morning early while going along the vley, Mr. Kotze exclaimed, "There

is one of the *Sternjes* I told you of." We instantly detected a new bird, and jumping from the cart we ran down each side of the vley and between us succeeded in obtaining the only specimen that we have seen. J. Verreaux says he also got them.

Mr. Andersson obtained a specimen in full breeding dress on the 6th of April. He says it was circling for some time round a vley in company with another. Two young specimens have been sent by Senor Anchieta from Humbe.

Above rather darkish slate colour, the exterior margins of the quill-feathers of the wings frosted. Head black, that colour extending on to the back of the neck; under the eye extending from the gape of the bill under the lores a broadish white stripe; chin whitish; vent white; the rest of the under parts dull dark slate colour; bill, legs and feet coral red. Length, 10"; wing, 8½"; tail, 3" 9". Wings extending beyond the tail, which is only slightly forked.

Fig. Dresser, B. Eur. viii, pl. 573.

676. HYDROCHELIDON LEUCOPTERA (*M. and S.*).

White-winged Black Tern.

Mr. Ayres has on several occasions procured this little Tern in the Transvaal; one was killed by him on the 26th of June, and in November "several of these Terns were hawking over a swamp some eight miles from Potchefstroom, with a slow, uncertain, wavy flight. The stomachs of those sent contained insects." Again he writes: "This Tern was killed in the month of December, at the lagoon at Loup-spruit, from a large flock which was apparently engaged in catching insects on the wing, and which, after being shot at, wheeled round and round in a body to an immense height, and then sailed away. The flight of these Terns was unsteady, like that of many of the Gulls, as if the wings were too large for the body." Mr. Buckley, during his journey to the Matabele, says that it was seen in the Transvaal during his way down, frequenting marshes and lagoons. Mr. Andersson says: "I have never seen this Tern on the sea-shore, but it is common on many inland fresh-water lakes, and during the wet season hunts over the temporary rainpools. It feeds on fry, frogs, spawn, snails, &c. It flies slowly and heavily, examining the ground carefully as it progresses."

Winter plumage. — Upper surface, including the tail-feathers,

uniform ashy grey ; forehead and crown white ; occiput and hind neck streaked with black ; a black spot behind the eye ; under surface of body pure white. Wing $8\frac{1}{4}$ inches.

777. STERNA FLUVIATILIS, *Naum.* Common Tern.
Sterna dougalli, Layard, B. S. Afr. p. 369.

We have killed many specimens at different seasons of the year, as it is a very common bird, seeking its prey along the edge of the surf, or on the marsh at the mouth of the Salt River. Mr. Rickard states that they are occasionally common near East London at the Buffalo Mouth. Mr. Andersson also found the species pretty common on many parts of the west coast, and Professor Barboza du Bocage records a pair collected in Benguela by Senor Anchieta. He considers that the South African bird is really distinct from the European Common Tern, and that it should bear the name of *Sterna macroptera* of Blasius.

The following description is a translation of that given by Professor Bocage from South African examples.

Upper part of the head deep black ; mantle ashy bluish ; rump and upper tail-coverts white ; lower parts white, slightly washed with grey on the breast and abdomen ; the white of the cheeks is prolonged into a narrow white band on the sides of the forehead ; quills black, broadly bordered with white inside, and glazed with grey on the outer webs, the first quill excepted ; tail white, the lateral feathers ashy on their outer webs ; bill violet black, with the base of the lower mandible inclining to reddish brown, and the point reddish ; feet violet red ; iris blackish brown.

Fig. Dresser, B. Eur. viii, pl. 565.

677. STERNA MACRURA, *Naum.* Arctic Tern.
Sterna brachypus, Layard, B. S. Afr. p. 37.

During a drive late one evening across a marsh formed by the celebrated hot spring called "Brandt Vley," near the town of Worcester, we observed a Tern, new to us, flying in considerable numbers over a portion of open water. Owing to the lateness of the hour, we were unable to stop and procure specimens ; but a short time afterwards we received a Tern from Tulbagh, a village at the end of the same valley (which is enclosed between high mountains), though distant about sixty miles, which we immediately

recognized as belonging to the same species as those at Brandt Vley. It answers in all respects to Swainson's description (*loc. cit.*) of the short-footed Tern, and as such we consider it.

A single specimen was obtained by Lieut. Giffard near Newcastle in Natal, at the end of November.

Upper part of head and back of neck black; general colour cinereous, both above and below, but paler and nearly white on the chin; upper and under tail-coverts, pure white; tail the same, but the outer web of the two external feathers is deep cinereous, almost sooty-black; quills blackish-cinereous; the shafts pure white, with the inner web half cinereous, half white; bill red; feet orange; tail one inch longer than the quills. Length, 15"; wing, 11"; tail from the base, 8; depth of fork, $4\frac{1}{2}$ "; tarsus, $\frac{1}{2}$ ".

Fig. Dresser, B. Eur. viii, pl. 564.

678. STERNA DOUGALLI, *Mont.*

Roseate Tern.

The Roseate Tern is said by Mr. Howard Saunders to occur in Natal, and there are specimens from South Africa in the British Museum. The same gentleman states that it is also found at Rodriguez. All the specimens marked by Mr. Andersson as belonging to this species from Damara Land were really *S. fluviatilis* in winter dress.

Mr. Saunders writes as follows:—"Apart from its light and elegant shape and its proportionately long wings, this species may always be recognized by the white inner margins of the primaries extending quite round the tips of the feathers as far as the outer web; the rump and tail-coverts are washed with grey. The colouration of the bill varies considerably with age and season; in some specimens it is black almost to the base, whilst in others the red or orange extends far in front of the angle.

Fig. Dresser, B. Eur. viii, pl. 566.

679. STERNA CANTIACA, *Gm.*

Sandwich Tern.

Pretty common throughout the seaboard. In habits they resemble *S. bergii*, with which they associate. According to Mr. Andersson, it is "common at Walwich Bay, and occurs in all parts of the coast between that locality and Table Bay." Senor Anchieta has met with it at Benguela, where it is called "Kamakundi."

Above, throughout, pale pearl-grey, rather darker on the wing-

feathers ; tail white and deeply forked ; on top of the head, from the bill, including the eye, and down the back of the head, a black hood, ending in a point on the back of the neck ; bill long and narrow, black, with the tip yellowish horn-colour ; legs and feet black. In winter the black on the top of the head is replaced by black speckles ; forehead white. Length, 15" ; wing, 12" 2" ; tail (to the end of centre feather), 4".

Fig. Dresser, B. Eur. viii, pl. 571.

680. STERNA CASPIA, *Pall.*

Caspian Tern.

This noble Tern is not uncommon on our shores ; but is, we think, a periodical visitant, appearing chiefly in the summer ; though Mr. L. C. Layard tells us he observed a pair during the day of the great gale, May 17th, 1864. It feeds on fish, and plunges from a considerable height, completely submerging itself. It is a solitary species, never appearing in flocks. Mr. J. Kotzé sent me an egg which clearly, from his description, belonged to this bird. It was found with three others (unfortunately eaten) on an island in St. Helena Bay. It is of a pale salmon-colour, profusely spotted with various sized spots of dark and light purple-brown. Axis, 2" 7" ; diam. 1" 9". Mr. Rickard records it from the neighbourhood of Port Elizabeth, and procured one out of a small party near the Swartkop's mouth. Mr. Andersson gives the following account of it :—" This splendid and powerful Tern is not uncommon at Walwich Bay and on the south-west coast of Africa generally. When on the wing it usually pursues a steady flight, and at a distance bears considerable resemblance to a Gull. It utters, at intervals, especially when fishing, exceedingly harsh and discordant notes, and, when about to do so, it arrests its course and, rising suddenly at an angle of about 45 degrees to its line of flight, gives vent to its cries, which are repeated two or three times, and in uttering which it greatly depresses its lower mandible whenever it opens its bill for this purpose. So far as I have seen, it lives entirely on fish. Where not previously disturbed it is not particularly shy or difficult to approach ; but when once it knows a gun it becomes exceedingly cunning." Sir John Kirk found this species breeding off the mouth of the Zambesi in January.

Above, throughout, pale pearl-grey ; quill-feathers of wings darkest ; beneath pure white ; head of male in full plumage, at the

top, from the base of the bill, including the eye and down the back of the neck, pure black; in the female this portion is only profusely speckled with black; bill fine scarlet; points horn-coloured; legs black. Length, 21"; wing, 17"; tail, to the centre, 5", forked.

Fig. Dresser, B. Eur. viii, pl. 569.

681. *STERNA BERGII*, *Licht.*

Swift Tern.

The Swift Tern is, perhaps, our commonest species, appearing in large flocks in Table Bay throughout the year. It breeds on the islands to the north-westward; lays two eggs of a rich cream-colour, dotted, blotched, and streaked with very dark brown and purple. Axis, 2" 5"; diam., 1" 7". The running of the smaller spots into streaks at once seems to identify the eggs of this species from those of others that may breed here. It feeds on small fish and crustaceans, the former of which it captures by dropping upon them from a considerable height; the latter it either gathers in a graceful swoop, as it flies along the edge of the retiring wave, or composedly picks up while walking along the sand, on which it readily perches. It is a singular sight to see the small craft in the bay covered by these birds and cormorants: each mast-head will be garnished with one, the bowsprit has a line of them, and along the sides and taffrail they sit as close as they can find room. When thus in repose they will permit a close approach, well knowing that the police regulations of the bay prevent their being fired at. Elsewhere they are wary enough.

Mr. Ayres says that these birds frequent the Bay of Natal generally in pairs, but sometimes as many as five or six are together. When in search of food they hover over the water and dart down on fish. Like *Larus phæcephalus*, they alight on any branch or piece of wood that may be above the water. Mr. Andersson writes: "Next to *Sterna caspia* this is the finest Tern on the south-west coast of Africa, where it is not uncommon. I have shot large numbers of it at Walwich Bay, where I have found it frequenting the innermost parts of the bay as well as some other inlets and bays to the southward." Sir John Kirk found this species breeding off the Luabo mouth of the Zambesi in January.

Male.—General colour above rather dark pearl-grey, darkest on the wing-feathers; under parts and lower part of the neck pure white; forehead white; top of head, including the eye and crest in

the male, jet-black ; in the *female* this is replaced by black speckles ; tail very deeply forked ; bill rich lemon-colour ; iris brown. Length (to centre of tail), $16\frac{1}{2}$ " ; wing, 15" ; tail, $4\frac{1}{2}$ " ; outside feathers, 8".

Fig. Cretzschm. in Rüpp. Atlas, pl. 13.

682. STERNA MINUTA, L.

Little Tern.

Mr. Howard Saunders states that in the British Museum is a specimen of this species from South Africa.

According to this observer, who is so well known as an authority on the *Laridæ*, the present species may always be distinguished from the other Little Terns by having *dark* shafts to the outer primaries, and by having the rump and tail *white*.

Fig. Dresser, B. Eur. viii, pl. 567.

683. STERNA BALENARUM, Strickl.

Damara Tern.

This lovely little Tern is scarce in Table Bay, only four specimens having appeared there during the whole of our residence at the Cape. We detected them fishing on a little sandy spot called Gordon's Bay, on Robben Island, November 29th, 1867. We killed a pair, right and left, and a friend with us knocked over another ; the remaining one decamped. Their stomachs were filled with small "sand-hoppers" (*Crustacea*). One specimen had the head mottled ; on dissection it proved a female : the other two were males. Mr. Andersson writes : "This exquisite little Tern is very abundant at Walwich Bay, and on some other parts of the southwest coast. It flies in pairs, or in small flocks, uttering harsh and rapid cries. It feeds on small fish and crustacea, in search of which it explores the creeks and shallows which are left by the receding trees. It is swift of flight, and very rapid in its movements. This species occasionally breeds at Walwich Bay, being the only Tern which does so ; its eggs are deposited in a small hole which it scoops in the sand." Mr. Howard Saunders gives the range of this Tern as from Walwich Bay to the Cape of Good Hope, and adds the following diagnosis :—"In this species there is no white frontlet, the black feathers coming down to the base of the bill, which is slender and black except at the gape ; the tail is grey like the mantle ; and the tarsi and feet are the smallest of those of the group ; the shafts of the primaries are white."

684. *ANOUS STOLIDUS*, L.

Common Noddy.

This is a likely species to be met with in South Africa, and two specimens from the Cape seas presented by Captain Thomas Rowe Harry are in the British Museum.

It may be told by its general sooty-brown colour, the lores and sides of the face being greyish-chocolate; the crown of the head is rather clear-grey, whiter on the forehead and over the eye; the wing varies from 10·2 to 11·5 inches.

685. *RHYNCHOPS FLAVIROSTRIS*.

Scissor-billed Tern.

This very odd-looking bird has been met with by Mr. Andersson at Ondonga and also at Lake N'gami, and Senor Anchieta has sent specimens from Humbe and the Rio Cunene, where it is called *Bamba*. Sir John Kirk also met with this Skimmer on the upper waters of the Zambesi and Shirè Rivers.

The following description is from Captain Shelley's "Birds of Egypt."

Beak very much flattened at the sides, and much deeper than it is broad, the lower mandible longer than the upper one. Top of the head, nape, back, centre tail-coverts, two middle tail-feathers, and wings dusky brown; forehead and remainder of the plumage white; secondaries tipped with white; inner web of tail-feathers shaded with dusky; legs and beak vermilion, the latter shading off to yellow towards the end; irides brown. Entire length 17 inches; beak, from the gape, upper mandible, 3·1; lower mandible, 3·9 to 4·4; wing, carpus to tip, 14; tarsus, 1·1.

Fig. Shelley, B. Egypt, pl. 14.

ORDER HERODIONES.

Fam. ARDEIDÆ.

686. ARDEA GOLIATH, *Temm.*

Goliath Heron.

This gigantic Heron has only once fallen under our notice, a fine male bird in full plumage having been received from Mr. Arnot, of Colesberg. Dr. Bradshaw has seen one or two specimens on the Orange River near Upington. The late M. J. Verreaux assured us that he saw this noble Heron at Zoetendals Vley. Mr. Atmore also says he is sure he saw it there. Mr. Arnot sends an egg, which we feel certain must belong to this bird: it is in colour like that of *A. cinerea*, but larger. Axis, 3"; diam. 2". In Natal, writes Mr. Ayres, "these birds frequent the mouths of the rivers and the bays along the coast. They feed entirely upon fish, easily swallowing those which weigh half-a-pound, or even more. They wade about up to their bodies, and dart on the fish as they swim past. The Bay of Natal affords fine fishing ground for these birds, being three miles in diameter, the greater part shallow, with a muddy bottom, and myriads of fish entering with the tide. These Herons when gorged retire amongst the mangroves to digest their meal, not roosting on the trees, but on the ground. They appear to be very solitary birds; I have seldom seen two together. The specimen sent measured, when in the flesh, upwards of six feet from the bill to the toes." In the Transvaal Mr. Ayres considers it to be the scarcest Heron of the country. He says that it is wonderful the size of the fishes they can swallow, and he killed one which had swallowed a 2 lb. carp. He also writes: "Whilst out fishing I shot a fine specimen of this Heron; he had just caught and gorged whole a cat-fish (here called Barbel) of at least 2 lb. weight, and with a head as broad as one's hand; he had dexterously speared it right through the body behind the head with one mandible, and had evidently clasped it with the other." During Mr. Jameson's expedition it was seen in Mashoona Land, but was not procured. Sir John Kirk states that it was seen in the swamps of the Zambesi delta and on Lake Nyassa, but was

nowhere plentiful; on the Chobè River it was found to be more abundant by Dr. Bradshaw. Mr. Andersson observes as follows:—
 “These fine Herons are not common in the Lake regions, from whence they make temporary and solitary excursions into Damara Land during the wet season. I have met with them on the Rivers Okavango and Teoughe, at Lake N’gami, and thence eastward along the River Botletlé. They are generally seen singly or in pairs, and are shy and wary birds, usually able from their great stature to espy any threatened danger from a considerable distance, and thus to make their escape in safety. They utter a strong, hoarse, croaking sound, not unlike the bark of a dog. I believe these Herons feed almost entirely upon fish, which they transfix with great celerity and swallow entire: it is said that a half-pound fish is thus easily disposed of.” It is not rare at Humbe on the Cunene River, according to Senor Anchieta.

Upper part of back and drooping plumes of chest, leaden-grey; head, neck, and under parts of body, deep rufous; chin white; down the front of the neck extends a line of black, mottled with white, coalescing and mingling with the drooping plumes of the chest. Length, 4' 6"; wing, 1' 11"; tail, 11".

Fig. Temm., Pl. Col. 474.

687. ARDEA CINEREA, L.

Common Heron.

The Heron is very abundant throughout South Africa, in all suitable localities, feeding upon fish and frogs, and an occasional snake. We are told they breed on the Cape Flats, placing their nests in company on tufts of grass and rushes, surrounded with water. This seems a strange habit, and very different from their European practice; but we see no reason to doubt our informant, who has volunteered to show us the breeding-place, and whose children make a yearly jaunt thither to feast on the eggs.

Miss Annie Van der Byl has forwarded us eggs taken in a similar situation in a vley near Fairfield (Caledon). We found it abundantly breeding with the other two following species at the Berg River, in September. The nest is a huge mass of rushes constructed on the reeds. Eggs blue-green, shaped alike at either end. Axis, 2" 3"; diam. 1" 9".

Mr. Rickard informs us that it is occasionally met with at Port Elizabeth and East London.

In Natal, Mr. Ayres says, they are found generally in pairs, and

are exceedingly shy, often feeding with the White Herons, and alighting on trees. Mr. Buckley states that it was fairly common on the Limpopo, where he observed several pairs and obtained one specimen. Senor Anchieta has found it in all parts of Angola and Benguela. At Quillengues the native name was *Lodera-angundo*, two words signifying to stand on a crocodile, a habit which they attribute to the bird. In Damara Land, writes Mr. Andersson, "this species is rather common on and near the sea-shore, from the mouth of the Orange River to Walwich Bay, wherever suitable localities occur; but I have seldom seen it inland, except in Ondonga, where it makes its appearance in December; but the natives say that it does not breed there, and I think they are right. These Herons usually occur singly or in pairs; but I have counted as many as twenty in one small spot (not extending more than two hundred yards in any direction). They will remain motionless sometimes for hours, but in the mornings and towards evening are usually on the move in search of their food, which consists in great part of fish, though they also feed on rats, mice, and reptiles."

Upper parts, blueish-grey; head, neck, and under parts, white; a broadish black stripe commences just before and extends over the eye to the back of the head, terminating in a lengthened pendant crest; a double row of black spots commences about one-third of the way down the front of the throat, and terminates among the pendant feathers of the chest, on each side of which is a broad black patch, extending down each side to the thighs; quill-feathers of wings black. Length, 3' 3"; wing, 1' 6"; tail, 8".

Fig. Dresser, B. Eur. vi, pl. 391.

688. ARDEA MELANOCEPHALA, *Vig. and Childr.* Black-necked Heron.

We suspect that the Black-necked Heron is more commonly distributed than is generally supposed; but, owing to its resemblance to the common species, is not often brought to notice. We once shot one without being at all aware that we were obtaining such a prize. It was on the marshy ground close to the Observatory, near Cape Town, and at the moment when we fired it was engaged in a fight with another. We took them both to be *A. cinerea* till we picked up our bird. We have received it from Colesberg in the young state; and Mr. Chapman procured it along the Zambesi route; Mr. Atmore in the George district. We also saw a specimen

in the Worcester Valley. We found it very common at the Berg River, breeding on the reeds along the river and in the vleys. The eggs are like those of *A. cinerea*; average size: axis, 2" 5"; diam. 1" 9".

The late Mr. Frank Oates procured one example in a marsh near Pretoria. Mr. Ayres shot a single specimen in Natal in a marshy valley about a mile from the coast. Captain Feilden obtained a female specimen at the Ingagane River on the 6th of June, and Major Butler noted several other specimens shot in the same locality. Sir John Kirk says that in the Zambesi it was scattered throughout the marshy regions of the rivers and lakes. According to the late Mr. Andersson, "this Heron is found sparingly about humid places in Great Namaqua and Damara Land, and in the lagoons on the southwest coast. Axel also found it common in Ondonga on his arrival there in the month of November; there was then no water in the vleys; and these birds were feeding exclusively in the fields, and chiefly on grasshoppers; but the ordinary food of this species also comprises fish, reptiles, rats, and mice. These Herons perch upon trees when there are any within reach." Mr. Monteiro found it "very abundant on all the fresh, salt, and brackish-water lagoons and marshes on the whole coast of Angola." Senor Anchieta has sent it from the Coroca River, Quillengues, and Humbe; at the latter place it is called *Kilubio*.

Upper parts, blue-grey, darkest in centre of back; upper portion of head and back of neck, black; chin and upper portion of throat, pure white; centre portion profusely mottled with black and white; lower part blue-grey; under portion of body light blue-grey; tail black. Length, 3' 3"; wing, 1' 4"; tail, 8".

Fig. Dresser, B. Eur. vi, pl. 393.

689. *ARDEA PURPUREA, L.*

Purple Heron.

The Purple Heron is abundant in all marshy places throughout the colony, and has been brought by Mr. Chapman from the Zambesi. It feeds on the same food as does *A. cinerea*, and is found in similar localities. We obtained it abundantly at the Berg River breeding in company with the two preceding, and making similar nests. Eggs are also similarly coloured but are rather narrower in form. Axis, 2" 4"; diam., 1" 7".

Dr. Bradshaw has seen it twice on the Orange River near Uping-

ton. Mr. Rickard records it from the neighbourhood of East London and Port Elizabeth, but it is not very common, as Captain Trevelyan met with only two specimens during his residence there.

Mr. Ayres says that in Natal it frequents streams and marshes, and he has found good-sized fish in the stomach. In the Transvaal Mr. Buckley found it common throughout the open country, and Mr. Ayres gives the following account of its nesting in the same locality. "This Heron chooses for its breeding-place a secluded reedy swamp. The nest is placed some few feet above the water (which is frequently out of one's depth), on reeds bent down by the bird so as to meet from all directions and thus form a sufficient support for the nest, which is a very rough structure composed of dead sticks and pieces of reeds; it is two or three feet in diameter, with a very slight concavity. These Herons lay three or four eggs; and frequently five or six pairs breed in company, placing their nests within a few yards of one another."

Mr. Barratt writes:—"The Purple Heron I have met with throughout my travels in the Free State and the Transvaal, but not further north than Nazareth in the latter state. I found that it became less common in the southern portions of the Free State, and *A. cinerea* seemed to take its place to a great extent. It is not so shy as most of the Herons, for I could generally easily procure a specimen near Potchefstroom when required." According to Sir John Kirk it was common in all marshy places in the Zambesi region. It breeds in the swampy spots or islands, making its nest at the foot of reeds; each has two or three eggs in February. They live in societies, returning to the same place a little before sunset. Mr. Andersson says: "I have not unfrequently shot this bird on the rivers Okavango and Teoughe, and at Lake N'gami, and I believe it also visits Damara Land during the rainy season; but the specimens which I obtained in the latter country were not preserved, and I am therefore unable positively to identify them. These birds live in small flocks or societies, and frequent marshy ground and the sides of running streams; they make daily excursions from some fixed point, to which they return at nightfall. The nest is formed in the ground, at the roots of reeds, in some swamp or dense reed-bed."

Senor Anchieta has found the species only at Humbe on the Cunene River.

Upper part of back, ashy-grey, variegated with a few red plumes on each side; top of head black; neck red, with a broad black stripe down the back, a narrow one on each side, and a blue one in front, formed of a succession of spots, and spreading out on the breast, which is bright buff; centre of belly, very dark rufous; sides lighter; thighs bright rufous; as are also the shoulders. Length, 2' 10"; wing, 1' 2"; tail, 7".

Fig. Dresser, B. Eur. vi, pl. 392.

690. *ARDEA ARDESIACA*, *Wagl.* Lesser Grey Heron.

Ardea calceolata, Layard, B. S. Afr. p. 307.

Ardea flavimana, id. t. c. p. 307.

As far as we know this Heron has only been found in the Transvaal. Mr. Barratt shot one near Potchefstroom, and, writing in 1871, Mr. Ayres says: "I have only obtained two specimens of this Heron, one of which was shot by my brother in April, 1869, in the swamp near Potchefstroom, and the other was also shot by a friend of mine in the same locality. The flight of this species somewhat resembles that of *Ardea purpurea*." Later on he observes as follows: "This beautiful Heron has a curious habit, whilst feeding, during the heat of the day and when the sun shines blazing hot, of throwing one wing suddenly forward and holding it out, so that it shades a small portion of shallow water; the bird immediately peers into the water searchingly, and invariably makes a dart at some unlucky little fish. In the specimen sent the tips of the primaries are worn; and without doubt this comes from the wing being so constantly thrown forward against rough grass and plants." In 1880 he forwarded a specimen with the following note: "This was a solitary bird that I had noticed for some time passing along the river, morning and evening, to and from his feeding-ground; when shot he was leading a small flock of *Herodias garzetta*, and these were immediately followed by about fifty of the Sacred Ibis, all in flight towards their roosting-place. All these birds passed regularly to their favourite resorts in the morning, returning in the evening to more secluded spots to roost." Sir John Kirk states that he found it singly or in pairs along the marshy parts of the River Shirè.

Mr. Andersson does not appear to have met with the species in

Damara Land, but Senor Anchieta has procured specimens on the River Coroca, and at Humbe, on the Cunene River.

General colour, black; with chin and upper part of anterior portion of throat, white; two long narrow pendant plumes proceed from the occiput; the feathers of the breast and back are much decomposed and elongated; in the latter projecting slightly beyond the tail, and curved upwards at the tip; irides bright-yellow. Length, 17"; wing, 8" 3"; tail, 4½".

Mr. Gurney (Ibis, 1871, p. 264) writes concerning the variation of plumage in this species: "There can, I think, be no doubt that *Ardea flavimana* of Sundevall, as well as *Ardea calceolata* of Du Bus, are synonymous with this species; the descriptions of Du Bus and of Sundevall, and the plate given by the former author, agree well with the specimen obtained by Mr. Ayres in April, 1869, except that the latter has the throat and chin of a rufous maroon colour, which is probably the remains of the immature dress, as the other specimen sent by Mr. Ayres, the sex of which was not ascertained, but which bears the appearance of being a younger bird, has the whole of the under plumage from the chin to the under tail-coverts inclusive, and also the thighs, more or less tinged with rufous maroon, interspersed with a few worn feathers of a whitish hue, and especially white on the shaft. Both the maroon tint and the intermingled white plumage are especially noticeable in this specimen, on the lower part of the front of the neck, where some of the lanceolate feathers are schistaceous on their outer, and rufous on their inner webs." Professor Barboza du Bocage also says that the young bird may be distinguished by the blackish brown tint of the plumage instead of its being slaty black, and by the absence of the long plumes on the back and fore-neck.

Fig. Du Bus, Bull. Acad. Brux. iv, pl. 3.

691. ARDEA RUFIVENTRIS, *Sund.*

Rufous-bellied Heron.

The beautiful and singularly coloured Heron was procured at St. Lucia Bay by Mr. Fellows, who kindly allowed us to describe this and several other novelties in his collection during our voyage from the Cape to England, in October, 1870.

Mr. Ayres has met with it in the Transvaal, and observes: "These Herons are shy and exceedingly scarce here; three or four are some-

times seen together. They fly rapidly, and settle on the reeds. The stomachs of those sent contained frogs." Mr. Frank Oates procured a specimen at Hendrik's Vlei during his expedition to the Zambesi. Mr. Andersson writes: "I have shot several individuals of this very handsome Heron both on the River Okavango and on the River Teoughe, as well as in the neighbourhood of Lake N'gami; but I not recollect having met with it in Damara Land."

General colour of head, neck, chest, back and wing primaries black shaded with ashy; belly, vent, sides, shoulders, secondaries, rump, and tail deep chestnut; legs and base of bill yellow; tip black; "legs slate-colour; iris dark hazel" (*F. Oates*). Length, 19" 6"; wing, 9"; tail, 3" 5".

Fig. Ayres, *Ibis*, 1871, pl. 9.

692. *HERODIAS ALBA*, *L.*

Great White Heron.

This fine Egret was shot on the Great Fish River and is now in the Grahamstown Museum, where we took the measurements. Mr. Gurney has recorded it from Natal. Mr. Buckley states that he saw a few pairs along the Limpopo during the summer, but we are not certain whether the identifications of these white Egrets in South Africa can always be depended upon, and whether some of the birds supposed to have been *H. alba* may not have been confused with the next species. Mr. Andersson's last collection contained an example, but without indication of exact locality. Senor Anchieta has met with it at Benguela, Lobito and Humbe on the Cunene River.

Pure white with decomposed feathers on the rump; bill yellow; legs black. Length, 38½"; wing, 14"; bill, 4½"; tarsus, 6½".

Fig. Dresser, *B. Eur.* viii, pl. 394.

693. *HERODIAS INTERMEDIA*, *Wagl.*

Short-billed White Egret.

Ardea egretta, Layard, *B. S. Afr.* p. 308.

A pair of these most lovely Egrets, male and female, have been shot at different times in Zeekoe Vley, between Cape Town and Simon's Bay. We have ourselves seen white Egrets wading about that piece of water, and also on the marsh nearer to Kalk Bay, but always too far off to determine the species. We have also seen some on the marsh below the Observatory, and on the rocks at Robben Island. They are, however, generally so wary as to be

unapproachable. Mr. Atmore tells us it is common at the Kuysna, but very shy, and breeds on a small rock in the sea, east of the Heads; he was too late (December) for eggs. Dr. Bradshaw says it is scarce on the Orange River near Upington. In Natal, writes Mr. Ayres, "these Herons are gregarious, frequenting the bays along the coast. They feed at low tide amongst the mud and shallow water, stalking gently along. When they see their prey they stop suddenly, and make a dead point at it, exactly like a pointer dog at a partridge; remaining motionless for a few seconds, then gradually drawing nearer, they dart their long necks suddenly into the water, and almost invariably catch the unlucky fish. At high water, or if disturbed, they always perch on the upper boughs of the mangroves, and other trees which fringe the bay, never roosting on the ground. Their flight is heavy, as is that of all the Herons I know." In the Lydenburg District of the Transvaal, Mr. Barratt states that it is shy and not easily procured. Mr. Ayres found the species at Spalding's on the Hart River during Mr. Jameson's expedition, and says that "a pair of these Egrets were met with on the swampy banks of the river, which was in flood, flying lazily up and down the stream of their favourite feeding-haunts." Dr. Bradshaw tells us that it is common on the Zambesi.

Mr. Andersson writes: "I obtained these Herons both at Lake N'gami and at Otjimbingue in Damara Land; on one occasion (on February 2nd, 1865) I killed three out of a flock of four. Their flight is heavy, and at a distance they look larger than they really are." Senor Anchieta has forwarded specimens from Humbe.

Plumage, pure white; bill and bare space round the eye, and between it and the bill, bright yellow; legs greenish-black. The male in breeding plumage has the feathers of the lower part of the neck elongated and decomposed, and those of the back also decomposed and prolonged to an enormous extent, projecting far beyond the tail, drooping gracefully over the end of the wings, and turned slightly upwards at the tips; irides bright yellow. Length, 2' 2"; wing, 10"; tail, 5" 6". The length of the bill is given by Mr. Andersson from the freshly-killed bird as 3·9 against 6·0 in *H. alba*. Prof. Bocage makes it 2·8 as against 4·3 in the larger species.

694. *HERODIAS GARZETTA* (L.).

Little Egret.

Ardea garzetta, Layard, B. S. Afr. p. 308.

Specimens of this beautiful Egret, both in winter and nuptial dress, have been procured in the neighbourhood of Cape Town, also at Colesberg and at the Knysna. The stomachs of this and the preceding, which we have examined, contained multitudes of small aquatic shells (*Physopsis africana* and *Succinia delalandi*).

It is very abundant at the Berg River, breeding in company with *A. cinerea* and the others: also in heronries by themselves. Their nests resembled those of the larger species. Eggs also three or four in number. Axis, 2' 2''; diam. 1' 7''.

Near Kingwilliamstown it is recorded as scarce by Captain Trevelyan, and Mr. Ayres states that it inhabits the Bay of Natal. Majors Butler and Feilden and Captain Reid say that the White Egrets were a familiar feature in all the less frequented vleys in the Newcastle district. Mr. Ayres has also procured the species in the Transvaal. Mr. F. A. Barratt observes: "I shot specimens of this lovely little Egret near Pretoria, and I have obtained them near Potchefstroom both in winter and summer." Mr. Andersson gives the following note: "This is a scarce bird in Damara and Great Namaqua Land, and very local; but it is pretty common on the rivers flowing into and out of Lake N'gami, and it also occurs on the Orange River. It associates in small flocks, and feeds on fish, lizards, frogs, crustacea, and aquatic insects." Senor Anchieta has procured this Egret in many localities in Benguela, the River Coroca, and at Humbe. At the latter place it is called *Nanhé*, and on the Coroca River *Dila*. Mr. Monteiro states that he observed it on all the stagnant fresh water of the whole of Angola.

Entirely white, with two long plumes depending from the back of the head; feathers of the breast and back elongated and decomposed; the latter not extending beyond the tail, and curved considerably upwards; bill and legs in full breeding plumage, black: at other times the legs and feet are greenish-yellow; irides bright yellow. Length, 2' 4''; wing, 12''; tail, 5''.

Fig. Dresser, B. Eur. vi, pl. 395.

695. BUBULCUS IBIS (L.).

Buff-backed Egret.

Ardea bubulcus, Layard, B. S. Afr. p. 307.

Two specimens of this Egret, in non-breeding dress (which is all white, without the crest and pendant plumes), have been received from Mr. Arnot, from Colesberg. Mr. H. Shaw also procured it in the same plumage at Wynberg, in May, 1867. It has also been found at Grahamstown. Mr. Rickard notes it as occurring both at Port Elizabeth and East London. Writing from Natal, Mr. Ayres says: "The flats near the mouth of the River Umlaas are the only localities where I have seen these birds. They are gregarious in their habits, roosting by night amongst the branches of trees which overhang the small lakes that are plentiful in that part of the country. They appear to feed entirely on ticks (*acaræ*), which they pick from the cattle as they are feeding, walking alongside of them and every now and then taking one off. They are wary birds, like most of the Herons, and not easy of approach. The farmers in the neighbourhood have also, of course, great objection to such useful birds being shot." Lieutenant Giffard procured a single specimen near Newcastle in the summer months.

Mr. Ayres has also shot the species in the Transvaal, but in 1880 says that it was becoming scarcer year by year. Mr. F. A. Barratt writes: "I shot a fine male of this species in a flock which were hopping about under some oxen, from which they were picking off the ticks. I have obtained them close to Lydenburg and Potchefstroom, and I have seen them near Pretoria, Rustenberg, and near the Vaal River. They congregate in flocks, standing on one leg basking in the sun."

Dr. Exton met with it at Kanye, in the Matabele country, and says that he noticed it feeding on the ticks on the oxen, but only observed this habit when the latter were lying down. Mr. Frank Oates procured a specimen at Tati, and it was met with by Mr. Jameson's expedition at Spalding's on the Hart River, when, Mr. Ayres says, a solitary bird was procured on the 7th of February. "We now and again saw a flock feeding, as they often do, amongst the herds of cattle. At the Tati River in December we saw a small flock." In the Zambesi region, Sir John Kirk says that "it is called 'Kakoe;' it follows herds of elephants and buffaloes, sitting on their backs or flying near to them, so that in long reeds the game may be followed when nothing but the birds are visible."

Mr. Andersson states that this species is exceedingly common in Ondonga, and quite tame; it perches on trees, and may be seen in flocks of from ten to fifty, frequently in company with cattle. Senor Anchieta has procured specimens in nearly every part of South-Western Africa visited by him, and has found it both in the interior and on the sea-coast.

Adult female, in breeding plumage: general colour white; top of head, crest at the back, pendant feathers of breast, and decomposed feathers of back, rufous-isabella colour; bill and legs yellow, irides yellow. Length, 1' 7"; wing, 9"; tail, 4½".

Fig. Dresser, B. Eur. vi, pl. 396.

696. ARDEOLA COMATA (*Pall.*).

Squacco Heron.

Ardea comata, Layard, B. S. Afr. p. 308.

Mr. Bowker sent it from Basuto Land in summer, and Mr. Arnot from Colesberg in winter dress. We saw it abundantly up the east coast and Mozambique Channel, frequenting the coral reefs which line the shore. It is rare near Kingwilliamstown, as we are informed by Capt. Trevelyan; he killed two specimens on the banks of the Buffalo in 1871, and one on the banks of the Chalumna in 1877.

Mr. Ayres has sent several specimens from the Transvaal, and has found the stomachs filled with crabs and grasshoppers. He says that it is plentiful in the swamps near Potchefstroom. Mr. Barratt observes: "I shot the best of my specimens of this lovely bird in October, when it was in magnificent plumage. It is, however, a rather wary bird; and I have often watched them from a distance standing near a vley and occasionally curving their long necks." Mr. T. E. Buckley met with the species in Bamangwato in August, and Sir John Kirk says that on the Zambesi it was seen in pairs, feeding in marshes and shallow water.

We are informed by Mr. Andersson that this species of Heron is found in Damara Land and Great Namaqua Land throughout the year, but is more numerous in those countries during the rainy season than at other times. It is very abundant in the Lake-regions, and on the rivers Botletlé, Teoughe, and Okavango. It feeds on insects, frogs, &c. Senor Anchieta has only met with it on one occasion, at Mossamedes.

Top and back of head, pale ochraceous-yellow; occipital feathers elongated, pointed, white; back rufous, the feathers elongated and

decomposed; all the rest of the plumage white; bill blueish, with black tip; legs yellow; irides yellow. Length, 16" to 17"; wing $8\frac{1}{2}$ ".

Fig. Dresser, B. Eur. vi, pl. 397.

697. BUTORIDES ATRICAPILLA (*Afzel.*).

African Black-headed Heron.

Ardea atricapilla, Layard, B. S. Afr. p. 309.

We obtained specimens of this pretty little Egret at Mauritius, Madagascar, the islands to the north-east, and along the whole east coast of Africa. Two examples were procured by Mr. Arnot somewhere in Mahura's country. It frequents equally fresh and salt water, finding its food, which consists of small fish, frogs, water-insects, and shells, with equal facility in either. It is very partial to the mangrove thickets which line the tidal rivers on the coast, and roosts among them, perching on the branches.

Near Kingwilliamstown Capt. Trevelyan says that it is rare. He informs us that Mr. Newby, of that place, killed one a mile or two from the town. In Natal, Mr. Ayres says that it is a scarce species, appearing to be very solitary in its habits; they are generally found amongst the mangroves, either perched on some low bough or on the mud, and always in the shade, evidently preferring the darkness to the light; if put up, they invariably fly but a short distance and alight again in the shade, mostly at the foot of some low-spreading tree or under the bank of some creek. He has also found it frequenting trees on the Marico River, and during Mr. Jameson's expedition it was met with on the Umvuli River. Mr. Ayres writes: "We found it solitary and rare, but met with a family party on the Quae Quae amongst dense reeds and low trees in the bed of a small stream." On the Zambesi, Sir John Kirk says it was by no means common, and was a solitary bird, keeping to the river, flying close along under the banks, and perching on the bushes which overhang, from which it watched for its prey. Mr. Andersson found it "not uncommon at Lake N'gami and its watersheds, as also on the Okavango." Senor Anchieta has met with it on the Coroca River, and at Gambos in Mossamedes.

Above, dark slate-coloured, tinged with green, which prevails on the wings; back, sides of neck, flanks, and under parts, cinereous; top of head and crest black, shot with green; chin and fore part of

neck white, tinged with ferruginous; dorsal plumes long, narrow, and lanceolate. Length, 15"; wing, 7" 2"; tail, 2" 9'''.

698. *BOTAURUS STURMI*, Wagl. African Dwarf Bittern.
Ardea gutturalis, Layard, B. S. Afr. p. 310.

We have seen one specimen of this Bittern shot at the Paarl by Mr. Gird in 1869. Mr. Ayres has procured it in Natal, and says that he believes that "both this species and *Botaurus pusillus* feed entirely at night, generally hiding themselves in the reeds by day, and coming out into the reeds at dusk." Mr. Jameson's expedition met with the species at Kooroomoorooi Pan. Mr. Andersson writes: "I observed several of these birds in Damara Land, and found them very common in Ondonga. Axel also found them exceedingly abundant between Ondonga and Ovaquenyama, as well as at Ovagandyaro. The favourite haunts of this species are vleys surrounded with trees and bushes, on which it perches; and it is rarely met with at a distance from trees. It feeds on insects and the smaller crustacea, but seems to be somewhat omnivorous in its diet. I am inclined to think that it feeds by night. It breeds in Ondonga, usually placing its nest in the lower branches of palm bushes which are partly immersed in water, a few feet above which the nest is situated; it is composed of stalks of coarse grass or of small twigs laid across each other without much care or strength, and with hardly any depression for the reception of the eggs, which are four in number." Senor Anchieta has procured a single specimen at Biballa.

Above, dark slate-colour; beneath buff, variegated from the chin down to the belly with elongated blotches of dark slate-colour, here and there edged with rufous; flanks tinged with rufous. Length, 12"; wing, 6"; tail, 2". "Iris brownish-lake; bill black, with the bare skin at the base light green; the bare skin round the eye dusky blue; tarsi and feet chrome-yellow, suffused with dusky brown" (Ayres).

Fig. Smith, Ill. Zool. S. Afr., Aves, pl. 91.

699. *BOTAURUS PUSILLUS*, V. African Little Bittern.
Ardea minuta, Layard, B. S. Afr. p. 309.
Ardea pusilla, id. p. 310.

It is now generally conceded that the Little Bittern of Africa is

not the same as the Little Bittern of Europe, with which it has been identified; and Mr. Gurney informs us that all references to *A. minuta* by himself and Mr. Ayres belong to the present species. This pretty little Heron is not uncommon in all suitable localities in the colony; and Mr. Chapman brought it in considerable abundance from the Zambesi. It conceals itself among reeds, and lies so close that the shooter often treads within a few feet of it before it will rise. Mr. L. C. Layard has shot several pair in the neighbourhood of Cape Town. Mr. Rickard has once met with it near Port Elizabeth, but we have no other notices of its occurrence in the eastern districts. Mr. Ayres has procured the species in Natal, and in the Transvaal he says it "is common amongst the reedy swamps and banks of rivers, where it lies close amongst the reeds and hedges, and is not always easily flushed; its flight is never lengthened." Mr. Andersson observes:—"I never met with this species in Damara or Great Namaqua Land; but it is not uncommon on the rivers Okavango and Teoughe, and also at Lake N'gami. It inhabits marshy districts, where it hides closely, coming out on the approach of night to feed on small fish and reptiles, and also on insects and mollusca. It is found singly or in pairs." Senor Anchieta has forwarded specimens from the Coroca River and Mossamedes, and it was found by Messrs. Capello and Ivens, who met with it on the banks of the Quango, in the interior. Mr. Monteiro's specimens, which were wrongly identified as belonging to *Ardea minuta*, were shot by him at the Bimbas or fresh-water lakes at Benguela.

We translate the description given by Professor Barboza du Bocage from African specimens.

Adult male.—Top of the head, occiput, back and tail, glossy greenish-black; cheeks and neck bright rufous, inclining to ochraceous on the fore-neck and chest; wing-coverts pearl-grey, the lesser coverts washed with rufous; under-surface of body ochraceous-rufous; the middle of the belly and under tail-coverts white; bill yellow, browner on the culmen; feet greenish-yellow; iris orange-yellow.

Female.—Has the back dark maroon-brown, instead of black, with narrow yellowish edgings to the feathers.

700. *BOTAURUS STELLARIS, L.*

Common Bittern.

The Bittern is occasionally found in a few favoured localities, even in the neighbourhood of Cape Town; and we are told that it breeds in Verloren Vley. At Zoetendals Vley we found it in great abundance; and early in the morning, or during the evening twilight, their booming call resounded from every part of the lake. Mr. Hugo, of Fransch Hoek, brought us a pair of eggs, unfortunately both broken, which he states belonged to this bird. The colour is a dark olive-green, smooth and shining as a duck's. Having seen Bitterns' eggs in various collections in England, we are satisfied that Mr. Hugo is right in his identification.

It does not occur in Mr. Rickard's list from East London; and Captain Trevelyan only met with it on two occasions near King-williamstown.

Majors Butler and Feilden and Capt. Reid state that "it was by no means uncommon in the reed-grown vleys in the Newcastle district; four or five were sometimes seen in the course of a day's shooting." Mr. Ayres says: "I first met with these birds amongst the rushes in the swamps surrounding Potchefstroom, where they lie concealed during the day, emerging from their covert towards dark to seek their favourite feeding grounds; at this time they frequently fly over one's head in their passage. Their flight is slow and laboured; and a loud harsh 'quirk' is occasionally uttered as they pass. When wounded they are extremely pugnacious, defending themselves with great pertinacity: they throw themselves on their backs, and, with claws and bill (which are both very sharp and strong) advanced, make rather a formidable appearance, more especially as the feathers round the neck are ruffled up at this time: and few dogs care to interfere with them. On my first arrival in Potchefstroom I was informed by the Dutch that a very large snake inhabited the surrounding swamps, that many persons had seen it, all of whom had been alarmed, and that at night, during the summer months, it made a loud bellowing sort of noise, which I should surely hear. I at once determined to overcome the monster and immortalize myself. The voice I certainly heard at night and also in the daytime, and that when I was often a mile or two distant from the swamps. I gave my friends, the Bull-

frogs, credit for it; but the Dutch laughed me to scorn for such an idea. I tried, gun in hand, several times to approach the spot; but sometimes the place amongst the reeds was inaccessible, at others the reeds so thick that I made so much noise in pushing my way through them as to frighten my enemy, who immediately left off making the unearthly noise in which he appeared to delight. One day, however, I heard it in a comparatively open swamp, and on walking in a direct line to the spot the noise ceased and a Bittern flew up and alighted again within three hundred yards. As I could see nothing further, I waited and listened for the noise to recommence, considering that the snake's head might, perhaps, be under water, as I was standing up to my middle in it amongst the rushes. After waiting patiently for nearly half-an-hour, and watching carefully, I heard the noise begin again from the direction in which the Bittern had flown. Proceeding thither, I again flushed the bird; the noise ceased. A third time the same thing happened; so without doubt the Bittern makes this extraordinary noise, which may be regarded as a love-note, and that apparently by drawing in the air and forcing it out again. The skin of the neck being exceedingly loose, the bird probably has the power of inflating it. Tadpoles and small frogs form its principal diet." Mr. F. A. Barratt gives the following note:—"The Bittern is found plentifully in the district of Potchefstroom. Their booming note used at one time to frighten the Boers that they would never go into a vley, even on horseback, when they heard it, believing it was a large snake. I have shot them near Bloemfontein, Orange Free State, but never further north than about thirty miles north of Potchefstroom." It does not seem to occur in South-Western Africa, as Mr. Andersson did not meet with it, nor has it yet been procured in Angola by Senor Anchieta.

General colour ochreous, profusely variegated with wavy lines of dark brown; top of head deep brown; chin white, or pale-ochreous; the markings on the back assume a bolder character than those on the other parts of the body; the neck is furnished with a ruff, which can be expanded at pleasure. Length, 2' 4"; wing, 12"; tail, 4". "Iris brownish-yellow; bill greenish, brown on the ridge; tarsi and feet greenish-yellow" (*Ayres*).

Fig. Dresser, B. Eur. vi, pl. 400.

701. *NYCTICORAX GRISEUS*, L.

Night Heron.

The Night-Heron is generally distributed throughout the colony; but appears to be nowhere common. It breeds abundantly at the Berg River in September, in company with the other Herons, in a vley near the bank on Mr. Welck's side, but we never found it in the reeds lining the banks. The nests resembled those of the other species, and the eggs, coloured the same, were generally rather pointed at both ends—three to five in number. Axis, 1" 10"; diam., 1" 4". Mr. Rickard records it from Uitenhage. In Natal Mr. Ayres says they are exceedingly scarce; when found they are always amongst the dense mangroves, and stationary; when disturbed they almost invariably alight again at a short distance, getting more and more wary each time they are put up. Majors Butler and Feilden and Captain Reid state that it was uncommon in the Newcastle district, only one young bird being met with. In the Transvaal Mr. Ayres says they are more plentiful, and he procured an adult female and a young male on the Inshlangeen River during Mr. Jameson's expedition to Mashoona Land. Mr. Andersson's notes on the species are as follows:—"This species is pretty frequent in the Lake country; it occurs in Ondonga in the wet season, and is recorded as having been obtained on the Orange River. In Damara Land I have only observed it very rarely, and always in immature plumage. It feeds on fish, reptiles, aquatic insects, slugs, &c." Senor Anchieta has met with it at Mossamedes, the Coroca River, and Humbe.

General colour, light slate; paler on the side of the head and neck, with a vinaceous tinge; chin, centre of throat, and under parts, white; the back, top of the head, and a portion of the hinder part of neck, dark iridescent-green; from the back of the head emanate two long, narrow, and pure white plumes, eight inches long; legs yellow; irides in adult bird the same; in young birds light reddish-madder. The young bird is of a dirty-grey, mottled with white. Length, 24"; wing, 13"; tail, 5'.

Fig. Dresser, B. Eur. vi, pl. 399.

702. *NYCTICORAX LEUCONOTUS*, Wagl. White-backed Night-Heron.

A pair of these birds, male and female, were killed in April, 1870, at the Kleinmont, by Messrs. Ed. Atherstone and H. Barber.

They were the only pair that fell under our notice. Senor Anchieta has also met with it at Humbe on the Cunene River, where it is rather common, and is known to the inhabitants by the name of *Xicongo*.

General colour, above, dark cinereous, tinged with rufous on the shoulders, and slightly shot with green in the primaries; between the shoulders a large black patch, becoming ashy on the rump; neck, bright rufous, variegated in front with a line of brown, more or less broken, which extends less conspicuously down the centre of the chest and belly, which is a confused ashy-rufous; chin and patch behind the eye, white; the rest of the head black, with greenish reflections, crested; tail below, ashy. Length, 1" 10''; wing, 11"; tail, 5".

Fam. SCOPIDÆ.

703. SCOPUS UMBRETTA.

Hammer-head.

The "*Hammerkop*" (literally Hammer-head) is found throughout the colony, and all the way to the Zambesi, frequenting ponds, marshes, rivers, and lakes. It is a strange, weird bird, fitting about with great activity in the dusk of the evening, and preying upon frogs, small fish, &c. At times, when two or three are feeding in the same small pool, they will execute a singular dance, skipping round one another, opening and closing their wings, and performing strange antics. They breed on trees and on rocky ledges, forming a huge structure of sticks, some of them of considerable thickness. These nests are so solid that they will bear the weight of a large, heavy man on the domed roof without collapsing. The entrance is a small hole, generally placed in the most inaccessible side. The eggs, three to five in number, are pure white. Axis, 1" 9''; diam., 1" 4''. On our late friend Jackson's farm, at Nel's Poort, there is a singular rocky glen between two hills. In this spot a beautiful permanent spring, called "*Jackalsfontein*," takes its rise. Of course, in consequence there are a few wild almond and other trees, and the place is a little oasis amid the barren mountains. It is a favourite resort of wild animals, hyænas, leopards, jackals, &c., and here Mr. Jackson has constructed one of his most successful hyæna traps. On the ledges of the rocks in this secluded spot a colony of Hammerkops have built for years. Some

of the nests are quite inaccessible, while others can be reached with a little trouble. We counted six or eight within fifty yards, all exhibiting the same form and structure, and some of them containing at least a large cart-load of sticks. Mr. Jackson told us they occupied the same nest year after year, and added to it or repaired it as required. About some that we visited, we found brass and bone buttons, bits of crockery, bleached bones, &c. Mr. Jackson said if a "Tottie" lost his knife or tinder-box on the farm, or within some miles of the place, he made a point of examining the Hammerkops' nests, and frequently with success; the birds, like the Bower-bird of Australia, embellishing their dwellings with any glittering or bright-coloured thing they can pick up. In the Karroo, between Worcester and Robertson, we saw a nest placed on the ground on the side of a trifling rise: it was at least three yards in length, by one and-a-half across, with a small entrance hole at one end.

Mr. Rickard says that at East London, where it is called "Podda Vanger," it frequents the rocky beach, and is generally seen in pairs: it is also found near Port Elizabeth. Near Kingwilliamstown Captain Trevelyan records it as common about the vleys, and he has sometimes seen as many as five or six together, but says that this is unusual. Mr. T. E. Buckley shot a specimen in the Free State in June. In Natal, according to Mr. Ayres, it is spread all over the country, but is not numerous, and is always seen singly. They frequent the streams of the interior, and the rivers and lakes near the coast, and are not very shy. Majors Butler and Feilden and Captain Reid state that near Newcastle it was a common bird in vleys and along sluggish streams. From the dates at which eggs were taken they opine that it breeds twice in Natal, in winter and summer, if not all the year round. Writing from the Transvaal, Mr. Ayres says: "Mr. Layard's description of the nidification of this species is excellent, and I can add nothing to it except that the inside of the nest is neatly plastered with mud, and that either from this cause or from the bird's muddy feet the eggs are often very dirty. Not long ago I saw one of these queer birds feeding in a shallow ditch; the water was about halfway up his legs, and he was feeling about with his feet in the mud and stones at the bottom, very carefully and in a most careful manner, evidently trying to worry out a frog or a crab, in which he did not then succeed. These

birds, when flying, utter, every now and then, a short, weak, metallic note, which one would not expect from a bird of that size." Mr. Frank Oates procured a specimen on the Makalapsi River in August. It was seen in Mashoona Land during Mr. Jameson's excursion, and on the Zambesi Sir John Kirk says it is called "*Nyamehengwe*." He writes: "Although seemingly a clean feeder, eating small fish, the Africans look on this bird as unfit for food, and also as sacred, or as possessing the power of witchcraft; and to injure it is everywhere regarded as unlucky. It haunts water, both running and stagnant. In its nest it is the most remarkable of all birds in Tropical Africa. This is built either on a ledge of rock or more frequently in some large tree. It is the work of a single pair, and yet is colossal, sometimes measuring six feet in diameter, in the form of a flattened dome. The entrance is at one side, and small. The greater part of the mass is solid, and composed of sticks and branches of trees intimately woven together. This serves for many years. The birds remain throughout the year." According to Mr. Andersson, "this queer and sombre-looking bird is pretty generally diffused throughout Damara Land and Great Namaqua Land during the rainy season, but is nowhere numerous, and moves to permanent waters as the rainpools dry up. It feeds much on frogs and also upon fish. It is generally observed singly or in pairs, and is of a fearless disposition, allowing a person to approach within range without difficulty." It has been procured by Senor Anchieta on the coast of Mossamedes, and also at Capangombe and Caconda in Benguela, as well as at Humbe on the Cunene River: it is called "Kahumba" at Capangombe and "Nagine-ankine" at Humbe.

General colour, a warm brown, glossed with purple; tail with a bar at the tip, and numerous narrow ones; head much crested; bill black. Length, 20"; wing, 13½"; tail, 6".

Fig. Shaw, Gen. Zool. xi, pl. 50.

Fam. BALÆNICIPITIDÆ.

704. BALÆNICEPS REX, *Gould*.

Whale-headed Stork.

Mr. H. H. Johnston (*Ibis*, 1883, p. 578) states that he saw this species near Humbe on the Cunene River, on the 16th of August, 1882, and gives an extract from his journal. "There are here many

acres of dried-up marshes and occasional lagoons shaded with pine-trees. On these reaches of still water innumerable wading birds are seen, and have a boldness of demeanour only accountable for by the supposition that man rarely comes here. Pelicans, Saddle-billed and Marabou Storks, *Balæniceps rex*, and Crowned Cranes are to be distinctly seen amid the short grass of the scattered pools." And further on he adds, "On these sand-banks, amid the sleeping crocodiles, and apparently in no fear of them, were standing one or two *whale-headed* Storks and Spur-winged Geese. On my return from the Cunene to Lord Mayo's hunting veldt, about forty miles off, I mentioned *Balæniceps* to him (Dr. Loesche) among the birds I had observed, and I believe he subsequently saw it there himself."

We have given Mr. Johnston's observations in full, inasmuch as we think that the occurrence of *Balæniceps* in South-Western Africa requires strong confirmation. We find it difficult to believe that so remarkable a bird should have escaped the researches of Senor Anchieta who resided for so many years at Humbe, and who was particularly careful to collect all the large Wading-birds for the Lisbon Museum.

Fig. Parker, Trans. Z. S. iv, pl. 64.

Fam. CICONIIDÆ.

705. CICONIA ALBA, L.

White Stork.

The Great Locust bird, as it is called by the colonists, is only a migratory visitant to the colony, following the flights of locusts, on which it feeds. It is not confined to any locality, but pursues its prey to all parts of the country. Our valued correspondent, Mrs. Barber, however, informs us that it breeds in the Interior. She writes as follows: "My authority for saying that the White Locust Crane build their nests in the Interior is good, or I should not have mentioned it. When my brother Septimus was lion-hunting in the Free State, he saw the hills where great numbers of their old nests were. Mr. William Stubbs (of the Queen's Town district), a great observer of Nature, and 'a good man and true,' is another of my authorities: he told us that he saw their nests upon the low rocky hills near St. John's River. Like the small locust-birds, they always build their nests in the neighbourhood of large swarms of *young locusts*, so that they may have plenty of food for their young

ones ; for young locusts remain long near the spot where they are hatched."

In the neighbourhood of Kingwilliamstown, Captain Trevelyan says that it is an irregular migrant, but that he saw it in thousands in 1876. Mr. Gurney has received it from Natal, and Majors Butler, Feilden, and Capt. Reid met with it commonly near Newcastle during the winter months. According to these gentlemen, a few pairs breed in Natal.

In the Transvaal Mr. Ayres records it as a rare visitant, and says that, though great swarms of locusts come every year, the Storks do not seem to follow them thither ; he found a solitary wanderer stalking about on the open flats a mile out of Potchefstroom. Mr. Buckley states that on his return journey from the Matabele country he found immense flocks of these birds frequenting the sand-banks and grassy places along the Limpopo, and Mr. Frank Oates procured a specimen on the Ramaqueban River in November. According to Mr. Andersson this Stork is abundant at Lake N'gami and in many localities of the lake regions ; it is also quite common during the wet season in Ondonga and in Northern Damara Land, sometimes occurring in large flocks ; and it is seen occasionally during the same season in Southern Damara Land.

All white, except the wings, which are black ; bill and legs red. Length, 3' 9" ; wing, 1' 11" ; tail, 1'.

Fig. Dresser, B. Eur. vi, pl. 402.

706. *CICONIA NIGRA* (L.)

Black Stork.

The Violet Stork is not common, but generally distributed. We have killed it at the Knysna, and Nel's Poort (Beaufort), and have received specimens from most of our correspondents, including Mr. Chapman. It feeds upon fish, frogs, and crabs, and will take a small mammal if it falls in with it. It is solitary in its habits, more than two being rarely, if ever, seen together. Its great height gives it a command of vision which puts all the shooters' powers of woodcraft to the tax, to enable him to circumvent his quarry ; and if the bird is only wounded, he proves no mean antagonist, striking fiercely with its sharp-pointed and powerful bill at the face and hands of his pursuers. On one occasion, having only broken the tip of a wing with a long shot, we had to despatch our bird with half a charge of dust-shot, so great was his resistance ; he, moreover, as if aware of

his greater chance, took to the water, and would not be driven from it. Mr. Rickard tells us that he once saw it on the sandy beach not far from Port Elizabeth, in considerable numbers, there being some twelve or fifteen.

General colour, very dark brownish-green, shot with green and coppery reflections; belly, thighs, and vent-feathers, pure white; bill, space round the eyes, chin, and legs, red. Length, 3' 8"; wing, 1' 10"; tail, 11".

Fig. Dresser, B. Eur. vi, pl. 403.

707. *CICONIA ABDIMII*, *Licht.*

White-bellied Stork.

We have not seen this bird from any locality, save the Zambesi, whence it was brought by Mr. Chapman, who informs us it is excellent eating, and is found in vast numbers about the borders of Lake N'gami. Mr. Jameson's expedition met with it on the Makara River in January, and Mr. Ayres writes: "From here all the way down the Hart River to Spalding's we found these birds by myriads in large flocks feeding on beetles, grasshoppers, and caterpillars. Although they were excessively fat, their flesh was not good eating. We saw this Stork also in some numbers in Matabele Land in December. They frequent open grassy country in the neighbourhood of rivers and swamps. On hot days they often soar to an immense height, appearing as mere specks in the clear blue sky as they wheel slowly round and round." Mr. Frank Oates procured a specimen at Sibanani. The following note is given by Mr. Anderson:—"This somewhat coarse but handsome Stork arrives in Damara Land during the rainy season, leaving it again on the approach of the dry. The more plentiful the rain the more abundant the birds, the cause being simply the greater abundance of food. This species feeds largely on locusts, but devours with equal gusto beetles of all kinds, many hundreds of which I have taken from the stomach of a single bird; it also devours small reptiles, water-rats, fish, and frogs, but appears to prefer locusts when these are to be had, chasing them on the ground as well as in the air. On such occasions these Storks may be seen in thousands gyrating in immense circles, and, as it were, in different strata, the lower frequently flying within range of the fowling-piece whilst the eye rests painfully on the higher as mere specks in the air."

Senor Anchieta has also procured it at Capongombe and Quillengues, and at Humbe on the River Cunene; it is called at the two last-mentioned places, "*Humbi-humbi*."

Above, greenish-purple; neck brown, with purplish-gloss; all the under parts white; chin, bare part of forehead, space round the eye, and tip of bill, orange-red; the rest of the bill greenish; bare space round the eye, blue. Length, 2' 9"; wing, 16".

Fig. Cretzschm. in Rüppell's Atlas, tab. 9.

708. *CICONIA EPISCOPUS* (Bodd.). White-headed Stork.
Ciconia leucocephala, Layard, B. S. Afr. p. 315.

This bird appears rather frequently in Natal; but we have not met with it in this colony, nor in any collection made to the westward or in the Interior. It could not have passed us unnoticed, as we are well acquainted with it from seeing it in Ceylon. Mr. J. Verreaux informed us that he procured it in Algoa Bay.

Mr. Ayres states that in Natal it "frequents the bays and swamps along the coast (occasionally coming inland). As the tide recedes, they wade into the water after crabs and small shell-fish, of which (especially the first) their food principally consists. They are gregarious, and not so shy and cunning as most of the Waders; the flesh is coarse, and not good eating. The stomach of the specimen sent contained a large quantity of the shells of small crabs, a few small shell-fish, and a very few fish-bones." Senor Anchieta has met with it at Quillengues and at Huilla, at all of which places it is called *Hombo*.

Violet-black, shining-green; plumes of lower neck, blackish-green, long, wide, truncated, violet-purple at the tip; forehead, chin, and neck, white; belly and rump, white; top and back of head, black; tail white; the webs of the four outside feathers, black, shining coppery. Length, 2½'; wing, 18½".

Fig. Gray and Mitch. Gen. B. iii, pl. 78.

709. *MYCTERIA SENEGALENSIS*, Shaw. African Jabiru.

We saw a single example of this fine Stork on the Kleinmont River, and though it never allowed either Dr. Atherston or myself to approach within gun-shot of it, we scanned it for some time through our binoculars. Mr. Ayres writes: "The Jabiru is a very scarce bird in Natal; a pair are occasionally seen at low water on the mud-banks in the centre of the bay, and when here they also

frequent the lagoons and marshes at the mouths of the rivers. If one of the pair happens to get shot, its place is not supplied by another, but the solitary bird may be seen feeding by himself, when he attempts to make friends with the Violet Storks, which seem to be rather afraid of their gigantic relation. Occasionally when the pair are feeding together, they stop suddenly and skip or dance round and round in a small circle, then stopping to bow to each other, again resume their quaint dance. Their food consists of crabs, shrimps, and small fish." During Mr. Jameson's expedition it was seen but not procured in Mashoona Land. Sir John Kirk states that it was not uncommon on the Zambesi and Shirè Rivers, but was more frequent on Lake Nyassa and the River Rovuma. "It feeds," he says "on snakes, frogs, and fish. On the Rovuma it was seen catching fish in shallow water, by running forward rapidly, so as to make the fish rush past it, when it caught them, keeping its bill all the while in the water. They are commonly found in pairs—never in large flocks." Mr. Andersson saw it occasionally in Damara Land and Ondonga; and the Rev. C. H. Hahn, a most excellent authority, informed him that, when stationed at New Barmen, he twice saw this species in that locality.

Senor Anchieta has procured the species on the bank of the Cunene, as well as at Caconda in Benguela, where it is called *Hombo*.

White; head and neck black, glossed with bronze-green; scapulars, and wing and tail-feathers, raven-black; base of bill to nostril, bright crimson; as is also the skin round the eye and under the bill (the bill from the nostril for $3\frac{1}{2}$ inches is black; from thence to the tip bright crimson); frontal shield, bright yellow; shanks and tarsi black; knees and feet brick-dust red; the bare spot on the breast, crimson; iris bright yellow. Length, $4\frac{3}{4}$ '; wing, 23"; tail, 10"; tarsus, $11\frac{1}{2}$ "; bill, 12".

The description of the soft parts is taken from a note of Mr. Ayres. Mr. Gurney (*Ibis*, 1865, p. 275) points out that the yellow eye is a sign of the female bird, and that the male has the iris deep brown.

Fig. Temminck, Pl. Col. 64.

710. *ANASTOMUS LAMELLIGERUS*, *Temm.*

African Open-bill.

This curious bird is not uncommon about the Zambesi; and the specimen from which the above description was taken was brought

thence by Mr. Chapman. We have not seen it from this side of the Tropic; but we believe it has been found in Kaffraria. Hartlaub also gives it as an inhabitant of South Africa. Mr. J. Verreaux also informed us that he obtained it both at the Berg River and on the Orange River. Major Feilden records an example from Ladysmith in Natal, killed on the 8th of March by Capt. Thackeray. Its enormous gaping bill, and the curious structure of its plumage, at once distinguish it from all our other Storks.

In forwarding a specimen from Potchefstroom in the Transvaal, Mr. Ayres says that it is scarce there, and again in 1871 he writes: "This curious bird was shot by my brother on the 6th February, 1869, in a swamp within a mile of Potchefstroom. It was a solitary bird, and before it was shot had been observed several days feeding in the swamp, and alighting on the neighbouring trees; its stomach contained all the soft parts of crabs well broken up. A few days after it was shot, five others were seen to fly over the town at a great height. This species only occurs as a visitor in this part of the country." Dr. Bradshaw informed us that it was extremely common on the Zambesi, and that the young birds were not bad to eat. Sir John Kirk states that it was frequent on the Zambesi and Shirè, in marshy localities, and breeding on trees. "This singular-looking bird," writes Mr. Andersson, "is not uncommon in the Lake regions, and it is also common in Ondonga, where it is found throughout the year. It roosts on trees, and is sometimes found solitary, but more often in large flocks. It feeds on fish, frogs, shells, &c.; and I have often found its crop and stomach crammed full of the bodies of shells in the driest time of the year; where does it get them? It may be seen poking about on perfectly arid spots; but neither there nor in moister places have I been able to obtain a single shell by the closest observation, or even by digging."

A large number of specimens have been sent by Senor Anchieta from Gambos and Humbe, where it is very common.

General colour black, shining green and purple, with the feathers of the lower part of the neck, chest, belly, and thighs, lamellated at their tips, and along the shafts: those on the back of the neck and chest, deep-brown; those on the body black; bill very large and gaping. Length, 2' 9"; wing, 1' 4"; tail, 9".

Fig. Temm. Pl. Col. 236.

711. *LEPTOPTILUS CRUMENIFER* (Cuv.).

African Marabon.

The only specimen of this bird that has fallen under our notice as occurring in the colony was killed by one of the Messrs. Bowker on the Swart Kei River about twenty miles from Cradock. The head of this bird is still in the possession of Mrs. Barber at Highlands where we saw it. This lady was present when it was shot, and tells us it was feeding on locusts.

We saw it abundantly on the east coast; and a specimen in the S. A. Museum was brought from the mouth of the Zambesi.

Mr. Ayres believes that he has seen it in the Transvaal, but no specimen has yet been procured. During Mr. Jameson's expedition it was met with on the Umvuli River in October, and Mr. Ayres writes: "Shot by Mr. Jameson while feeding on a dead rhinoceros in company with a flock of vultures. I am told that this bird is able to cut a hole in a dead Rhinoceros when the vultures cannot do so. The Boers call it the King of the Vultures, and say that when it chooses it will keep the latter from carrion until it has satisfied itself; but this does not agree with the experience of Mr. Selous and other hunters. Although I have always met with it singly, Mr. Selous informs me that along the Chobè River and the Zambesi he has seen great numbers together; and my brother Walter, when living in Pretoria, saw a large flock of them one day assemble just outside the town to feed upon some mules that had died of horse-sickness."

In his paper on the birds of the Zambesi region Sir John Kirk writes: "The feathers under the tail are much valued, but are never collected in Eastern Africa. The bird feeds on fish, reptiles and carrion. It is readily tamed, and is then of use near a house." Mr. Andersson observes: "This species is met with in Damara Land during the rainy months, at which season it is also frequent in Ondonga; and it is abundant at Lake N'gami throughout the year. It is usually seen in flocks, sometimes upon the ground, and at others perched on trees. It will remain for hours in the same position, with one foot drawn up under its body; and a number of individuals seen in this attitude through the fantastic medium of a mirage present a singular and ludicrous appearance. It is a true scavenger bird, feeding on carrion, as well as on the most offensive offal; but it also captures living prey, such as fish, tortoises, and snakes."

Above, dark greenish-black, slightly glistening; below, dirty

white; head and neck bare; the back of the latter furnished with a stripe of scanty woolly hairs: a few of these are also scattered on the pouch which hangs in front, and on the bare spot of the breast beneath it. In life, these bare places are of a bright carmine. The bill is very strong, straight, and of a dirty yellowish-white; the legs and feet jet-black. Length, 5'; wing, 28"; tail, 10".

Fig. Temm. Pl. Col. 301.

712. PSEUDOTANTALUS IBIS, *L.*

African Wood-Ibis.

Tantalus ibis, Layard, B. S. Afr. p. 318.

A single specimen of this bird in young plumage was shot at Nel's Poort by Mr. Henry Jackson. A second example was received from him in February, 1866. He states that he killed it on his dam: it was in company with two others, who, moreover, would not permit any approach after the death of their comrade. Mr. Ayres writes: "This specimen was shot by my brother at Port Natal, amongst the mangroves, at low water, on the edge of the inner harbour; there were two of them; and others have been seen at the same spot subsequently. This bird was wounded by my brother's shot; and as he approached it made a curious snapping noise with its bill, but did not attempt to defend itself."

Mr. Barratt observes: "I procured one of these at Potchefstroom, where, I am told, a few are sometimes seen together; but in 1875 mine was the only specimen obtained in the district. It is said that they inhabit similar places to *I. æthiopica*." Sir John Kirk found it common on all the rivers in the Zambesi district. In Mr. Andersson's "Birds of Damara Land," we find the following:—"I have once or twice observed this singular-looking Ibis in Damara Land, but I do not recollect to have met with it in Great Namaqua Land. In the Lake regions it is not uncommon at all seasons. It is generally seen in small flocks, either wading about in shallow water or stalking leisurely on the adjacent mud or sand-banks, in search of insects, larvæ, &c. When not molested it is comparatively tame." Professor Barboza du Bocage states that the Lisbon Museum has received many specimens from Senor Anchieta, from the Coroca River, Quillengues, and Humbe: at the first-named locality the native name is "*Gangula*," and at Quillengues "*Humbo*."

White; fore part of head bare of feathers, red; some of the

feathers of the wing washed with rose-colour or purple; wing and tail black; bill yellow, and curved downwards at the tip; thighs and legs red. Length, 3'; wing, 18"; tail, 7½". The young bird is of a dull brownish-grey; wing and tail black.

Fig. Daubent. Pl. Enl. 389.

Fam. PLATALEIDÆ.

713. IBIS ÆTHIOPICA, *Lath.*

Sacred Ibis.

A few specimens of the Sacred Ibis or Schoorstein veger (lit. chimney-sweeper), as it is called by the colonists, have come under our notice, killed in the colony; one, a female, in fine plumage, having been shot at Green Point, within three miles of Cape Town, feeding about the rocks which line the coast in that direction. It appeared in Mr. Chapman's collections; and he informs us that they are very common towards the Lake. We saw a large flock of them at Zoetendals Vley, in December, 1865; they walked rapidly about a mud bank in the river near the mouth, probing for worms; and we noticed that they turned about in the usual quick manner of the Curlew. We were informed that they sometimes bred in that neighbourhood. It breeds occasionally near the Berg River, but omitted to do so the year we visited that locality. Captain Roe brought us a number of eggs from Dyer's Island on the south coast. They are white, unevenly spotted, chiefly at the obtuse end, with small dry blood-coloured spots. Axis, 2" 9''; diam., 1" 9''. Mr. Ayres met with it in Natal, and gives the following note: "These birds frequent the Bay of Natal and the mouths of the rivers along the coast. They are very shy. They feed with the Curlews at low water on the mud-banks; but where they roost I do not know, though I have seen them sometimes sunning themselves on the upper boughs of the mangroves, together with Spoonbills, White Herons, &c. In their flight they usually form some figure similarly to the Pelicans, Swans, Geese, &c." In a later paper he writes: "These Ibises are only here during the winter months, and then they are moulting, so that it is very difficult to get a specimen in anything like decent plumage; besides that, they are extremely shy and wary, tough to kill, and frequent such localities as almost invariably to fall in the mud, which ruins the delicate whitenss of

the plumage ; they are gregarious, and may often be seen feeding with the Egrets and Herons on the shrimps, small fish, and crabs which abound in the little streamlets and mud at low water at the head of the bay. The White Herons and Sacred Ibis are absent during the summer ; no doubt they then resort to their breeding haunts." Major Feilden states that when in Natal he saw a flock of eight flying over Bennett's Drift Camp, about three miles from Newcastle, on the 16th of September. Mr. Ayres says that the species is plentiful in the Transvaal, frequenting the swamps, in flocks of fifty or sixty together, but he is not aware that they breed there. Mr. Barratt writes : "I have observed these birds in flocks of about ten or a dozen at the sides of vleys and swampy places near Potchefstroom and towards the mouth of the Mooi River, where their white plumage and black shining necks cannot but attract the notice of the bystander. They walk about thrusting their long bills into the mud, and then will stop suddenly, and appear to listen with their heads on one side, when they fly off, and, circling round, alight a few yards further away. They have their favourite feeding-places, which I generally found to be in corners near the bends of rivers. I have also shot them near Bloemfontein, and I have observed them a few miles south of Pretoria." Sir John Kirk states that it arrives in the Zambesi from the north in December, being found at all seasons near the coast, where it feeds on the sea-shore at low water. Its flesh is very good eating. In Mr. Andersson's work on the "Birds of Damara Land," he writes as follows : "I have never observed this species in Damara or Great Namaqua Land ; but it is not uncommon in the Lake-regions, and is extremely abundant in Ondonga, especially during the rainy season, when it is comparatively tame, though wild at other times. It is sometimes met with in flocks of from fifty to a hundred individuals ; it is a heavy bird, and its flesh is good eating." Senor Anchieta has met with it at the Coroca River in Mossamedes (native name, *Deleca*), and at Humbe on the Cunene River.

General colour pure white ; the tips of the wing-feathers being brilliant dark green, and the supplementary plumes assumed by the male in his nuptial livery, deep rich blue and white, and very lax ; head and the whole of the neck in the male, bare and black ; in the female, clothed with short black and white feathers ; chin and space

round the eyes, bare, black; legs black. Length, 2' 6"; wing, 15½"; tail, 7".

Fig. Cory, Beautiful and Curious Birds, part vii.

714. GERONTICUS CALVUS (*Bodd.*).

Bald Ibis.

The *Wilde Kalkoen* (wild-turkey) of Dutch colonists is not rare on the eastern frontier; but seldom appears to the westward. We are told it is a very foul feeder, frequenting the neighbourhood of native villages, and acting the part of scavenger. It thrives well in confinement, and becomes very tame. One in the possession of His Excellency Sir George Grey was at large in the Government Gardens; he walked with great rapidity, and was always seeking for food, probing the ground with his long curved bill, and drawing thence the large earth-worms, which he swallowed at a gulp. Mr. Albert Vigne shot a fine female at Tygerhoek, on the River Zonder End, near Caledon, in February, 1866. Mr. Orllepp says, "Specimens that I have shot had their stomachs filled with caterpillars and beetles; it breeds in cliffs." Mr. Ayres gives the following note from Natal: "These birds feed entirely on insects, principally beetles. They frequent the open country, and are invariably to be found on land from which the grass has been burnt; they live principally inland, where they are very numerous, but gradually approach the coast during the winter months. I have not seen them nearer the sea than eight or ten miles; they are exceedingly wary, and it is a difficult matter to get within shot of them, as they generally prefer the bare open plains, without cover, to feed on: they walk about very fast, and are constantly on the move from morning till night. I imagine they must eat a great quantity of food, for they are always in search it—not resting now and then, as all reasonable birds do; they seem to have no time at all for amusement." Majors Butler and Feilden and Capt. Reid write as follows: "We were somewhat astonished to hear that wild *Turkeys* were to be found in the country on our first arrival, and equally astonished to find out what was intended by the same. They are not uncommon near Newcastle, several specimens being obtained in the winter. Reid shot a lovely one at the Ingagane on the 7th July, and saw others there; he also observed them, paired, at Rorke's Drift on the 3rd October. They breed on the steep banks of the Buffalo or its

tributaries in this neighbourhood, as Butler heard of several nests, some with eggs and others containing young birds; but we had no opportunity of examining the nests ourselves. Butler adds that he found them very good eating." Mr. Andersson says that he procured it on the Orange River, but it did not occur in his Damara collections.

General colour throughout, shining-green, glossed with purple, with a patch of rich golden-copper on each shoulder; head, and portion of the neck, bare, and of a greenish white, the top of the head bright red; as are also the bill and legs. Length, 2' 6"; wing, 16"; tail, 8½"; bill, 5" 6".

715. HAGEDASHIA HAGEDASH (*Lath.*).

Hadadah Ibis.

Geronticus Hagedash, Layard, B. S. Afr. p. 320.

The *Hadadah* (so called from its cry of "Ha-ha-hadadah!") is only found in wooded places, such as the Knysna, where it is not uncommon, associating in small flocks, and making the wooded streams resound with its loud and not unmusical call. It feeds on worms and small crustaceans, which it finds in the shallows and muddy creeks. Mr. Chapman procured it at the Zambesi. It is everywhere very shy, and difficult to procure, the best way being to watch their roosting-place, to which they nightly repair, and where several may be obtained from an ambuscade by a successful discharge.

Mr. Rickard says it is migratory, "generally arriving at East London in March; in 1870 they were later than usual." We were not able to ascertain, but suspect that it was only a partial migration.

Mr. Ayres writes from Natal: "These birds are seldom solitary, generally occurring in small families of from four to ten or twelve. When feeding they much frequent the dense bush, and though usually very wary, will sometimes allow one to walk right in amongst them before they rise, which they then do altogether, and with such a din as quite to startle even a person accustomed to such things. Beetles and insects form their food almost entirely. They are also fond of hunting in old mealy-gardens, and on the tops of high hills and amongst stones and rocks, where they find food in abundance. Their notes are loud and harsh, and may easily be heard at the distance of a mile or more in still weather. At the earliest break of day they leave their roosting-places, generally in high trees overhanging water, and return again as the sun is setting, or a little

after, when they are easily shot, as the same birds always return to the same tree every evening; and the sportsman being hidden beneath, he easily loads his game-bag with them as they straggle home from their day's labour. These fine birds are now becoming very scarce, in consequence of their habits being so regular and so well known. They are very good eating when properly cooked. Their nest is built on a bough overhanging the water; it consists of coarse sticks lined with a little fine grass; the concavity is just sufficient to prevent the eggs, four in number, from rolling out; year after year the same pair, if undisturbed, build in the same tree."

Majors Butler and Feilden and Captaid Reid have the following note upon this species in Natal: "Very numerous at the Ingagane (= Black Ibis, in Kaffir) River; there is a favourite roosting-place on a precipitous range of low cliffs overhanging the river, about a mile above the drift, on the main Newcastle Road. Here Reid obtained specimens, and had a good opportunity of observing their habits; but he was unable, unfortunately, to ascertain if they bred there. As many as one hundred made use of these cliffs at roosting time, leaving in small bands long before sunrise for their feeding-grounds in the marshy tracts on the veldt, and returning in the same order about sundown, uttering their loud and weird cries the while. There were smaller roosting-places lower down the river, but the species was certainly not common elsewhere in the Newcastle district. We are informed on the very best authority that these birds are most delicious eating, 'fit for the Prince of Wales,' as one man described them; and Butler also pronounces them to be excellent birds for the table, in fact better than the 'Knorhaan,' being more tender and highly flavoured. Butler adds the following note on its nidification: 'Found a nest at Colenso on the 13th November. It was an ordinary stick nest, well lined with dry grass, and placed in the fork of a low bough, overhanging a well-wooded stream running out of the Tugela River, and about seven feet from the ground. It contained three incubated eggs of a light dingy olive-green colour, smudged over with dark brown, and very unlike the ordinary type of Ibis eggs. The nest was solitary, and the hen bird flew off close to me as I approached it, uttering its peculiar call. I saw no other birds of that species near the spot, but they may, notwithstanding, sometimes build in groups.'"

In the Transvaal Mr. Ayres records it as very scarce, but he obtained a solitary specimen amongst the thorn-trees on the banks of the Vaal River. Mr. Andersson says: "This Ibis is found abundantly in the Lake-regions and on the Rivers Teoughe and Botletlé. It feeds on insects, but does not despise other kinds of food; it is always observed in flocks, which vary from a few individuals to a dozen or two in number. These birds roost at night on trees in the immediate neighbourhood of water, which they leave at daybreak for their favourite feeding-grounds; these are sometimes situate in dense forest bush, sometimes in reedy thickets, and sometimes amongst rocks. They always return to the same tree at night, and thus often fall an easy prey to the marksman, who conceals himself in ambush within a convenient distance of their favourite perch, birds of this species being much sought after for their flesh, which is very palatable. When suddenly disturbed, or when straggling back to their nightly quarters, these birds scream most vociferously; and during my arduous and tortuous ascent and descent of the Teoughe, I was not unfrequently quite startled by their dinning noise as we surprised them in their reedy resorts, or as we passed at a sudden turn of the river, under one of their roosting-places which had been previously hidden from our view. This Ibis builds on trees overhanging the water; the nest is constructed of rough sticks, superficially lined with fibrous roots, tendrils, and grasses, and is so slightly depressed above that the hollow is barely sufficient to admit the eggs and to prevent them from falling out. It is said that these birds, when not disturbed, will nest in the same tree for several successive seasons."

General colour above, dark brown, glossed with shining-green and purple, especially on the wings and tail; head, neck, and under parts, dull brownish grey; ridge of the bill near the head, red, the rest black; legs red-brown. Length, 2' 5"; wing, 14½"; tail, 7".

Fig. Vieill. et Oudart, Gal. Ois. pl. 245.

716. FALCINELLUS FALCINELLUS (*L.*).

Glossy Ibis.

Ibis falcinellus, Layard, B. S. Afr. p. 319.

Hartlaub cites this as a South African species; but it has not come under our notice, dead or alive; and it is quite familiar to us in either state, as we shot many of them in Ceylon.

Mr. J. Verreaux tells us that he obtained it on the Orange River at Zee-koe Vley, at the base of the Muisenberg, between Cape Town and Simons Town.*

Mr. Ayres has procured it once on the Monocusi River in Natal, but in the Transvaal he says it is scarce, and also very shy and difficult to approach. "They frequent swamps, generally in pairs, and on being disturbed circle up to a great height in the air, and then go right away to some other favourite marsh." On the Zambesi Sir John Kirk found it rather common, but a shy bird, difficult to approach. Senor Anchieta has met with it at Huilla, in Benguela, and at Humbe on the Cunene River, whence he has sent numerous examples.

General colour, very dark brown, resplendent with iridescent-green, purple, and bronze reflections; shoulders deep ruddy brown, as are also the neck and under parts; the cheeks and chin mottled with white. In some specimens the neck and under parts are not ruddy, and the former is mottled all the way down.

Fig. Dresser, B. Eur. vi, pls. 71, 72.

717. *PLATALEA TENUIROSTRIS*, *Temm.* Slender-billed Spoon-bill.

The only specimen we have seen was in the Grahamstown Museum, shot at the Kariega, fourteen miles west of the Kowie. Mr. J. Verreaux assures us that in his time it was common at the Berg River, Verloren Vley, &c. At Verloren Vley it used yearly to breed, but we think that it has now forsaken these localities. Mr. Ayres procured it in Natal. He observes: "The stomachs of these birds were crammed with shrimps. Of their habits I know but little: they are gregarious, and are frequently to be found with the White Ibis and other waders. They are extremely shy, and I have not had an opportunity of seeing them feed. They generally fly in lines or form the letter V." The following note is given by Majors Butler and Feilden and Captain Reid: "First seen by Butler, a single

* It is singular to notice the change that has taken place in the ornithology of the country since Mr. Verreaux collected in it at the beginning of the century. We found on going over our catalogue together that many species common in his time had utterly disappeared, while on the other hand species unknown to him as inhabitants of the Cape, are now abundant even in the neighbourhood of Cape Town. This occurs among the marine species as well as the land birds—*E. I. L.*

bird being noted by him near Newcastle on the 18th September. Afterwards occasionally observed in the 'vleys;' and a small colony were found breeding by Butler on the 1st October, in a thick reed-bed near the Buffalo River, on the Transvaal side, of which he furnishes the following note: 'Found a small colony of Spoonbills, five or six pairs breeding in a bed of bulrushes growing in a "vley" near Newcastle, on the 1st October, 1881. Nests large, composed of sedge, being built just above the level of the water and placed within five or six yards of each other. All contained young birds, either two or three in number, almost ready to leave the nest, except one, which contained three nearly fresh eggs, white, richly marked with chestnut-brown. The parent birds evinced great anxiety for their young as they hopped out of their nests, on my approach, into the water, flapping their wings and trying to swim, and descended on to the nests fearlessly within a few yards of me. In the old birds, as far as I could see, the legs and feet were red or pink (not black, as in *P. leucorodia*), and the young birds were white, with black tips to the primaries; bill livid grey; legs and feet grey. Not bad eating. The bulrushes, in which the nests were found, were growing in water about three or four feet deep.'"

Mr. Ayres has sent it from the Transvaal, and Sir John Kirk states that it was not unfrequent on the Zambesi and at Lake Nyassa.

Mr. Andersson gives the following note:—"This species occasionally visits Damara Land, chiefly during the rainy season, when I have reason to believe that it also occurs, though less frequently, in Great Namaqua Land. At Lake N'gami and its watersheds it is by no means an uncommon bird. It is generally observed in small flocks; and where not much disturbed, it is not particularly shy. It feeds on fish, shrimps, small mollusca, &c.; and the stomach of one which I dissected contained a large number of beetles, chiefly aquatic." The late Mr. Monteiro met with it in Benguela, and Senor Anchieta has procured it at Mossamedes and Humbe.

General colour, white; the shafts of the larger wing-feathers, and the tips of the first four or five, being dark brown; fore part of head bare, and of a bright vermilion; the bill very narrow, but expanding at the tip into a broad spoon. Length, 33"; wing, 15¼"; tail, 4½".

Fam. PHENICOPTERIDÆ.

718. PHENICOPTERUS ERYTHREUS, *Verr.*

Greater South African Flamingo.

Our large Flamingo has a wide range throughout South Africa, and has been killed, both in mature and young plumage, at the mouth of Salt River, close to Cape Town. We are informed that it is very abundant at Verloren Vley at certain seasons; and many persons have assured us that it breeds there. Mr. Chapman also informs us that both the Flamingos found in South Africa breed on Lake N'gami, forming a large elevated nest of rushes, amid the reeds that surround the lake. We saw it in great numbers at the mouth of the river flowing out of Zoetendals Vley in November. An egg, said to belong to this species, was presented to the Museum by Miss Boonzaier, of Hoedtje's Bay. It is pure white, finely granulated; shell extremely thin: axis, 3' 9''' ; diam., 2' 7'''.

Mr. Rickard has procured the Flamingo near Port Elizabeth at the salt-pan at Bethelsdorp, on the Uitenhage road. Mr. Andersson writes: "This Flamingo is very abundant at Walwich Bay, Sandwich Harbour, Angra Pequena, and the mouth of the Orange River; it is also met with in a few inland localities, such as Lake N'gami, Lake Orondava, &c., all of which are more or less impregnated with saline substances, to which this species seems to be attached. With rare exceptions (and these not well authenticated, but merely surmised from young birds being sometimes found barely able to fly) the Flamingos do not breed in any parts of the coast above particularized; and, indeed, the only locality where I know for a certainty that they nest is the inland one of Lake N'gami. On the approach of the breeding season they leave the coast of Damara Land, and wing their way to the northward; they take their departure about the month of February, and return about the latter end of October and during November, the old birds being the first to arrive. The Flamingo feeds both during the day and the night; but I suspect that the latter is its principal feeding-time; for about sunset flocks varying from a few individuals to many hundreds may be seen pursuing their flight in various directions, and their loud croaking

voices may be heard throughout the night. The favourite resorts of these birds are shallows partially left dry by the ebbing tide; here they industriously search for the small crustacea, marine animalcula, and sea-grasses which constitute their food. The Flamingo is strictly a wading bird, but on rare occasions will make use of its webbed feet by resorting to deep water, evidently for the sake of the fun of the thing." A specimen has been procured by Senor Anchieta at Mossamedes.

General colour, pure white; the wings black and crimson; base of the bill crimson; the tip black; legs light-crimson. Length, 4' 6"; wing, 17½"; tail, 8"; leg, 2' 2".

Fig. Gray, Ibis, 1869, pl. xiv, fig. 6 (head).

719. PHENICOPTERUS MINOR, *Geoffr.*

Small Flamingo.

Several specimens of this Flamingo have reached our hands from widely different localities; and Mr. Piers informs us that they approach the end of the continent as far as Vogel Vley, near Tulbagh. It has also been observed at Cradock.

According to Mr. Andersson, this species is comparatively rare at Walwich Bay and elsewhere on the south-west coast of Africa, but at Lake N'gami it is more common. Senor Anchieta has sent five specimens from the neighbourhood of Mossamedes. Sir John Kirk gives the following localities: Zambesi delta, Shirè valley, Lake Nyassa, Mozambique. He says that it is a constant dweller throughout the year in the Zambesi delta, being found in other parts during the wet season only.

General colour, pale pink; wings black; outside edges, deep pink or crimson; bill, purple-pink. Length, 3' 3"; wing, 14"; tail, 6"; leg, 16".

Fig. Temm. Pl. Col. 419.

ORDER ANSERES.

Fam. ANATIDÆ.

720. PLECTROPTERUS GAMBENSIS, L. Spur-winged Goose.

This is the largest of our Geese, and is easily distinguished by the strong spur on the end of its wing. Our descriptions are taken from a fine pair, male and female, brought by Mr. Chapman from the Zambesi. We have also received it from Mr. Arnot, who procured it in Mahura's country.

Mr. H. Bowker sent us eight eggs: "They were obtained near Maseru from an old 'Hammer Kops' nest (*Scopus umbretta*) on an overhanging rock on the banks of the Caledon River." They resemble ivory in texture and creamy whiteness. Axis, 2" 9''; diam., 2" 6'''. Captain Trevelyan tells us that he met with a couple of specimens about Peelson, six miles from Kingwilliamstown, in 1876, after some heavy rain. Majors Butler and Feilden and Captain Reid state that they found it "abundant in the Newcastle district all through one winter, and up to the time of our departure in November. Numbers were shot and eaten, the young birds especially being excellent. They breed, according to trustworthy informants, in the long grass at some distance from water, but we were too early for nests."

Mr. Buckley during his journey to the Matabele country obtained one specimen. He says that he often used to see birds which he supposed to be this species in the marshes of the Transvaal. From their colour they were very conspicuous, but very shy. In the last-named country, Mr. Ayres observes: "This is the commonest of our wild Geese, and is by no means capital eating, as the flesh is coarse and tasteless, and the young birds have scarcely any meat on them. Sometimes they are very shy, and at others almost absurdly tame; as a rule, it requires heavy shot to kill them. They come out early in the morning from the swamps and reeds to feed on grass-seeds, and are often seen on the farmer's corn-lands: if

stalked in the long grass they will almost invariably creep away, instead of taking wing; and unless the hunter has a dog it is no easy matter for him to find them, as they run at a good pace, and by the time he is on the spot, expecting them to rise, he sometimes sees the head of one a couple of hundred yards off examining the situation; if the shooter squats when the birds are flying, they will often come and have a look at him, and this curiosity frequently costs them their lives. As a rule, they are gregarious, but are sometimes seen singly, and at others in pairs; they breed away from water in thick grassy or rushy spots, and lay a number of white eggs with thick glossy shells." Sir John Kirk states that they are called "Tsekire" on the Zambesi. "They vary," he says, "from 10 to 14 lb. in weight. They come with the rains in flocks of ten or twelve, and remain to breed in the marshes. Their favourite food is the 'Nyka' or tuberous enlargement of the bud of the *Nymphœa* which they swallow. They perch on trees, and seem occasionally to roost in them. In the daytime they often settle on the trees near their feeding-grounds." Mr. Andersson writes: "This noble bird is not uncommon on the River Okavango and at Lake N'gami; it is also found on the River Teoughe; but I am not aware that it has been met with in either Damara or Great Namaqua Land. It is generally found in small flocks, and presents a conspicuous object when standing erect in the marshes to which it resorts. It is said to perch and roost occasionally on trees." Senor Anchieta has sent specimens from Benguela, Huilla and Humbe.

Upper parts black, shot with bronze and green; wings mottled with white; lower parts white, with patches of black behind the thighs; the front of the head is bare (more so in the female than in the male), granulated, and reddish; this is succeeded by a white patch, which does not extend to the top of the head, but occupies the chin and part of the front of the throat; wings armed with a strong powerful spur. Female: length, 3' 6"; wing, 21"; tail, 7". Male: length, 3"; wing, 19"; tail, 6".

On the variations met with in this species and its allies see Professor Barboza du Bocage's note (Orn. Angola, p. 491).

721. CHENALOPEX ÆGYPTIACA (L.).

Egyptian Goose.

The "Berg-Gans" or Mountain-Goose is the commonest of our Geese, and is found in considerable abundance throughout the

colony. It congregates, at particular seasons of the year, in vast numbers in certain well-known vleys, such as Vogel Vley (Bird Lake), Verloren Vley (Lonely Lake), Bot River Mouth, &c., &c. In these places it sheds the wing-feathers and becomes unable to fly. It is then much sought after, being very fat; but it dives with such rapidity that even in this condition it is very difficult to kill. It breeds in the rushes in these vleys; but in other places, such as the Keurboom River, in the Knysna division, it breeds in holes of rocks or hollow trees near the water, and is said to bring down its young on its back. The goslings dive as actively as their parents, which show much solicitude about them, keeping with them until they are fully grown; in fact, the little flocks in which they are generally found consist usually of an old pair and their brood, from ten to fifteen in number. They are easily tamed, and a great ornament to a poultry-yard; but sad plagues to the rest of the inhabitants, over which they domineer. They have a loud, harsh cry, which, however, sounds well amid the wild rocky scenes where they love to dwell. They are strong on the wing, and require a hard-hitting gun and a charge of buck-shot, well aimed, to bring them down. Their eggs are white, and small for the size of the bird, being: axis, 2" 2"; diam., 1" 7".

Mr. W. Atmore writes: "At the Zaurits River they breed on ledges of rocks 200 ft. above the level of the water in company with *Vultur kolbii*, and appear quite friendly with them."

Large flocks feed by day on the wet grass lands about the Berg River, always shifting their quarters as night came on, and retiring to sleep in other parts of the vley. Becoming acquainted with their line of flight, the Messrs. Kotze with ourselves laid in ambush for them and succeeded in cutting a wide lane through the flocks with a discharge of eight barrels. Next night they changed their line, but we had anticipated them, and again thinned their numbers: the third night they avoided that bit of country altogether, and fetched a tremendous circuit to reach their favourite roost.

At Port Elizabeth Mr. Rickard says that he only saw tame individuals, and does not know whence they came. Capt. Trevelyan found the species rare near Kingwilliamstown. In Natal, observes Mr. Ayres: "these Geese feed on the land early in the morning and towards evening, and are fond of the seed-cars of grasses, which are abundant at certain seasons. During flight they sometimes utter a

loud chattering note. They are mostly found in pairs, but sometimes a whole flock may be met with. This species also occurs in the Transvaal." In the Newcastle district it was not seen till the 6th of October, when Major Butler observed several in "Spoonbill Vley." It was reported to be extremely abundant in a large vley just over the Free State side of the Drakensberg to the west of Newcastle, called "Seekoe Vley." During his journey to Matabele Land Mr. Buckley says it was "seen in pairs on the banks of the Limpopo. They are very wary, and begin to sound the note of alarm long before one can see them; one which we obtained was shot from a nest in a tree, where it was doubtless sitting on its eggs." It was seen but not procured in Mashoona Land by Mr. Jameson's expedition. Sir John Kirk states that it frequents the Zambesi and the Shirè Rivers, breeding during January on the coast and inland on the islands. It was always solitary or in pairs, never in flocks.

According to Mr. Andersson "This is the most common species of Goose on the waters of Damara and Great Namaqua Land, where it remains throughout the year, and is invariably found either in pairs or in small flocks. During the daytime it is not unfrequently to be seen at some distance from the water. When on the wing it utters a kind of barking quack."

Senor Anchieta's specimens are from the Coroca River on the coast of Mossamedes, and from Humbe on the Cunene River.

Upper parts ruddy grey; between the shoulders, finely variegated with black, deepening into pure black on the rump, and brick-red on the wings; on the closed wing, a broad white patch commences at the shoulder, and extends half-way, when it is met by a brilliant green patch; near this junction the white is interrupted by a narrow black line, which extends across the white; under parts ruddy grey, finely mottled; the centre of the belly least so; in the middle of the posterior part of the breast is a patch of deep rufous; top of the head, chin, and cheeks, dirty-white; base of the bill, a patch round the eye, back of the neck, and ring round the lower part, ruddy. Length, 28"; wing, 16"; tail, 5".

The soft parts are given by Mr. Ayres as follows: *Male and Female.* Iris dark yellow; bill pink, with tip, margins, and base black; tarsi and feet pink.

Fig. Daubent, Pl. Enl. 379.

722. *NETTAPUS AURITUS* (Bodd.). African Dwarf Goose.
Nettapus madagascariensis, Layard, B. S. Afr. p. 348.

This lovely little Goose may at once be known by its brilliant colouring, particularly by the green patch on each side of the neck of the male. It is abundant at Natal, where a friend informs us it swims in such large flocks, that he has killed from ten to fourteen in a single discharge of a common fowling-piece. Mr. Chapman found it equally abundant in his travels to the northward. A fine pair were killed by Mr. J. Nightingale on a small vley near Alexandria in 1868, and presented to the South African Museum; it has also been obtained at Grahamstown and beyond the Kei by Mr. W. Bowker. Captain Trevelyan informs us that he saw the skin of one of these birds which had been shot in British Caffraria about seventeen miles from Kingwilliamstown.

In Natal Mr. Ayres says they are gregarious, frequenting the lakes and rivers near the coast, but Majors Butler and Fielden and Capt. Reid state that they were disappointed in not meeting with the species, and it appears to be irregular in its visits to Natal. Mr. Ayres states that a pair were shot on the Vaal River in April, about fourteen miles from Potchefstroom. Sir John Kirk writes concerning its occurrence in the Zambesi district: "Native name 'Sequiri.' This beautiful bird is confined to lagoons near the rivers and lakes, being very seldom to be seen on the main waters. It occurs in pairs, and in flocks of from eight to ten. When disturbed, it flies along the water, following all its windings, never crossing the country. Its habits are entirely aquatic. It dives, and remains long under the surface, and is very difficult to obtain when wounded, getting entangled in the weeds at the bottom."

Mr. Andersson says: "I have only observed this handsome little Goose on Lake N'gami and its watersheds, where it is not uncommon. It is met with in small flocks and is not very shy. It is exceedingly fat at certain seasons, and is pretty good eating." Senor Anchieta has met with it at Humbe on the Cunene River and at Huilla in Benguela.

Adult male.—Upper parts, shining black green, with a longitudinal white stripe along the wing; under parts white; chest, flanks, and sides rufous, the first transversely marked with narrow black bars; front of head, cheeks, and throat, white; top of head shining black

green; on each side of the neck a large dead green patch, surrounded by the black green of the head. Length, 14"; wing, 6"; tail, 2" 9".

The females and young males want the green patch on the sides of the neck. According to Mr. Andersson the iris is "bluish in the male; the bill rich orange, inclining to livid on the edges of the lower mandible, the 'nail' of the upper mandible horn-colour; the legs and toes are shining black, tinged with dusky yellowish on the outer toes and the outer side of the legs. In the female the bill differs from that of the male in the upper mandible being dusky olive, with a greenish orange patch on the lower part of the base, and a small livid spot on each side of the 'nail.'"

Fig. Daubent, Pl. Enl. 770.

723. DENDROCYGNA VIDUATA (*L.*).

White-masked Duck.

This curiously marked Tree-Duck (which is easily distinguished from all other species by its half-white face) is occasionally met with in Natal, to which place it doubtless wanders from the Zambesi, where it is common. We found it also abundant in Madagascar, in the swamps and rice-fields, and very easy of approach. The habit of perching on trees resembles that of the allied *D. arcuata* of India.

In Natal, Mr. Ayres says, it is gregarious, frequenting the lakes and rivers near the coast. Mr. Barratt shot one near Potchefstroom, where, however, it is rare. Sir John Kirk states that it is very abundant in all marshy lands in the Zambesi district, large flocks arriving with the rains in November and December, but the species never entirely deserts the Zambesi region: it breeds in the marshes and on islands. Its favourite food is the seed of the *Nymphaea*. During the night the various flocks pass to and fro, uttering a frequently repeated clear whistling note. The flesh is particularly fine; and settling in dense masses on the mud-banks, they can be had in great numbers from a canoe while passing the marshy regions, in which the large game are so difficult to procure.

Mr. Andersson observes: "This Duck, which congregates in immense flocks, is exceedingly common in the Lake-regions and on the River Okavango; in the latter locality it is seen most abundantly during the annual inundation, when much of the usually dry land which abuts upon the river is converted into

marshes and swamps. As these temporary resorts dry up, the Ducks of this species move eastward, until they arrive at that extensive flooded country which stretches far and wide on each side of the Teoughe below Libebé. I have never seen this Duck in Damara or Great Namaqua Land." Senor Anchieta has obtained the species on the Coroca River, on the coast of Mossamedes, and also in the interior at Quillengues and Humbe. At Quillengues it is called *Imbanteque*.

Above, brown; the feathers broadly margined with dirty fulvous; wings and rump blackish-brown; in the centre of the back a rufous patch; centre of under parts immaculate black-brown; flanks and sides transversely barred with fulvous; fore part of the head, chin, and spot on the middle of the throat, white, more or less tinged with fulvous; back of head and neck black; front of neck and chest, deep ruddy. Length, 17"; wing, 8½"; tail, 3".

Fig. Daubent. Pl. Enl. 808.

725. *SARCIDIORNIS AFRICANA*, *Eyton*.

Knob-billed Duck.

This Duck may be at once recognized in the breeding season by the curious flattened knob on the bill. We have received it from Mr. Arnot and Mr. Chapman, who tells us it is common on the rivers of the north. It has also been killed on the Kleinmont River (January, 1868). Mr. Barratt obtained a specimen in the Transvaal near Potchefstroom, and Mr. Ayres also procured an example at a lagoon on Loup-spruit, about six miles from Potchefstroom. He says: "It is the only one I have ever met with; and I had great trouble to get it, as, after being shot, it flew into the spruit, dived, and died on the opposite bank." In 1880 he writes: "The specimen sent is the only one of the kind that I saw amongst the Magaliesbergen; it came down to a shallow pool one morning as my brother and I were at breakfast; and he made a successful stalk and floored it." The late Mr. Frank Oates shot an example in a tree at Mopani Pan, near the Ramaqueban River, in March, 1874. He adds: "The dogs caught a young one in the pan, where I suppose this Goose had its brood." Mr. Jameson's expedition met with it on the Molopo River in January; and Mr. Ayres observes concerning it: "Rather sparingly distributed over this part of the country. I saw several in February flying over the Hart River." Sir John Kirk states that in the Zambesi region it was "found only

during the rainy season and the few months which follow, but was not seen during the dry, hot time. It feeds in fields and marshes, perching readily on trees. The flesh is good, more tender than that of the Black Goose, but without the delicate flavour of the Whistling Duck."

According to Mr. Andersson, "this very handsome species is common in Damara and Great Namaqua Land during the rainy season, and is found at all seasons at Lake N'gami and on the River Okavango. It is usually found in flocks, and may not unfrequently be seen perching on dry trees near the water; its flesh is very good." Senor Anchieta has forwarded many specimens to the Lisbon Museum, procured at Caconda (native name *Violo*), Huilla, Gambos, and Humbe (native name *Ecubo*).

Upper parts, blackish-brown, shining-coppery on the back, and brilliant green on the wing; rump brownish-grey; under parts whitish; flanks grey; head and neck white, covered with black spots, which form a broadish line from the top of the head, down the back of the neck. The male, in the breeding season, has a large elevated flattened black caruncle extending down the centre of the upper mandible. Length, 24"; wing, 15"; tail, 7".

726. CASARCA CANA (*Gm.*).

South African Shell-Duck.

Casarca rubida, Layard, B. S. Afr. p. 350.

The "Berg-Eendt" is readily distinguished by its rufous colour and grey head. It is rare in the colony, appearing at odd times in different places. We are told it breeds among rocks, and, like the *Dendrocygna*, conveys its young down to the water on its back.

"Three specimens," writes Mr. Ayres, "were killed by my brother on a lagoon in the Free State; but birds of this species also occur on this side the Vaal, where I have seen them, but have never been able to get at them."

General colour, rufous, inclining to yellow (fulvous) on the chest and vent, and mottled with minute wavy black lines on the back; rump and lower part of back very dark grey; tail black, shining green; shoulder pure white; green patch on the wing, very large; head and neck ash-coloured, with a dark rufous collar. Length, 2' 3"; wing, 15"; tail, 6½".

727. PÆCILONETTA ERYTHORHYNCHA, Gm. Red-billed Teal.

Anas erythrorhyncha, Layard, B. S. Afr. p. 351.

The "Smece-Eendtje"* is common and very generally distributed. It is usually found in little flocks of six or eight individuals, frequenting tanks and rivers. It breeds among rushes, forming a large flat nest of sedge, and lays from six to ten eggs, similar in colour and size to that of the *Æ. capensis*.

To Kingwilliamstown, Captain Trevelyan informs us, it comes down in fair numbers after heavy rains. In the Newcastle district of Natal Majors Butler and Feilden and Captain Reid state that it "is not so numerous as *A. xanthorhyncha*, but is a well-known Duck, frequently met with in small flocks in all the 'vleys,' and excellent eating. The sexes differ so much in size that we were inclined at first to think there were two species." Mr. Ayres has also found them in Natal, inhabiting the lagoons, but not very common. In the Transvaal he says it far outnumbers all the other species of Duck. Mr. Frank Oates met with it at Mopani Pan, near the Ramaqueban River, in March, and again in November. He was informed that it was the common small Duck of the locality.

Mr. Andersson observes: "This is the commonest Duck in Damara and Great Namaqua Land, where it is found throughout the year; and it also abounds on most of the waters to the northward. I met with several of its nests in Ondonga in the months of February and March; the largest number of eggs contained in any of the nests was ten. This species is usually observed in flocks, and, where not previously disturbed, is not very shy or difficult to obtain." Senor Anchieta has procured it plentifully on the coast of Mossamedes and on the Coroca River, where it is called "Deleca."

Upper parts brown, tinged faintly with green, each feather margined with pale pinkish; below brown, each feather so broadly margined with white as to cause that colour to predominate; head and neck dark brown, the latter minutely mottled with dirty white; chin, and lower parts of the cheeks below the eye, white; on the wings a broad bar of pink, crossed at the upper side by a narrow

* "Mr. Fellowes tells me that Widgeon are called "Smees" in some parts of Norfolk,—evidently derived from the old Dutch name."—*E. L. L.*

green line; centre of the bill brown, the rest pink; iris hazel. Length, $18\frac{1}{2}$ "; wing, $8\frac{1}{2}$ "; tail, 3".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 104.

728. ANAS XANTHORHYNCHA, *Forst.* Yellow-billed Teal.

The "Geelbec" is our commonest Duck, being abundant all over the colony and South Africa generally. It is migratory, as indeed are all our Ducks, coming and going with the waters. It is usually seen in pairs, male and female, and exhibits all the wariness and caution of its race. They breed in considerable numbers at Vogel Vley among the rushes and and rocks scattered over that lake. We are told that at one season of the year the farmers in that neighbourhood assemble for a grand hunt after these birds and the *P. erythrorhyncha*. The method of hunting is as follows: The shooters are posted in different parts of this long sheet of water, hidden among the rushes and the bush-rovered rocks which jut out here and there in the shallows. Men are then sent about with the long waggon whips, and with these they beat the rushes, and keep up a continual cracking (and the crack of a Cape whip is nearly equal to that of a gun); the wretched birds fly backwards and forwards (having no other water within many miles), and as they pass the ambuscades, are shot down; when the day's butchery is over, the dead and wounded are sought for, and usually fill many sacks.

They construct their nests in the dry veldt, at a distance from the water, generally in a dense bush; the female sits so close that unless hunted for she will scarcely rise. Her eggs, usually six in number, are cream coloured. Axis, 2" 3''; diam., 1" 9''.

Captain Trevelyan says that it is not uncommon on vleys near Kingwilliamstown. Majors Butler and Feilden and Captain Reid state that in the Newcastle district "it was abundant in all the vleys, sometimes seen in flocks of considerable size. It was most excellent eating, and a decidedly pleasant change from our impracticable rations of 'trek ox!' Though we found no nests, they appeared to be breeding in October." Mr. Ayres gives the following note: "I found a pair of these birds in November, in the upper part of the Mooi River, Natal; and in the Transvaal they are tolerably plentiful, inhabiting there in some numbers. They frequently lie so close in the rushes, where the water is about knee-deep, as almost to allow themselves to be trodden on. They

build, amongst the high rushes, a substantial nest of dry flags, well elevated above the water, and generally choose such lagoons as will not rise sufficiently to flood the nest, except in the case of a very unusual fall of rain. These Ducks during the winter moult lose all the feathers of the wings at once, and then they take good care not to get far away from the reeds and other cover, where they hide with much cunning; a good water-spaniel is then useful, as the birds, though moulting, are generally fat and excellent eating. I shot several in this condition on the 'Barbel Pan,' near the Rhinoster River, in the Orange Free State, last winter." It was seen in Mashoona Land by Mr. Jameson's expedition. Mr. Anderson writes: "This Duck is somewhat common on Lake N'gami and the Tottlelé River, but I do not remember to have met with it in Damara or Great Namaqua Land, though to the south of the Orange River it is a widely diffused and common species." Senor Anchieta has met with it at Huilla and Caconda.

Throughout a light brown, each feather broadly edged with white, giving the whole a scaled appearance; head and neck minutely mottled with white; a broad green band, narrowly edged with black, and again by white, extends partially across the wing; bill bright yellow, with the tip and centre of upper mandible black. Length, 22"; wing, 9"; tail, 4".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 96.

729. *ANAS SPARSA*, *Smith*.

Black Duck.

The Black Duck is solitary and shy in its habits, frequenting rivers, under the banks of which it conceals itself during the day. It is scarce, but generally distributed. We have received specimens from Colesberg and Traka, and heard of it at Middelburg, where our late friend, Mr. Jackson, shot several specimens. It may be distinguished from all other ducks by its dark plumage and abrupt white spots. Mr. Atmore writes: "The common duck of the Oliphants River—very shy—delicious eating." Mr. H. Bowker sends eggs procured in Basuto Land, near Maseru. "Nest in a mass of drift in an overhanging willow-tree on the banks of the Caledon River. It was about fifteen feet from the ground and six from the water in a hollow of the rotten wood under the wreck, and lined with down from the bird's own breast. There were only five eggs in the nest, almost ready to hatch." The eggs are similar in

colour to those of *A. xanthorhyncha*. Axis, 2" 6''; diam., 1" 9''. Laid in November.

Mr. Rickard notes its occurrence near Port Elizabeth, and at East London he says several were procured up the Buffalo River. From Kingwilliamstown Captain Trevelyan writes: "The commonest Duck of the Buffalo River, but they are not numerous: very rarely found on vleys." "In Natal," says Mr. Ayres, "we seldom find more than two of these birds together: they frequent the rocky streams in the interior of the country, and are by no means plentiful, being exceedingly shy and wary. In the moulting-season we have shot them so denuded of feathers that they could not fly a yard, and depended for their safety on diving, and hiding under the banks, at which they are very expert, and it is difficult to frighten them from their hiding-places." Though not obtained in the vicinity of Newcastle, this Duck was rather common at the Ingagane River, about twelve miles away, where Captain Reid shot several in June and July. They were very shy, and generally found singly or in pairs in the river, not in the vleys. Mr. Buckley only met with them south of Pretoria. Mr. Ayres found the species on the Mooi River, but not common, and he has also sent it from the Transvaal. On the Zambesi Sir John Kirk states that it was "nowhere very common, but widely distributed, occurring in single pairs. The first appearance is with the rains, and it remains to breed. After the end of April it is not seen. The young may be obtained in March."

Mr. Andersson observes: "I have never seen this Duck in Damara Land, and only on one or two occasions in Great Namaqua Land; but I have reason to think that it is less unfrequent during the rainy season in some parts of the latter country, chiefly along the southern course of the Great Fish River and its tributaries."

Throughout of a dark brown, finely mottled on the head and neck with dirty-white, and marked on the wings and tail with large pure white spots; vent edged with white; across the wing is a bright green bar, edged with black and white; the black nearest the green. Length, 22"; wing, 10'; tail, 5'.

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 97.

730. *QUERQUEDULA HOTTENTOTTA*, *Smith*.

Hottentot Teal.

Sir Andrew Smith, whose description we quote, states that the

only specimens of this bird seen by him, two in number, were procured on a large vley about one hundred miles north-west of Cape Town. This was probably Verloren Vley. We have not seen it from the colony; but a mutilated specimen appeared in Mr. Chapman's collection.

In Natal Mr. Ayres states that this Teal appears singly or at most in pairs. Lieutenant Giffard obtained it near Newcastle in November. In the Transvaal Mr. Ayres says that it is tolerably common about the lagoons near Potchefstroom and is found in pairs and small flocks." Mr. Andersson writes: "This is a rare Duck in Damara and Great Namaqua Land. I procured more individuals at Omanbondé than at any other locality; several specimens have also been brought from the Lake country." Senor Anchieta found it abundant at Mossamedes and on the Coroca River.

Male.—Umber-brown, edged with lighter; crown, occiput, and quills, dark brown; chin, throat, cheeks, rump, and under tail-coverts, light brown; the last narrowly edged with darker; breast, lower part of neck, and under surface, darker than on the rump; abdomen barred with black; speculum and secondaries, bright brassy-green; the former edged behind with black, then with white; coverts brown, slightly glossed with brassy; tail dark brown.

Female.—Like the male, but markings less distinct; under plumage lighter; legs in both sexes brown; bill lead-coloured; nail horn-brown. Length, 13" 9"; wing, 5" 8"; tail, 2" 10".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 105.

731. *QUERQUEDULA CAPENSIS* (*Gm.*).

Cape Teal.

Mareca capensis, Layard, B. S. Afr. p. 351.

The "Teal-centdtje" is usually confounded here with the "Smee centdtje," in company with which we have shot it at Beaufort, the Knysna, on the Cape Flats, and at Vogel Vley. At this latter place we killed one near a nest which contained a single egg; it was probably one of this species, and is of a dirty greenish-white throughout: axis, 1" 10"; diam., 1" 6". Mr. Ayres has recorded one specimen which he shot in the Transvaal in August, and Mr. Andersson writes: "This is rather a scarce Duck in Damara and Great Namaqua Land; but I have found it more abundant in the immediate neighbourhood of Walwich Bay than elsewhere in Damara Land." Senor Anchieta has procured it on the coast of Mossamedes and on the Coroca River.

Head, ash-grey, profusely streaked with blackish dots; lower part of neck and breast, ash-grey, profusely variegated with reddish-brown broken bars, giving the plumage a scaled appearance; feathers of the back, dark reddish-brown, each feather edged with lighter; speculum of the wing, bright green, edged with white and black; shoulders dark ash; legs reddish; webs dusky; claws black; bill red, the base black. Length, 19"; wing, $8\frac{1}{2}$ "; tail, $2\frac{3}{4}$ ". Female smaller than the male.

732. CHAULELASMUS STREPERUS (*L.*).

Gadwall.

The late M. Jules Verreaux assured us that he once procured two specimens of this bird on the Orange River.

The following description is taken from Macgillivray's "British Birds," vol. v, p. 59: "Male with the bill an inch and ten-twelfths long, eight-twelfths broad toward the end, black; scapulars and inner secondaries elongated and acuminate; middle tail-feathers pointed, but not much longer than the rest; upper part of the head and nape dusky, with small reddish-brown markings; lower neck all round, and part of the back, dusky, with semi-circular white lines; middle of the back, scapulars, and sides, finely undulated with dusky grey and reddish-white; smaller wing-coverts grey, barred with pale reddish; middle coverts deep chestnut-red; speculum black and white; hind part of back and tail-coverts bluish-black; tail grey. Female with the scapulars, inner secondaries, and tail-coverts less elongated; the upper part of the head dusky, a lightish streak over the eye; the upper parts blackish-brown, the feathers edged with reddish; the lower parts light reddish, marked with oblong spots of greyish-brown."

Fig. Dresser, B. Eur. vi, pl. 424.

733. SPATULA CAPENSIS (*Smith*).

Cape Shoveller.

The Shoveller or *Slop* is rarely seen in the neighbourhood of Cape Town, but it accompanied *Erismatura maccoa* and *Aythia capensis* when they appeared there in such numbers. Mr. L. C. Layard captured a wounded specimen near the Salt River in November, 1865. It is common at Vogel Vley, near Talbagh, at the Knysna Lakes and at the Berg River, where he obtained eggs, which are of a delicate cream colour tinged with green. Axis, 2" 2''; diam., 1" 6'''. Mr. C. D. Griffith says: "It seems rare on

the eastern frontier, but has been procured near Queen's Town." Mr. Rickard tells us that he has shot it near Port Elizabeth on the Swartkops River. Mr. Ayres has met with it in Natal, and a pair were seen by Major Butler on a vley east of Newcastle on the 18th of September. Mr. Ayres states that it occurs in the Transvaal. "It is comparatively scarce," writes Mr. Andersson, "in Great Namaqua and Damara Land; but I have traced it as far north as the River Okavango," and Senor Anchieta has only met with it on the Coroca River in Southern Mossamedes.

General colour above and below, dark brown, each feather being bordered with dirty white, thus imparting to the bird a scaled appearance; shoulder blue, succeeded by a bar of white, and then by another of shining green, on the inner side of which there is a patch of blue; head grey, finely mottled with dark brown speckles. The female is much less brilliantly coloured. Length, 21"; wing, $9\frac{1}{2}$ "; tail, $3\frac{3}{4}$ ".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 98.

734. *AYTHIA CAPENSIS* (Cuv.). South-African Pochard.
Nyroca brunnea, Layard, B. S. Afr. p. 355.

A periodical visitant to this end of the colony. We saw a pair in Zoetendals Vley in November, 1865, apparently breeding in the vast bed of rushes at the south end of the vley. In September we found it breeding at the Berg River. Eggs 5-8, pale cream colour. Axis, 2" 3''; diam. 1" 9''. It has been found on the Kleinmont River by Dr. Atherston. Mr. Ayres has shot the species on the Sea-cow Lake, in Natal, in November; and Major Butler first saw it in the vley to the east of Newcastle, near the Ingagane, early in September. He saw a brood of five or six young ones, about ten days old, on the 18th of that month. Captain Reid observed three pairs of these Ducks on a small open vley, close to the main "drift" and Fort Auriel, at Newcastle, on the 7th of November. In the Transvaal, Mr. Ayres says: "This species is to be found on the lagoon at Loup-spruit, where a few years since it was plentiful, but has lately become much more scarce." Mr. Andersson writes: "This species is only a visitor to Damara Land, and, I suspect, a rare one; for I only remember meeting with it there on one occasion, when I obtained several individuals from a flock which had settled on a vley, a day's journey from Barmen. It is, however,

very common in the Ondonga country during the wet season; and whilst I was there eggs were shown to me which were said to belong to this Duck; and, though I did not succeed in identifying them with certainty, I think it probable that such was the fact, as they exceeded in size the eggs of *Anas erythrorhyncha*, from which they also differed in form and colour." Senor Anchieta has procured this species at Mossamedes, on the Coroca River, and at Humbe, on the Cunene River.

Male.—General colour above, deep brown, minutely variegated with grey; below, deep brown, tinged with rufous, more especially on the flanks and shoulders; lower part of the neck and breast approaching to black, tinged with faintish purple; cheeks and sides of upper part of neck, rich dark chestnut; small spot on the chin and bar on the wing, white.

Female.—Throughout a lighter brown, approaching to white on the under parts, and all tinged and blotched with dirty rufous; chin, anterior portion of throat, base of the bill, and stripe through the eye, white; irides bright reddish-crimson. Length, 19"; wing, 9½"; tail, 3".

Fig. Eyton, Monogr. Anat. pl. iv, p. 61.

735. THALASSORNIS LEUCONOTA, *Smith*.

White-backed Duck.

This singular Duck makes periodical visits to the vleys in the neighbourhood of Cape Town. It is found in abundance to the northward, and was included in Mr. Chapman's collection. Sir A. Smith says it inhabits Verloren Vley, that great haunt of all water-fowl, and other lakes on the western coast of South Africa, and that it prefers diving to seeking safety by flight. We fancied we made out a pair of these birds at Zoetendals Vley. We examined them for some time with our binoculars, but they would not allow of a near approach; still the yellow patch on the throat was very visible.

Mr. Ayres has recorded it from Natal, and Major Feilden obtained his first specimen near the Buffalo River, early in September. It was common on the vleys near this river and the Ingagane in October; and Major Butler had the good luck to find a nest with four eggs in one of these vleys. He gives the following note: "Found a nest of this species on the 18th September. It was built of sedge, and very similar to a Coot's nest, but smaller, and

placed in thin rushes, just above the surface of the water, which was about two feet deep, and about ten yards from an island in the centre of a good-sized tank. It contained a single large greenish-white egg, quite fresh, and the surrounding rushes were broken across (no doubt by the old bird), and bent down over the nest, so as to conceal its contents. On revisiting the 'vley' on the 25th inst., I found another nest, precisely similar, about twenty yards off, containing three fresh eggs. This nest was probably built by the same pair of birds. The eggs were warm all day, and a small flock, consisting of three or four pairs of birds, remained close by constantly; still we never saw the hen bird go to the nest, although there were feathers in it and scattered about on the water all round. I fancy they slip off the nest and dive, like the Grebes, the moment they see any one approaching. Legs and feet bluish plumbeous; iris dark brown; bill dark brown, inconspicuously spotted on the sides of the upper mandible; lower mandible pale brownish-yellow, with base and tip dusky brown." Mr. Ayres states that it is very scarce in the Transvaal. Mr. Andersson observes: "This is a comparatively scarce species in both Great Namaqua and Damara Land; but during one season I found it tolerably abundant at the large marshy vley of Omanbondé, in the latter country. It is generally found singly or in pairs. When disturbed it takes wing unwillingly, and merely skims the surface of the water, settling again as soon as possible; it appears to prefer endeavouring to escape from danger by diving, in which it is very expert, being able to continue long under water." Mr. Monteiro found it in the fresh-water lakes of Benguela to the south of Mossamedes; and Senor Anchieta has procured it on the Coroca River.

Back white; all the rest of the upper parts variegated with fulvous, black, and rufous; under parts fulvous, transversely striped with dark brown, least so in the centre of the breast and belly; head and back of neck fulvous, profusely mottled with black round spots; front and sides of lower part of neck bright fulvous; chin and spot on each side at the base of the bill white. Length, 18"; wing, 8"; tail, 2½".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 107.

736. *ERISMATURA MACCOA* (*Smith*).

Maccoa Duck.

The singular rigid tail-feathers of this Duck will serve to

distinguish it from any of the other species inhabiting South Africa. It is found at Verloren Vley; and Mr. Dumbleton informs us that he shot a specimen at Victoria. Sir Andrew Smith states that it dives with great facility.

In the winter of 1858, great flights of these birds, and of *Aythya capensis*, appeared in the neighbourhood of Cape Town, and were shot in considerable numbers on the Cape Flats, and on all the vleys of the neighbourhood. Since that date only a few stray specimens have made their appearance at odd times; and it may be reckoned as one of our scarcest ducks. Mr. Ayres observes: "The specimen sent I shot in December whilst standing up to my middle in water and mud in a very extensive lagoon on the borders of the Vaal River. It kept constantly diving, and did not attempt to fly; but so quick were its motions, remaining not a second above water, that I had the greatest difficulty in shooting it. The belly was extraordinarily large, and the stomach contained water-snails."

Upper parts, chestnut-brown; under parts and wings, brown; head and upper parts of neck, black; bill blue; tail-feathers very narrow and rigid. Length, 17"; wing, 6" 6"; tail, 3½". The young male is beautifully mottled, and the female is generally of an umber-brown colour, with the chin and sides of the head clear white.

Mr. Ayres gives the following soft-parts:—The irides were brown, the upper mandible black, the lower pale, tarsi and feet dusky ash-colour.

Fig. Smith, Ill. Zool. S. Afr. pl. 108.

Fam. PROCELLARIIDÆ.

737. OCEANITIS OCEANICA (*Kuhl*). Wilson's Petrel.
Thalassidroma wilsoni, Layard, B. S. Afr. p. 359.

The accompanying description is from a specimen killed in Table Bay on the 29th April, 1865, by Mr. L. C. Layard, who informs us that he saw several more of the same species. We procured several specimens off L'Agullas Bank in 1856, since which time, until Mr. L. C. Layard found it in Table Bay; we had not seen them on the coast.

In habits they resemble *Oceanitis leucogaster*, with which they freely consort, flitting over the waves and picking up odd bits flung over the ships' sides. When taken in hand they disgorge large quantities of an oily matter, which quickly congeals, and assumes the appearance of dirty lard. Mr. Rickard records it from the neighbourhood of East London, and Mr. Andersson gives the following note:—"This bird is not unfrequently met with off the south-west coast of Africa, as well as in many of the bays and inlets. I have occasionally seen it very abundant about the fisheries at Walwich Bay and Sandwich Harbour, where these birds would approach within a few feet of the fishermen, eagerly picking up the smaller particles of refuse thrown away by them whilst cleaning their fish on the shore."

General colour throughout, brownish-black; rump and thighs white; legs and feet black; webs between the toes yellow, edged with black; irides black. Length, 7"; wing, 6"; tail, 2½".

Fig. Dresser, B. Eur. viii, pl. 614, fig. 1.

738. *OCEANITIS TROPICA* (Gould). Black-bellied Petrel.
Thalassidroma melanogaster, Layard, B. S. Afr. p. 538.

Not uncommon off Cape L'Agullas and on the south-eastern coast. While cruising with Admiral Trotter in the old "Castor" frigate, the boats being always at our disposal, we obtained many specimens of this and other species of birds inhabiting the Cape seas. Indeed, most of our knowledge of our oceanic birds is due to the opportunities so kindly afforded us by our kind and noble old friend, now, alas! no more.

General colour throughout, brownish-black; belly white, divided down the centre by a black stripe; rump and sides behind the thighs, pure white; legs, feet, and webs between the toe, black. Length, 8½"; wing, 6" 5''' ; tail, 3".

Fig. Gould, B. Austr. vii, pl. 62.

739. *OCEANITIS LEUCOGASTER* (Gould). White-bellied Petrel.
Thalassidroma leucogaster, Layard, B. S. Afr. p. 358.

Obtained by His Excellency Sir George Grey in the Cape seas. The only specimen that has fallen under our notice was kindly presented to the South African Museum by Lieutenant-Commander L. A. Bearsdslee, of U.S. Navy, and captured on board his ship, the

U.S. steamer "Aroostook," about 300 miles to the westward of the Cape, May, 1867.

Resembles the preceding species in size and colour, with the exception of being rather lighter, and by having the belly not divided by a black stripe; the toes also are shorter.

Fig. Gould, B. Austr. vii, pl. 63.

740. PROCELLARIA PELAGICA, L. Storm Petrel.
Thalassidroma oceanica, Layard, B. S. Afr. p. 359.

A few of these Petrels appeared in Table Bay in company with *Oceanitis oceanica*, in the month of May, 1865. Specimens of each were procured by Mr. L. C. Layard and ourselves. We had never seen either of them so near inshore. According to Mr. Andersson, "this Petrel is occasionally seen rather numerously at Walwich Bay, and is quite common off the rest of the south-west coast of Africa."

General colour of plumage, soot-colour; quill-feathers approaching to black; edges of the secondaries whitish; rump and vent white; four outer tail feathers white on the inner webs, at the base; bill and legs black; eye dark brown. Length, 6''; wing, 5''; tail, 1'' 9''.

Fig. Dresser, B. Eur. viii, pl. 613, fig. 1.

741. OSSIFRAGA GIGANTEA (*Gm.*). Giant Petrel.
Procellaria gigantea, Layard, B. S. Afr. p. 360.

The Giant Petrel is common in Table Bay, and all along our coasts, throughout the year. Though very plentiful beyond the shipping in the Bay, it never approaches the shore or wharves—certainly not from the fear of man, because when a boat cruises about the Bay, it is sure to pay it a visit and examine its inmates closely. A white variety is common up the west coast towards Walwich Bay. It is called "the Nelly" by sailors. Some of them have here and there a black feather. They breed on the Crozette Islands. Eggs of this species measure: axis, 4'' 3''; diam. 2'' 8''; pure white, rough to the touch, and rather pointed at each end. They retain the strong smell of the bird for a long period. Mr. Andersson writes: "The Giant Petrel is not unfrequently met with on the south-west coast of Africa; and I have observed it between the 26th and 35th degrees of south latitude. It is a most voracious

feeder, and hardly anything comes amiss to it; but it seems to be especially fond of the abandoned carcasses of whales and seals. This species pursues the Greater Shearwater, probably with the view of compelling it to disgorge any prey that it has captured." Senor Anchieta has procured it in the Bay of Mossamedes.

General colour throughout, deep brown-black; bill livid. Length, 2' 10"; wing, 21"; tail, 11".

Fig. Latham, Gen. Syn. vi, pl. 100.

742. *MAJAJUEUS ÆQUINOCTIALIS* (L.).

Cape Hen.

The "Cape Hen" is a constant resident in Table Bay, though the majority leave us at one season of the year to breed. It cruises among the shipping and wharves, looking out for stray scraps washing about, on which it feeds. It extends far out to sea, and may be met with for some distance up both east and west coasts. It breeds on the Crozette Islands.

The eggs are pure white, rather rounded at each end: axis, 3" 2'''; diam., 2" 2'''. .

Mr. Rickard has seen it from the vicinity of Port Elizabeth.

General colour throughout, deep brown-black, with chin, and more or less of the top of the throat, pure white. Length, 21"; wing, 15½"; tail, 6½".

743. *ÆSTRELATA MOLLIS* (Gould).

Soft-plumaged Petrel.

This Petrel is common along the southern coast of this colony, to the eastward. It is found far out at sea, and its flight is peculiarly rapid and graceful. It is generally seen in small companies, although each appears to hunt, and dwell apart.

General colour above, dark cinereous brown, darkest on the wing and tail-feathers. A narrow collar of the same extends across the chest; forehead more or less mottled; under parts white, slightly mottled on the flanks and under tail-coverts. Length, 12"; wing, 10"; tail, 5½".

Fig. Gould, B. Austr. vii, pl. 50.

744. *ÆSTRELATA MACROPTERA* (Smith).

Long-winged Petrel.

Procellaria macroptera, Layard, B. S. Afr. p. 360.

Dr. Smith states simply that "this is a rare bird in the Cape

seas." We obtained a single specimen of it off the Cape in 1856, while cruising in H.M. Frigate "Castor," with Admiral Trotter.

The whole plumage intermediate between brownish-red and liver-brown; several of the scapulars and interscapulars narrowly tipped with yellowish-brown; the feathers of the head, neck, and body, silvery-white towards their base, with a satin lustre; bill, rich black; tarsi, toes, and interdigital membrane, liver-brown, the two first tinted lake-red. Length, 17"; wing, 13" 9''' ; tail, 6".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 52.

745. *THALASSÆCA TENUIROSTRIS* (*Audub.*). Smith's Grey Petrel.
Procellaria glacialoides, Layard, B. S. Afr. p. 361.

The type of *P. glacialoides* was obtained in the Cape seas by Sir Andrew Smith.

Above, cinereous; below, white; head and back of neck white, tinged with cinereous yellow; the coverts of the primaries and secondaries, outwardly ruddy brown, with the two last white; tail, pale cinereous; the sides of the body tinged with bluish-grey; bill above, purplish-blue; below, livid flesh-colour; top of mandible, livid black; feet, livid grey; Length, 18" 9''' ; wing, 12" 4''' ; tail, 5" 3''' .

Fig. Smith, Ill. S. Afr. Aves, pl. 57.

746. *DAPTION CAPENSIS* (*L.*). Cape Petrel.
Procellaria capensis, Layard, B. S. Afr. p. 361.

This bird, though common enough along the coast, rarely enters our harbours, preferring the open sea for its hunting-field. At one season of the year, about November and December, they disappear, and the voyager finds the sea duller and tamer than ever. We presume that they go off to breed; but where they select their nurseries we know not.

On a recent voyage to England, we left the Cape at the end of March: not a single Daption was visible throughout our trip; nor indeed, after we left the land, until off Ushant, did we see more than half-a-dozen birds in all (1866). On our return in November, we fell in with one *three degrees north* of the Line!! We have never before heard of this species extending beyond the Equator. Mr. Rickard states that three or four were seen, and one procured on the 12th of September, 1861, near Port Elizabeth; the only occasion

on which he met with them in that vicinity. According to Mr. Andersson, "this is the most common Petrel off the south and south-west coast of Africa, but is rarely seen much to the north of 27° lat. It is pretty generally known as the 'Cape-pigeon;' why, it is hard to say, except it be from its comparative fearlessness of man. Their food is various, consisting chiefly of mollusca, including such refuse as is thrown overboard from vessels, and sometimes also the carcass of a putrid whale, which, when it occurs, affords to those birds a welcome feast. They are voracious feeders, and will rush at a bait with the utmost avidity, disputing fiercely with each other for the treacherous morsel; they are thus easily captured with a hook and line, and sometimes by a line only, if suddenly thrown over them as they pass close under a vessel's stern. Sometimes, also, they become entangled by flying against lines which have been set by the sailors for that purpose. When caught, they are exceedingly awkward on the deck of a vessel, as they cannot rise, but attempt to make their escape by running along with outstretched wings; on such occasions they frequently vomit large quantities of a reddish-coloured offensive oil. This they seem to do from sheer fright only. Sealers declare that the only locality known as a breeding-place of this species is the island of South Georgia." The late Dr. Welwitsch obtained a specimen at the mouth of the Bengo, and Senor Anchieta procured a single example near Mossamedes.

Upper parts, mottled black and white; head black; chin speckled. Length, 15"; wing, 10½"; tail, 4" 9'".

Fig. Gould, B. Austr. vii, pl. 53.

747. *HALOBENA CERULEA* (Gm.).

Blue Petrel.

Procellaria cerulea, Layard, B. S. Afr. p. 361.

The larger size and the white edges to the scapulars, the tips and two outer tail-feathers distinguish this species at once from all the Blue Petrels inhabiting our seas. It is not uncommon along the coast, and is occasionally cast ashore after a gale of wind.

Mr. Rickard says that one specimen was brought to him near East London, which was being carried off by a Sea-eagle, having been probably picked up dead by the latter bird.

Upper parts, darkish pearl-grey; under parts white; scapulars grey, darkened by a distinct tint of brocoli-brown; several of them *finely tipped with white*; tail pearl-grey, the *tips of all the feathers,*

as well as their inner edges, white; lateral feather on each side, dull white, with a freckling of grey towards its shaft; forehead, space in front of the eyes, eyebrows, and sides of head, white; bill very narrow. Length, 10" 5"; wing, 8½"; tail, 3" 10".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 53.

748. PRION VITTATUS (*Gm.*). Broad-billed Blue Petrel.
Prion banksii, Layard, B. S. Afr. p. 362.

This bird occasionally frequents the bays of our coasts, and is constantly to be seen in the Cape seas. Mr. Ayres states that it has been thrown ashore at Natal, dead, in vast numbers. The same thing has occurred here several times. Many were thus cast away at Green Point on the 21st of April, 1866; and a large flock perished in a vineyard at Constantia, belonging to Mr. Cloete.

General colour above, pearl-grey; back of neck and interscapulars tinged with brown; lesser wing-coverts, and the ends of the scapulars, ruddy brown; tail grey, tinged with yellow-grey; the ends of the feathers dirty brown; through the eye a stripe of purple, tinged with ruddy brown; sides of the chest shining grey; below white; eye brown; bill livid brown towards the tip of the upper mandible, clouded greenish-yellow; feet ruddy brown. Length, 10"; wing, 7" 9"; tail, 3" 9".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 55.

749. PRION DESOLATUS (*Gm.*). Narrow-billed Blue Petrel.
Procellaria turtur, Layard, B. S. Afr. p. 361.

The shape of the bill, the sides of which are nearly straight, will distinguish this from the preceding bird, which has the bill bowed sideways from the base to the tip.

Sir Andrew Smith procured it in the Cape seas, and Mr. Andersson gives the following note: "This species is occasionally seen in the bays and inlets of the south-west coast of Africa, especially after a storm; but the open sea is its favourite resort. It sometimes settles on the water, but rarely remains longer than is necessary to enable it to fish up its prey. It will follow in a vessel's course for hours together, but evidently not with a view of picking up the refuse that may chance to be thrown overboard, as is the case with some other species, nor does it approach very close. It is a very powerful

fier, and cleaves the air with astonishing velocity—now rising suddenly, then abruptly precipitating itself to the very crest of the foaming waves, and skimming gracefully over the intervening troughs—its varied evolutions thus affording to the voyager a constant object of never-ceasing interest.”

Above, bluish ash-coloured; beneath white; space before the eye, eyebrow, and lower eyelids, white; lesser wing-coverts, tips of the scapulars, webs of the primaries, the outer vanes of the four external quill-feathers, and the tip of the tail, dull reddish-brown; base of tail cinereous; bill greenish-black; upper mandible at the point, yellow-brown; lower mandible livid; feet reddish-brown; eyes black-brown. Length, 10" 9"; wing, 7" 6"; tail, 4".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 54.

750. *Puffinus griseus* (Gm.).

Sooty Shearwater.

The following description by Sir A. Smith is taken from a young specimen. He states that they are common in the Cape seas; but we never met with them. Mr. J. Verreaux confirms what Sir A. Smith says, but they seem to have entirely disappeared now (1871). Sir A. Smith's specimens are in the British Museum. Mr. Andersson writes: "This species is common in the Cape seas; and I have reason to think that it is not unfrequently met with off the coast to considerably north of the Orange River. It is generally observed in the Cape seas from May till September, when it retires to its breeding-grounds."

Above fuscous, tinged with yellowish-brown; below cinereous-brown; wing and tail-feathers, and lower tail-coverts, brown; bill livid brown; at the tip, yellowish-brown; front of the tarsi yellow, brown behind, and externally reddish-brown; eyes brown. Length, 17"; wing, 11" 9"; tail, 3" 10".

Fig. Smith, Ill. Zool. S. Afr. Aves, pl. 56.

751. *Diomedea exulans*, L.

Wandering Albatross.

The "Cape Sheep," as it is called, is a well-known inhabitant of our seas, and though it seldom ventures into the bays, it is sometimes caught by the fishermen between Robben Island and the mainland, together with the next species. It retires from our shores about November, and breeds on the Island of Tristan d'Acunha. An egg

brought thence by Captain Nolloth, of H.M. steamer "Frolic," and now in the South African Museum, is of a dull white, minutely spotted with brown at the obtuse end: axis, 5"; diam., 3" 3". We were on that island at Christmas, many years ago; but we still retain a vivid recollection of the marvellous number of albatrosses of all kinds which we encountered on our arriving in that neighbourhood, and of the thousands that we found sailing about the singular peak, looking at that great altitude (8326 feet) like mere specks in the sky. Eggs have been brought to us by Captain Armson from the Crozette Islands. This gentleman informs us that they make no nest, but simply lay in a depression in the soil caused by their frequenting the same spot for many successive years. He tells us that the young birds remain for several months in the nest, not eating anything, that he could ascertain, the parent birds having long left the islands. However, this statement, though made in full sincerity, may not represent the facts of the case. We know that a few hundred miles of flight would be nothing to a bird of such vast powers as the albatross. Nocturnal visits may therefore be made to the young, and entirely escape detection. This appears to us a likely solution of the difficulty.

Since the above was written, we have spoken to many of the sealers frequenting these islands. They declare that the albatrosses *visit their young daily*, and turn them off the nests when the next breeding season comes round.

Mr. Andersson gives the following note: "The thirtieth degree of south latitude has been assigned as the northern limit of the Great Wandering Albatross; but I have frequently met with them off the coast two or three degrees further north. They are generally observed at sea from April to October; during the rest of the year few or none are to be seen, certainly none of the old birds, which retire at that season to their breeding-places at the Island of Tristan d'Acunha, Prince Edward's Island, and the south-eastern part of Kerguelen's Land."

Adult: general colour pure white, mottled minutely on the back with wavy black lines; wings black and white, mottled; tail spotted with black. Young: dull brown, with white face and neck. Length, 3' 9"; wing, 2'; tail, 12".

Fig. Gould, B. Austr. vii, pl. 38.

752. *DIOMEDEA MELANOPHRYS*, *Temm.* Mollymauk.

Very abundant in all our bays, and on the coast generally. Hundreds are caught by the fishermen while out pursuing their usual trade, and are sold for three-pence each in the fish market. They are much eaten by the lower orders, and we are told are very palatable. They retire with the preceding to breed, and their eggs resemble those of the latter in every particular, save size, being: axis, 3" 9"; diam. 2" 6". This and the next species alight readily on the water to pick up garbage thrown from ships, and are easily caught with a hook and line in calm weather. Mr. Andersson writes: "This bird is very common on the south-west coast of Africa, and may even be occasionally seen close inshore. I have not unfrequently found them in Walwich Bay, as well as in some other bays and inlets to the southward of that locality. It is known to sealers and sailors by the name of 'Mollymauk,' and is very little inferior in grace of flight and strength of wing to the Great Wandering Albatross. As far as I have observed, it is more difficult to capture in the open sea than that species; but it is frequently taken by the fishermen in the vicinity of the southern coast, and exposed for sale in Cape Town market. This species sometimes captures, by diving, the molluscous animals on which it preys, but it seems to do so rather from necessity than from inclination; and it will frequently pursue some of the smaller allied birds, especially the Greater Shearwater, when these have captured anything in sight of their stronger kinsman, and compel them to disgorge their prey for its benefit."

Back, wings, and tail, brown black, the latter with a grey tinge; head, neck, rump, and under parts, pure white; a blackish line passes over the eye. Length, 36"; wing, 21"; tail, 11".

Fig. Temm. Pl. Col. 246.

753. *DIOMEDEA CHLORORHYNCHA* (*Gm.*). Yellow-nosed Albatross.

Not uncommon off the south coast, but it does not approach so near to land as the preceding. All Albatrosses feed much on squids. From the stomach of one we took a handful of their hard, horny, parrot-billed-shaped jaws.

They breed on the Crozettes in company with the preceding, and

their eggs are similar. Mr. Rickard has observed it off Port Elizabeth and East London.

Wings, back, and tail, sooty black-brown; the shafts of the latter white; the rump and the rest of the plumage, pure white, with the faintest tinge of black for an eyebrow; bill black, with a broad yellow stripe commencing about 4" of an inch from the feathers, and extending along the ridge of the upper mandible to the tip, which is reddish; lower mandible black, with the exception of the extreme tip, which is livid. Length, 31"; wing, 19"; tail, 11".

Fig. Temm. Pl. Col. 468.

754. DIOMEDEA CULMINATA.

Culminated Albatross.

We obtained a single specimen of this Albatross off the south coast, while cruising in H.M.S. "Castor," and for some time confounded it with the preceding, with which it was consorting, and agreeing perfectly in habits. We have never before heard of this species so far north. On the coasts of Australia it is a common species.

Upper part of back, pale sooty black; head and neck lighter; wing much darker, and tinged with brown; eyebrow, above dark, like the back, below white; under parts, from the base of the neck, pure white. Length, 30"; wing, 19"; tail, 11".

Fig. Gould, B. Austr. vii, pl. 41.

755. DIOMEDEA FULIGINOSA, *Gm.*

Sooty Albatross.

The Black Albatross, or "Blue-bird," as the sailors call it, is common along our southern coast, at a little distance from land. It may at once be distinguished from *Ossifraga gigantea* by its wedge-shaped tail, and when close, by its white eyelids. It is fond of hovering over a ship's deck, and we have obtained specimens by watching our chance and sending a small rifle-bullet through them, thus killing them instantly; if struck with shot, their feathers are so dense that they seldom receive a death-wound, but drift to seaward and perish miserably. We have never observed any of the other Albatrosses hover over the deck in the manner that this bird constantly does: sometimes we have seen it almost touch a man on

the royal-yard or on the lift of the spanker. It seems actuated by curiosity, turning its head from side to side, and scanning everything with its brilliant dark eye. Eggs of this species resemble those of *D. exulans*, but are smaller: axis, 4" 2"; diam. 2" 6".

Throughout of a dull sooty black, darkest on the wings; eye surrounded by a white eyelid; bill jet-black, with a narrow, yellowish stripe along the lower mandible; legs flesh-coloured; irides brown; tail wedge-shaped. Length, 33"; wing, 20"; tail, 13".

Fig. Gould, B. Austr. vii, pl. 44.

ORDER STEGANOPODES.

Fam. PHAETONTIDÆ.

756. PHAETON RUBRICAUDA (*Bodd.*) Red-tailed Tropic Bird.

It is with some hesitation that we include this species among the Birds of South Africa. A single red tail-feather was picked up on the beach at Port Elizabeth by our correspondent Mr. Rickard, who believes that it was freshly cast there.

Fam. PELECANIDÆ.

757. SULA CAPENSIS, *Licht.* Cape Gannet.

The *Malagash*, as it is called by the colonists, or Common Gannet of South Africa, frequents, in countless thousands, the whole of our coast-line, breeding on the various islands scattered over the whole extent from St. Ann's River to the eastward of Natal to the guano islands off Angra Pequina. It visits Table Bay in vast numbers in the months of April and May, in pursuit of the shoals of fish that then appear on the surface, upon which the birds pounce with almost unerring aim, from a great altitude, becoming entirely submerged by the violence of their descent. We have never seen this species far from land: they have invariably disappeared on the morning after the ship's departure, if standing off the land. Eggs of a blue ground, covered with white chalk: axis, 3'' 5''; diam. 2''.

Mr. Rickard records it from Port Elizabeth and East London. He states that he has found a great many parasites in the air membranes found in these birds. According to Mr. Andersson, "this is a very common bird on the south-west coast, and is found far to the north of Walwich Bay, and from thence southwards to the Cape of Good Hope. Its flight is very powerful and continuous, and it also presents a very pretty picture as it rides carefully on the foaming and crested waves. It is a most expert diver, and will precipitate itself from a considerable height with fearful velocity in pursuit of its prey, which it seizes under the surface, often at some

depth. As it comes sweeping down, its wings are extended and motionless, but it tucks them in a moment or two before it touches the water." Senor Anchieta has met with it at the Coroca River.

General colour throughout white; the larger feathers of the wings and tail, black-brown; the shafts of the former grey; those of the latter white; head and neck, and particularly the back of the latter, ochreous-yellow; space round and before the eye, bare, and of a dark-blue colour; a bare stripe of the same extends from the angle of the mouth, on each side of the head, and from the chin, two-thirds of the way down the neck; irides, pale fulvous; legs, dark livid-colour. Length, 36"; wing, 19"; tail, 10".

758 PELECANUS MITRATUS, *Licht.*

Mitred Pelican.

Pelecanus onocrotalus, Layard, B. S. Afr. p. 381.

Widely distributed, frequenting vleys and the mouths of rivers. Generally associates in small flocks; soars to an immense altitude. We have never seen it plunge after its prey. It swims with great rapidity, and captures its food while sitting on the water. It breeds on all the islands both to the westward and eastward of Tape Point. Captain Roe brought us specimens from Dyer's Island of old birds; young birds in all stages, and eggs. The latter are creamy white covered with chalk, but very smooth and satiny. Axis, 3" 9''; diam., 2" 6''. The yolk is a most beautiful crimson colour, totally unlike that of any other egg we ever saw. The young are dark brown, almost black, getting lighter by age. Capt. Roe says the old birds feed them with fish and young Cormorants and Solan Geese, for which reason the guano getters smash all the eggs and kill all the young they can find to protect the guano makers. Dr. Gueinzus has procured this Pelican in Natal. Mr. Andersson writes: "This species is very numerous at Walwich Bay, and is also tolerably common at Sandwich Harbour; but south of this port its numbers rapidly diminish. On approaching Table Bay the Pelican reappears and is abundant in many parts of the Cape seas nearly inshore; it is also found at Lake N'gami, Lake Omondara, and a few other localities in the interior." Senor Anchieta has procured a male at Humbe on the Cunene River.

Plumage throughout, white, tinted with rose-colour; the larger wing-feathers frosted with grey, and some of the smaller with grey edges; on the breast a tuft of stiff bright straw-coloured feather;

feathers of the head coming down in a point on the forehead; head crested; cheeks bare, and with the pouch, which extends half-way down the throat, light yellow; centre of upper mandible, and base of lower, blue-black; the other parts yellow, with crimson markings; legs flesh-coloured. Length, 6' 2"; wing, 2' 5"; tail, 1' 3"; tip of bill to forehead, 18".

759. PELECANUS RUFESCENS, *Gm.*

Red-backed Pelican.

This delicately-tinted Pelican has several times been shot in the neighbourhood of Cape Town in company with the preceding, which it resembles in habits. We saw them both in considerable numbers at Zoetendals Vley in October, 1865. They have also been procured in Natal.

Mr. Ayres observes: "These birds frequent the bay of Natal and the mouths of the rivers on the coast; their food, I believe, consists entirely of fish. They appear to feed in the evening and early in the morning, basking in the sun during the day. They are gregarious, and may be seen in flights of from three to thirty, which occasionally come inland. In such cases, although I have seen them wheeling round and round close to the ground, I have not seen them alight, but have watched them until out of sight. In their flight they generally form the letter V, similarly to the Geese, &c. They are to be found here all the year round more or less, frequenting the most retired parts of the bay, and are exceedingly shy and wary. The bird now sent, when shot, was only pinioned, and falling into the water, gave me a long chase. It swam with such swiftness, that by the time I got into my boat it had three hundred yards' start. There being a strong head wind blowing at the time, I had the greatest difficulty in overtaking it, and rowed more than a mile before I was near enough to give the bird a second shot, which put an end to its existence. These Pelicans soar to an immense height, wheeling round and round, especially when coming from a distance. They appear to examine the waters well before they alight, and settle far out of gunshot of any cover there may be." Senor Anchieta has secured specimens at Mossamedes and on the River Coroca.

General colour, white; frosted with grey on the wings, tail, head, neck, and belly; tinged with yellow on the stiff feathers of the breast, and with pink behind the thighs and all down the back; wing-feathers, dark brown; head, crested; pouch, yellow, with

numerous perpendicular crimson lines. Length, 4' 7"; wing, 1' 10"; tail, 10".

Fig. Cretzschm. in Rüpp. Atlas, pl. 21.

Fam. PHALACROCORACIDÆ.

760. PHALACROCORAX CARBO (*Linn.*). Common Cormorant.

We believe that we have seen this species in Simon's Bay. Mr. Barratt writes: "I shot one of these near Kronstadt, Orange Free State, the only one I have ever seen in that State or the Transvaal. I found it resting on an overhanging branch near a small stream. When I fired it dropped into the water and dived; on its rising I gave it the second barrel, which brought it down." It is as well to note that there may be some mistake about the identification of this specimen, as the Common Cormorant has often been confused with the next species in South Africa.

According to Mr. Andersson, the true Common Cormorant of Europe is at one season of the year not uncommon at Walwich Bay, and from thence southward to Table Bay.

The following description is from Macgillivray's "History of British Birds": "Length about three feet; tail of fourteen feathers; imbricated feathers of the back and wings ovate, rounded, with silky margins. Adult in winter crestless; the head, neck, lower parts, middle and hind part of the back, greenish black, tinged with blue; the feathers of the fore part and sides of the back, with the wing-coverts and secondary quills, greyish brown or bronzed, with greenish black margins; a greyish-white band on the throat, ascending to the eyes; some scattered, extremely minute, filiform, pencil-tipped, white plumulets on the head and neck, and a few white streaks over the thigh. Adult in spring coloured as in winter, with the addition of a longitudinal greenish black crest, numerous linear white feathers on the head and neck, the throat-band pure white, and a roundish patch of that colour over the thigh. Young with the upper part of the head and the neck dusky brown, finely streaked with brownish-grey; cheeks and fore-neck, greyish-white, mottled with brownish-grey; a brownish white band on the throat; lower parts greyish white, mottled with dusky, becoming darker behind; upper parts nearly as in the adult."

Fig. Dresser, B. Eur. vi, pl. 384.

761. PHALACROCORAX LUCIDUS, *Licht.* South African Cormorant.
Graculus carbo, Layard, B. S. Afr. p. 380.

Not so common as the lesser *P. capensis*, but still in considerable abundance. Its chief haunt is the rocky, lonely shore at the base of Cape Point. It breeds to the north-west, on the islands in Saldanha, St. Helena, and Walwich Bays, also on Dyer's Island, off L'Agulhas. The eggs are bluish-green, covered with the usual chalky coating, much pointed at each end, and narrow for their length. Axis, 2' 8''; diam., 1" 8''. Mr. Rickard has met with it near East London. Senor Anchieta has also shot the species on the Coroca River.

Head and back of neck dark brown, with a tinge of rufous; back, sides, and flanks black-green; wing-coverts and scapulars grey, edged with black-green, causing a scaled appearance, which is very beautiful; tail black, slightly frosted with grey; chin, fore part of throat, and under parts pure white. Length, 27"; wing, 13"; tail, 7", fourteen feathers.

762. PHALACROCORAX NEGLECTUS, *Wahlb.* Wahlberg's Cormorant.

We have not, to our actual knowledge, fallen in with this species unless the bird shot by ourselves and Commander Sperling in August, 1867, in Simon's Bay ("Ibis," 1868, p. 121), may prove to belong to it. It is a species with twelve tail-feathers, which was discovered and described by the late Professor Wahlberg, but which did not occur to Mr. Andersson. Mr. Gurney has appended an account of it in the "Birds of Damara Land," p. 368, and has given a translation of the original description, which we herewith copy.

"Greenish-black, but cinereous-brown on the back, with bronzy reflections; the feathers narrowly (1-1½ millim.) edged with greenish-black, rounded at the tips in adults, but slightly pointed in younger specimens; throat almost bare, but the space extending from the angle of the mouth to below the nostrils feathered; the sides of the head much feathered, but a black bare ring round the eyes (2 millims. wide). Rectrices twelve. Iris ochre-yellow in adult birds, but green on the lower moiety, in younger specimens entirely a cinereous-brown; bill blackish horn-colour; feet black."

Male.—Entire length, 715 millims.; expanse of wings, 1160;

bill, from forehead, 60; height at base, 13·5; wing, 273; tail, 130 to 138; tarsus, 55; middle toe, with claw, 82.

Female.—Bill from forehead, 56 millims.; height, 13; wing, 269; tail, 137; tarsus, 55.

763. PHALACROCORAX CAPENSIS, *Sparrm.* Cape Cormorant.

Graculus capensis, Layard, B. S. Afr. p. 380.

Extremely common along the whole coast. We have seen it in flocks extending upwards of three miles in length and a quarter of a mile wide, across the bay, the hindermost constantly flying forward and plunging into the sea as soon as the outside of the army was reached. In this way the flock gradually moved out of the bay, feeding as it went. It breeds on Pomona Island, and all the small rocks along the coast, laying two eggs of a blue ground, covered with white chalk. Axis, 2" 4''; diam. 1" 6''. It is eaten by the Dutch colonists; and after soaking for a night in vinegar, or being buried for a few hours in the ground, it loses its disagreeable odour, and is not bad food.

Mr. Rickard informs us that it is common both at East London and Port Elizabeth. Mr. Ayres states that thousands of these Cormorants appeared on the coast and in the Bay of Natal at the latter end of the year 1862, but did not apparently remain more than a month. He was told that the coolies went with sacks at night and caught numbers on the rocks at the bluffs where they roosted. Mr. Andersson says: "This is the most abundant species of Cormorant along the whole south-west coast of Africa; indeed, at some seasons of the year they may be counted not merely by tens or even by hundreds of thousands, but by millions; their numbers, in fact, exceed all computation; for it is no unusual thing to see a deep unbroken line of these birds winging their way for two or even three consecutive hours to or from their feeding-grounds. This Cormorant leaves Walwich Bay for its breeding-places in December; and during the nesting-season large numbers are to be found on almost every suitable rock and islet from the River Cunéné to Table Bay, in which situations, next to the Gannet and Penguin, this species is the principal depositor of guano. Its nest is composed of seaweed; its eggs are either one or two in number, white speckled with pearl-grey and pale sea-green, and about two inches in length."

General colour of adult black-green; the wing-coverts and scapulars very dark grey, narrowly edged with black-green; tail black, slightly frosted with grey; chin bare and bright orange; irides green. Length, 22"; wing, 9½"; tail, 4".

Young: throughout of a dull rufous-brown, palest on the neck, and darkest and least rufous on the wings and tail.

Fig. Sparrm. Mus. Carlss. pl. 61.

764. PHALACROCORAX AFRICANUS (*Gm.*). Long-tailed Cormorant.
Graculus africanus, Layard, B. S. Afr. p. 381.

Of this elegant little Cormorant, examples have come under our notice from the interior. One was sent from Colesberg by Mr. Arnot; the other appeared in Mr. Chapman's collection, and was killed on Lake N'gami. Dr. Eyton found it at Kuruman. Mr. Fred. Barber also obtained it near Graham's Town, but its great habitat seems to be the Berg River. Here we found it breeding in great numbers with the herons and other birds in Mr. Melck's vley, in the month of September. Its nests were built like the others of sticks and rushes, and the eggs of the usual Cormorant green, entirely covered with white chalk, similarly shaped and pointed at each end. Axis, 1" 7"; diam., 1" 2".

It is a fresh-water living Cormorant, rarely going to the sea, but Mr. L. C. Layard shot one in Table Bay. In Natal, Mr. Ayres says that the species "frequents the fresh-water lagoons on the coast. Its flight is rapid and strong. When in the water it swims extremely low, scarcely any part of its back being then visible. Both in the air and on the water it much resembles the Anhinga (*Plotus levillanti*) in appearance. It is a very superior diver, and feeds entirely on fish: if disturbed, instead of diving, it generally seeks safety on the wing. It is solitary in its habits, and, like the Anhinga, is particularly fond of sunning itself with outstretched wings on some clumps of rushes." Major Butler and Captain Reid saw a pair at a small vley, a few miles east of Newcastle, on the 25th of September, and Mr. Ayres states that "these Cormorants are tolerably numerous about Potchefstroom, but appear to keep to themselves, for they fish and move from place to place in a solitary manner, passing along the river, generally high overhead, early in the morning to their favourite pools, and returning pretty regularly in the evening to where they sleep; they swim very low in the water." Mr. Barratt

writes: "I have shot them near Pretoria, and found them to vary a great deal in their plumage. They dive with great rapidity, but when first rising from the water are rather slow, so are easily killed; but if they attain an elevation they fly swiftly and are very watchful, twisting their long necks from side to side." Sir John Kirk states that it is "common on all the rivers, lakes and lagoons of the Zambesi, breeding on the retired islets among the rapids. Native name *Chidankwee*." Mr. Andersson gives the following note: "This Cormorant occurs on Lake N'gami and its watersheds; but I have never met with it, except on inland waters. It feeds on fish, and is a most expert diver. Its flight is strong and rapid; and it perches on trees both during the day and at night. This species feeds chiefly at night; as the sun declines it is seen in flocks flying from its roosting-places to its fishing-grounds. During the day it remains in great measure stationary, either lazily sunning itself on some branch overhanging the water, or on a bunch of reed; or it may be seen standing erect on a sandbank, with outstretched wings. When in the water, it has the habit of submerging its body to such an extent as to leave little more than the neck exposed." Mr. Monteiro found it very common on all the rivers and fresh-waters of Angola, and Senor Anchieta has sent it from Benguela (native name *Kamakundi*), the Coroca River, Huilla, Quillengues, and Humbe.

General plumage black; back and wing feathers, light grey, with a terminal spot, and sometimes a white tip; above the eyes in some specimens a pale brown stripe extending partly round the head; bill, and cere round the eye, bright yellow; irides carmine (F. Barber). Length, 17"; wing, 8½"; tail, 6½". Sexes similar.

Fig. Dresser, B. Eur. vi, pl. 386.

Fam. PLOTIDÆ.

765. PLOTUS LEVAILLANTI, *Licht.*

African Darter.

Plotus congensis, Layard, B. S. Afr. p. 378.

The "Anhinga," "Snake-bird," or "Darter," is not unfrequent in certain localities, among which may be mentioned chiefly: Verloren Vley and the Berg River generally, the River Zonder End, and Zoetendals Vley. In this latter place, we saw several individuals, evidently building, as they carried long trailing rushes

in their bills; but we could not discover their nests. They may often be seen sitting on the "snags" projecting out of the water in the still reaches of the rivers, off which they dive with such ease and dexterity as hardly to leave a ripple to betray their departure. At the Berg River we visited a "rookery" of these birds. It consisted of about thirty nests, thick dense masses of sticks and weeds resting on them, placed among the branches of some African willows growing in water during the breeding season, and unapproachable, but dry at other times. The eggs were of a green ground colour, covered with white chalk. Axis, 2" 2''; diam., 1" 5''. They are much prized as very delicate eating, and we must say with good reason. Indeed, we ate the eggs of all the herons, &c., which we procured at the Berg River, and found them first-rate.

Mr. Rickard has procured it at Port Elizabeth on the Swartkops, and at East London on the Buffalo and Katroon Rivers.

In Natal Mr. Ayres says that "these curious birds swim so low in the water that scarcely a bit of their back is to be seen, and indeed hardly anything but their long snake-like neck and head, which, as they swim, are moved gracefully backwards and forwards. When in this position, the bird might easily be taken, by those unacquainted with it, for a water-snake. This species lives entirely on fish, and is a most expert diver. It is particularly fond, on hot days, of sunning itself, with wings outstretched, on some bunch of rushes or a log of wood. Its flight is rather laboured, yet the bird is able to sustain it for a length of time. On being disturbed, it frequently circles round and round the waters which it inhabits, rising higher and higher at each turn, when having attained a very considerable height, far out of gunshot, it will go straight away to some other distant pool." Mr. Barratt observes: "The Anhinga, or Snake-bird, is found in certain localities throughout the Transvaal. I have shot them near Potchefstroom and Lydenberg, and I have seen them near Pretoria and near the Modder River, Orange Free State. I have often seen them sitting on a dead bush overhanging the water; but on shooting at them they have dived so quickly that I have lost them, not being able to see which way they had gone. I observed several in the Chalumna district, between the Kaskama and Buffalo River, British Kaffraria." Mr. Andersson believes that he saw it on Lake N'gami, where it was procured by Mr. James Chapman. Mr. Jameson's expedition met with the species on the Quac-

Quae River, and Mr. Ayres gives the following note: "The Darter is found sparsely on most of the rivers of Mashoona Land, but is more abundant in the Transvaal and Natal. Beware how you handle a wounded bird. One made a sudden dart at my eye, and it was only by the merest instinct of self-preservation that I put my hand up in time to receive the thrust. The upper mandible pierced with great force the bone of my thumb, and the bill being serrated stuck there amongst the muscles, giving considerable pain, and I had to pull hard to get it out." Sir John Kirk states that it is found in the Zambesi "in all waters, from the coast to the interior, to be seen sunning its wings on rocks or trees; on the least danger betaking to the water. The plumage varies very much; sometimes it is of a rich glossy black, at other times of a rich brown. Its food consists entirely of fish, which it catches under water, coming to the surface before swallowing it." Senor Anchieta has procured specimens at Benguela, on the Coroca River, at Mossamedes and at Humbe on the Cunene.

General colour, black, shining-green on the back and shoulders, longitudinally striped with fulvous, that colour occupying the centre of each feather; neck and head rufous-brown; black lines extend from the back of the eye, down the sides of the neck, becoming fainter as they descend, and coalescing at the base of the neck; below this line, but only extending to one-third the distance, is a pure white line; tail and wing feathers, black: the former very stiff; the two centre ones corrugated. Length, 36"; wing, 13½"; tail, 10" 9'''.

The plumage in this species, as with the Cormorants, varies much with age.

Fig. Daubent. Pl. Enl. 107.

ORDER PYGOPODES.

Fam. PODICEPITIDÆ.

766. PODICEPS CRISTATUS, L.

Great Crested Grebe.

The Crested Grebe is common on all our vleys. It breeds in companies, six or eight nests generally appearing within a few yards of each other; these are built on the water—a mere flat form of sedge, *generally damp throughout*; indeed, we remarked that every egg taken by us at Zoetendals Vley was *wet*. This might have been caused, however, by the wet water-weed with which each bird carefully covered her eggs as we approached the nest. We watched three birds perform this manœuvre through our binoculars. They slid off their nests and rapidly picked up the floating weed, which they carefully disposed over the eggs, so as completely to hide them from view. We examined some fifteen or twenty nests, each one of which was thus covered. We never found more than three eggs in each nest, of a dirty chalky texture. Axis, 2"; diam., 17". The bird feeds on small fish and water-insects. Mr. Pratt shot a specimen near Pretoria, and Mr. Ayres has met with it once in the Transvaal. He says: "This bird was brought to me alive one day in April by a Caffre; he stated that he had chased it amongst the reeds in shallow water, and so caught it. It is the first specimen I have met with in the Transvaal." Mr. Andersson writes: "I have only observed this handsome species on the sea-coast, chiefly at or near Walwich Bay, and there by no means numerously. It is seldom that more than three or four of these Grebes are seen together, and generally not so many. They are rather wary, but may nevertheless be successfully surprised if the sportsman is acquainted with their habits. Not unfrequently they may be seen asleep on the water, when, of course, it does not require much art to secure them. It is, however, a bad plan to fire at them in such a position, as there is then but a small portion of the body exposed to view; it is best to startle the birds lightly, when they immediately stretch forth their long necks to the full extent,

besides considerably raising the body. If these birds are seen swimming in deep water, but within gunshot of the shore, the gunner should run as fast as possible straight for the birds, and as far as the land will allow him, when they rarely take wing, but appear surprised and half-stupified. When fired at they dive if not killed, but generally reappear within range for a second or even a third shot. In shallow water, however, they are difficult to reach, as in such positions they take wing at once on the slightest approach of danger. I dissected all the specimens which I obtained, and invariably found that the stomach contained scarcely anything but fine sea-grasses; this species does, however, feed on shrimps, sea-lice, small mollusca, &c."

General colour above, greyish-black, tinged with rufous; on the wing a large white patch; under parts pure white; greyish on the breast and flanks; head ornamented with a double crest, and throat with a large ruff; top of the head, crest, back of neck, anterior and lower portion of neck ruff shining black, tinged here and there with rufous; chin white, changing into golden-yellow and rufous on the ruff; below the ruff white, tinged with rufous; tail spurious; iris red. Length, 20"; wing, 7½".

Fig. Dresser, B. Eur. viii, pl. 619.

767. *PODICEPS NIGRICOLLIS*, *Sund.*

Eared Grebe.

Podiceps auritus, Layard, B. S. Afr. p. 374.

The Eared Grebe was unknown to us as an inhabitant of South Africa until the year 1859, when, having an opportunity of visiting Vogel Vley, in the Wellington district, we found it breeding in considerable numbers amid the rushes that border portions of that lake. Each pair seemed to keep guard over its special province, and never to stray to any distance from the haunt. The nest was constructed of sedge, and was a large compact structure; the eggs, four or five in number, are chalky white. Mr. Ayres states that it breeds in the Transvaal "in December, in most of the shallow lagoons, in from two to three feet of water, amongst the rushes. The nests, which float on the water, are formed of a mass of rushes built in a conical form, about a foot in diameter, and two or three inches out of the water. On leaving the nest, the old bird always carefully covers the eggs with rushes; and any person unacquainted with this habit would pass the nest as an unsightly heap of rotten

weed. The eggs, from three to five in number, are frequently much discoloured from being half immersed in water; but this does not appear in any way to injure them or to prevent them from hatching in the usual way. The young birds are beautiful little downy creatures, striped brown and black on the back and white and black on the chin and throat, their bodies being pure white." Mr. Andersson says: "The only locality in Damara Land in which I have met with this species is Walwich Bay, where, however, it is a rare bird." A single example was procured by the late Mr. Sala at Katumbella, in Benguela.

General colour greyish-black, tinged on the sides with rufous; beneath, from the centre of the breast to the vent, satiny white; behind the eye, over the ear, a tuft of longish reddish-yellow feathers; patch on the wing white. Length, 13"; wing, 5"; tail spurious.

Fig. Dresser, B. Eur. viii, pl. 632.

768. PODICEPS MINOR, L.

Little Grebe.

Not uncommon throughout the colony, frequenting still "reaches" (here called "*zeekoe gaten*," seacow-holes in the rivers) and all the vleys. Young birds have been brought to us. We never knew the nest to have been taken here; but in Ceylon we have found those of an allied species (*P. philippensis*), constructed of sedge, and closely resembling those of *P. cristatus* in all but size—the eggs pointed at both ends, and chalky-white.

Mr. Rickard has met with it both at Port Elizabeth and East London, and Captain Trevelyan records it as common near King-williamstown. In Natal, writes Mr. Ayres, "these Grebes are common in the lagoons, and are occasionally found in the rocky streams inland; they are almost always in pairs, and appear to be somewhat pugnacious and fond of chasing each other about. The stomachs of three which I shot all contained insects, but no signs of fish, although the waters were swarming with them." Majors Butler and Feilden and Captain Reid state that it was common on all the larger vleys near Newcastle in October and November. Mr. Ayres has sent skins from Natal, and Mr. Barratt also states that he saw it near Potchefstroom and at the mouth of the Mooi River. Mr. Frank Oates procured specimens at the Tchakani Vley in May, and at Tamasancha in December. Mr. Andersson gives the following

note: "I have repeatedly shot this diminutive Grebe at Lake N'gami, Otjikoto, Omanbondé, and Walwich Bay, but have nowhere found it abundant, except in the vleys of the Ondonga country, where it breeds in vast numbers. Its eggs are from four to six in number and of a dirty white. The nest is a mass of weeds and grasses, and lies on the water. The eggs are always found covered over, often several inches deep. Out of the numerous nests I have taken and seen, in no one instance (except where the nest contained only one or two eggs) did I find the eggs uncovered; and the covering is so complete and regular that it is not possible that it can be the work of an instant or performed whilst the bird was making a hurried retreat from its nest." Mr. Monteiro says it is abundant in the fresh-water lakes of Angola, and Senor Anchieta has procured it at Benguela and Mossamedes.

Upper parts, top of head, chin, and back of neck, greenish-black; rest of neck deep-rufous; breast brownish-grey; flanks the same, tinged with rufous; under parts satiny-white; all the plumage lustrous, and very dense, more like hair than feathers; eyebrow and tip of bill, clear horn-coloured; base bright green. Length, 10"; wing, 4"; tail spurious.

Fig. Dresser, B. Eur. viii, pl. 633.

ORDER IMPENNES.

Fam. SPHENISCIDÆ.

769. SPHENISCUS DEMURSUS (*Linn.*). Cape Penguin.

The whole plumage is of a stiff character, resembling strips of whalebone. The wings are mere paddles for progression under water, and are incapable of flight—the feet placed so far back as to cause the bird to appear always falling backwards if it attempts to stand on dry land. This singular bird is very common on all our coasts, swimming to great distances out to sea. It breeds on rocky islets, in the months of August, September, and October. Through the kindness of our dear and valued friend, the late Admiral Trotter, we once had the pleasure of visiting a breeding-place of this bird, Seal Island, a lonely rock in the centre of False Bay. It can only be approached in certain winds, as the surf breaks on it with great violence. The Penguins occupy the lower ledges by hundreds, having dug their holes among the rocks. As we walked over the stones, the birds rushed out at us, snapping at our legs, and drawing blood plentifully from the naked feet of the sailors, in defence of their one large solitary white egg, which is laid on the bare ground, without any protection from the damp—axis, 2"9"; diam., 2"—abruptly pointed at the small end. When not sitting on their eggs, they stand upright on the rocks in long rows, balanced on their stiff tails. They feed exclusively on fish, which they overtake beneath the surface by their swiftness in swimming.

Mr. Rickard records it both from Port Elizabeth and East London. Mr. Andersson writes as follows: "This is the only description of Penguin found on the south-west coast of Africa; but if this coast-line lacks variety in this genus, the deficiency is in some measure compensated by the great abundance of this particular species, which is found on almost all parts of the coast from the Cape of Good Hope to Walwich Bay. How much further it may extend to the north I cannot say. This species is known to sea-faring men as the 'Jackass Penguin,' and its most favourite

resorts are the Ichaboe, Mercury, Hollanis-bird, and Possession Islands. From the latter end of March to late in May these Penguins go to sea in a body, and may then be seen forty or fifty miles away from land.

General colour, bluish-grey ; below white ; a band, the colour of the back, extends from the front of each thigh, up the flanks and sides, passes in front of the root of the wings, and forms an arch at the base of the neck ; a patch of the same colour includes the eye, ear, chin, and a portion of the side of the neck. Length, 26" ; wing, 7" 3" ; tail, 1".

Fig. Temm. Pl. Col. 382.

770. *EUDYPTES CHRYSOLOPHUS*, *Brandt.* Macaroni Penguin.

The late M. Jules Verreaux assured us that in the year 1828 or 1829 he found vast numbers of a Penguin dead on the rocks at Cape Point. One was brought to us nearly dead in 1868 which had been captured in Table Bay. He gave us the name of the Penguin observed by him *E. chrysochome*, but we believe that the species which he records was in all probability the present bird.

Fig. Sclater, Rep. Voy. "Challenger," II, pl. 29.

ORDER RATITÆ.

Fam. STRUTHIONIDÆ.

771. STRUTHIO AUSTRALIS, *Gurney*.

Southern Ostrich.

It is beyond the limits of the present work to enter largely into the natural history of the Ostriches, since that bird has been so freely domesticated in Southern Africa. The subject is fully treated by Messrs. Harting and Mosenthal in their interesting work on "Ostriches and Ostrich-farming," to which the latter has contributed an excellent account of the domestication of the bird. Since then another practical work on the subject has been published by Mr. J. W. Douglas. We would, however, remind our readers that the range of the wild Ostriches in South Africa is still a subject of much interest, and that the question of the number of species in the northern regions of South Africa still remains unsettled. Mr. Andersson was certain that at least two kinds occurred in Damara Land, and the British Museum would be glad to acquire a series of specimens illustrating the changes of plumage in these two species.

The Ostrich is still found in most of the Karroo country, within the borders of the colony. It usually runs in small families of from three to six individuals, except, of course, in the breeding season, when a hen and her whole clutch of chickens may be seen together.

The hen lays a large number of eggs in her nest (thirty-six have been found in one), while many more are dropped in the neighbourhood. The farmers affirm that these latter are broken when the young are excluded, and serve for their first meals. They also affirm that more than one female lays in a nest, which is always on a sandy patch, and that they incubate by turns. The eggs measure: axis, 6"; diameter, 4" 9" or 5".

The South African Ostrich is now recognized as distinct from the North African bird, to which the name of *S. camelus* was originally given. The egg of the former may at once be distinguished by its finer texture.

Mr. T. E. Buckley states that it is still common in the Matabele country, but much hunted for the sake of its feathers. Mr. Ayres also writes: "The Ostrich is sparingly distributed throughout the Mashoona country, frequenting generally the more open shallow valleys. In the Bamangwato country they are much more plentiful." According to Mr. Andersson, it is "pretty commonly distributed over the boundless wastes and plains of both Great Namaqua and Damara Land."

General colour, black in the male; cinereous in the female and young male; feathers of the spurious wings and tail, pure white, or sometimes mottled with black; neck covered with brown hair-like feathers; stands about eight feet high.

APPENDIX.

DURING the progress of the present work through the press many important essays have been published on South African Ornithology. We have, therefore, thought it best to write a few additional notes in order to try and bring the work up to date. This has been done more with a view to render complete the geographical description of South African birds, and we have been compelled to omit many interesting notes on their habits which have been recorded in the recent papers of Mr. Ayres, Captain Shelley, Mr. Oates, Mr. Barratt, and Majors Butler and Feilden, and Captain Reid.

Page 1. GYPS KOLBII.

Lydenburg district (*Ayres*).

Exceedingly numerous in Newcastle district (*Butler, Feilden, and Reid*).

Mashoona Land (*Ayres*).

Page 3: GYPS RUEPPELLI.

Mashoona Land (*Ayres*).

Page 4. OTOGYPS AURICULARIS.

Orange Free State (*Barratt*).

Lydenburg District (*Ayres*).

Occasionally seen in north-west portion of Natal (*B., F., and R.*).

Near Umvungu River, December (*F. Oates*).

Mashoona Land (*Ayres*).

Page 6. LOPHOGYPS OCCIPITALIS.

Humbe on the Cunene River; native name *Kubi* (*Anchieta*).

Lydenburg District (*Ayres*).

A pair seen at the Ingagane River, July 23rd, 1881 (*Reid*).

Mashoona Land (*Ayres*).

Page 6. Insert:—PSEUDOGYPS AFRICANUS (*Salvad.*), AFRICAN WHITE-BACKED VULTURE.

Senor Anchieta states that this species is common at Humbe on the Cunene River; native name *Kubi*. Professor Barboza du Bocage suggests that the *Gyps kolbii* identified by Andersson in Damara Land, but of which no specimen was sent by him to England, may after all have been the present species. We think this very likely.

Adult.—General colour deep brown, some of the feathers on the back and wing-coverts blackish brown; lower back and rump pure white; upper tail-coverts brown; some inclining to blackish; quills and tail black, the secondaries with an external ashy-grey shade; ruff white, rather scanty; crop-patch brown; rest of under surface pale brown with very narrow yellowish-white shaft-lines; bill brownish-black, the culmen yellowish; feet dusky plumbeous; iris umber brown. Total length, about 30 inches; culmen, 3·2; wing about 22; tail, 9; tarsus about 4·5; middle toe, 5.

Immature female.—Fulvous brown, the secondaries lighter and more ashy; quills and tail blackish brown, the former externally shaded with greyish; lower back and rump white; upper tail-coverts brown, terminally washed with fulvous white; crop-patch brown; rest of under surface brown, paler and more fulvescent in centre of body, the feathers with pale fulvous-white central streaks, very indistinct. Total length, 34 inches; culmen, 3·15; wing, 24·5; tail, 11·5; tarsus, 3·5.

Fig. Bocage, Orn. Angola, pl. 9.

Page 6. NEOPHRON PERCNOPTERUS.

Orange River (*Dr. Bradshaw*).

Mossamedes (*Sala, Mus. Lugd.*)—cf. Bocage, Orn. Angola, p. 4.

Lydenburg District (*Ayres*).

Buffalo River, about four miles east of Newcastle (*Butler*).

Colenso, Nov. 20th (*Reid*).

Page 7. NEOPHRON PILEATUS.

Ramaqueban River, August (*F. Oates*).

Mashoona Land (*Ayres*).

Page 8. SERPENTARIUS SECRETARIUS.

Dr. Bradshaw says that he has never seen one of these birds near the Orange River, and but very few in the Zambesi country.

Near Lydenburg, Rustenberg, and sparingly throughout the Transvaal and Free State (*Barratt*).

Common in Newcastle District, becoming scarcer down country (*B., F., and R.*).

Mashoona Land (*Ayres*).

Page 9. POLYBOROIDES TYPICUS.

Two specimens on the Orange River ; also shot on the Chobè River (*Bradshaw*).

Humbe on the Cunene River (*Anchieta*).

Two specimens obtained at the kloofs of the Drakensberg, near Newcastle (*B., F., and R.*).

Page 11. CIRCUS MACRURUS.

Lydenburg (*Barratt*).

Near Newcastle (*B., F., and R.*).

Page 12. CIRCUS PTGARGUS.

Lydenburg, Transvaal (*Barratt*).

"Very plentiful on my brother's farm about fifteen miles from Potchefstroom" (*Ayres*).

Spalding's, Hart River, February 3rd (*Ayres*).

Page 14. CIRCUS RANIVORUS.

Huilla in Benguela (*Anchieta*).

Very common in marshes close to Durban (*Shelley*).

Breeds in the Transvaal (*Ayres*).

Exceedingly numerous everywhere near Newcastle, nesting in the vleys (*B., F., and R.*).

Page 17. MELIERAX CANORUS.

"This is the commonest species in Kovana Land, and it extends far into the colony. I have not met with it further north than the Makalapsi River, about twenty miles to the northward of Shoshong in Bamangwato" (*Bradshaw*).

"Transvaal; they generally seem to keep to the low rocky ridges a few miles from Potchefstroom" (*Ayres*).

Rustenberg (*Ayres*).

Bush Veldt between Pretoria and Bamangwato, July (*F. Oates*).

Page 18. MELIERAX POLYZONUS.

Humbe, Cunene River; native name, *Kahahula* (*Anchieta*).

Prof. Barboza du Bocage thinks that all the South-west African birds are *M. mechowii* (*Cab.*).

Page 19. MELIERAX GABAR.

Common along the Orange River (*Bradshaw*).

Very common near Humbe; native names, *Lucoi* and *Kuatakuti* (*Anchieta*).

Marico; near Potchefstroom; near Pretoria; found breeding near the Modder River (*Barratt*).

Rustenberg, not plentiful (*Ayres*).

Lion Camp, Crocodile River, July; second Makalaka Kraal on Zambesi Road, September (*F. Oates*).

Page 20. MELIERAX NIGER.

Humbe (*Anchieta*).

Vaal River, twenty-four miles from Potchefstroom (*Rex*). Potchefstroom, August (*Ayres*). Rustenberg (*Lucas*).

Page 22. ASTUR POLYZONOIDES.

Huilla and Humbe (*Anchieta*).

Near the Vaal River; between Potchefstroom and Rustenberg; near Marico (*Barratt*).

First Makalaka Kraal on Zambesi Road, August 22nd; Hendrik's Vley, December 18th (*F. Oates*).

Umvuli River, August 23rd; Gangani River, September 18th (*Ayres*).

Page 22. Insert: ACCIPITER OVAMPENSIS. Andersson's Sparrow-Hawk.

This species was discovered in Ovampo Land by the late Mr. Andersson, and was named by Mr. J. H. Gurney from specimens in the Norwich Museum. We have since seen examples collected by Dr. Bradshaw on the Zambesi, and Sir John Kirk has recently presented to the British Museum a bird of this species obtained by himself during the first Livingstone expedition.

The latter specimen, as well as the one in the Norwich Museum, had been referred to *Astur polyzonoides*, which this Sparrow-Hawk much resembles in its grey colour above and barred breast, but it can always be distinguished by the long middle toe, which measures 1·4 inch in the male, 1·7 in the female.

Fig. Gurney, Ibis, 1875, pl. vi.

Page 22. ACCIPITER RUFIVENTRIS.

Lydenburg District (*Ayres*).

A male in the Drakensberg on August 27th (*B., F., and R.*).

Page 23. ACCIPITER MINULLUS.

Humbe on the Cunene River (*Anchieta*).

Rustenberg (*Ayres*).

Page 26. BUTEO JAKAL.

Decidedly scarce in Kovana Land (*Bradshaw*).

Near Bloemfontein. Lydenburg; smaller than specimens from the colony (*Barratt*).

Very common in upper portion of Natal Colony (*B., F., and R.*).

Page 30. BUTEO DESERTORUM.

Scarce and very shy on the Orange River; only one specimen procured (*Bradshaw*).

Huilla in Mossamedes (*Anchieta*).

Transvaal in April (*Ayres*).

Siklogolo River, January 17th (*Ayres*).

Page 32. GYPAETUS OSSIFRAGUS.

Lydenburg District (*Ayres*).

Page 33. AQUILA VERREAUXII.

Breeds in the Magaliesbergen (*Ayres*).

Page 35. AQUILA RAPAX.

Humbe; native name *Lucoi* (*Anchieta*).

Potchefstroom (*Ayres*).

Page 36. AQUILA WAHLBERGII.

Mrs. Monteiro has sent to the British Museum an immature specimen of this Eagle from Delagoa Bay. It is possible that *Lophotriorchis lucani*, Sharpe and Bouvier, Bull. Soc. Zool. France, ii, p. 471, may also be the young of the present species.

Gangani River, September 17th; a pair commenced to build on an upper bough of a large tree on the banks of the Umvuli in the beginning of October (*Ayres*).

Page 37. NISAETUS PENNATUS.

Near Newcastle, November (*Feilden*).

Page 38. NISAETUS SPILOGASTER.

Biballa and Huilla in Mossamedes (*Anchieta*).

Page 40. SPIZAETUS BELLICOSUS.

Caconda in Benguela; native name *Gonga* (*Anchieta*).

Page 42. ASTURINULA MONOGRAMMICA.

Common in the interior of Mossamedes, but not yet seen in collections from Gambos and Humbe. Native name at Capangombe, *Caçonque* (*Anchieta*).

Rustenburg (*Ayres*).

Page 43. CIRCAETUS CINEREUS.

Maconjo and Humbe; resident during the year at the latter place. Native names at Maconjo *Kingakiadiulo*, and at Humbe *Ankubi* and *Lucoi*. Professor Barboza du Bocage thinks that *Circaetus thoracicus* is a distinct species from *C. cinereus*.

Page 45. *GYPHONIA ANGOLENSIS*.

Transvaal; a young bird shot on a willow-tree in the town of Potchefstroom (*Ayres*).

Page 46. *HALIAETUS VOCIFER*.

Not very common along the Orange River; very plentiful on the Zambesi and Chobè Rivers (*Bradshaw*).

Transvaal; only makes its appearance in this part of the country occasionally (*Ayres*).

Mashoona Land (*Ayres*).

Page 48. *HELOTARSUS ECAUDATUS*.

Not uncommon along the Orange River; very common about the Zambesi (*Bradshaw*). Lydenburg district (*Ayres*).

Tolerably common all along the route from the Transvaal to the Umvuli River (*Ayres*).

Page 49. *MILVUS ÆGYPTIUS*.

Common during the summer on the Orange River; very plentiful on the Zambesi; disappears during the winter months from both places (*Bradshaw*).

Lydenburg District (*Ayres*).

Two pairs seen near Rorke's Drift on October 3rd (*Reid*).

Tati, October: Ramaqueban River, October 17th (*F. Oates*).

Mashoona Land (*Ayres*).

Page 50. *MILVUS KORSCHUN*.

Near Potchefstroom; also near Rustenberg (*Barratt*).

Apparently a regular visitor in the summer months to the Newcastle district (*B., F., and R.*).

Page 52. *ELANUS CÆRULEUS*.

Common all over the country near the Orange River; met with in the Zambesi (*Bradshaw*).

First seen near Newcastle on August 1st; common along road to Colenso, and also seen down to the coast; Richmond Road, December 10th; Durban, August 12th; bred near Ladysmith, and attempted to do so near Newcastle in October (*Reid*).

Hex River, July (*F. Oates*).

Mashoona Land (*Ayres*).

Page 53. Insert: *MACHÆRHAMPHUS ANDERSSONI* (*Gurney*).

Andersson's Pern.

By some unaccountable oversight this most interesting species has been omitted from the body of the work. It was discovered in Damara Land by the late Mr. Andersson, and has since been met

with in Madagascar. It can be told from all other South African Hawks by its thin, weak bill, with the feathers of the lores covering half of the nostril. It has also a well-marked occipital crest.

Mr. Andersson gives the following note:—"On the 10th March, 1865, I obtained one specimen, a female, of this singular bird at Otjimbingue, Damara Land; it was shot by my servant, who observed another, probably the male. I imagine that I have myself observed it once or twice in the neighbourhood of Otjimbingue just before dusk. When brought to me I instinctively suspected the bird to be a feeder at dusk or at night, and called out, 'Why, that fellow is likely to feed on bats!' And truly enough, so it turned out; for, on dissection, an undigested bat was found in the stomach; and in another specimen, subsequently killed by Axel, there were several bats in the stomach."

The accompanying description is taken from the "Catalogue of Birds."

Adult.—Upper surface chocolate-brown, the head very much crested, the nape and some of the feathers of the upper parts somewhat varied with white, where the bases to the feathers show through; above and below the eye a broad white line; lores inclining to white behind the nostril; cheeks slightly mottled with whitish; below the gape a line of dark brown feathers, forming a kind of moustache; quills dark brown, banded with white below, some of the inner secondaries with concealed white bars on the upper surface; tail chocolate-brown, narrowly tipped with whitish, with bars of paler brown on the upper surface, white on the inner web of outer tail-feathers and under surface of all; throat and chest white, with a faintly indicated streak of dark brown on the throat, and many streaks of dark brown on the breast, the lower part of which, as well as the flanks and thigh-feathers, are entirely brown, slightly mottled with white; lower part of abdomen and under tail-coverts white, the latter tipped with brown; under wing-coverts brown, crossed and tipped with white; bill and gape bluish lead-colour, black at tip of the former; tarsi and toes bluish white; iris bright lemon-yellow. Total length, 16·8 inches; culmen, 1; wing, 13·9; tail, 7·3; tarsus, 2·4.

Fig. Gurney, Trans. Z. S. vi, pl. 29.

Page 55. POLIOHIERAX SEMITORQUATUS.

One specimen shot on the Orange River on the 17th of August, 1881. Iris light brown; bill horn-colour, tip bluish; cere and orbits deep orange-red; legs pale orange-red; claws black (*Bradshaw*).

Page 56. *FALCO COMMUNIS*.

Professor Barboza du Bocage (Orn. Angola, p. 45) refers the pair of birds obtained by Anchieta on the River Coroca to this species, and not to *Falco minor*.

Page 57. *FALCO BIARMICUS*.

Humbe: native name *Lucoi* and *Kuata-andimba* (Hare-catcher) (*Anchieta*).

Lydenburg district; breeds in June and July (*Ayres*).

Bred in the Drakensberg, near Newcastle, August 18th (*Butler*).

Mashoona Land (*Ayres*).

Newcastle (*F. Oates*).

Page 60. *FALCO RUFICOLLIS*.

Very scarce on the Orange River; only two specimens seen (*Bradshaw*).

Lydenburg district (*Ayres*).

Near Rorke's Drift, October 4th (*Reid*).

Page 60. *CERCHNEIS TINNUNCULUS*.

According to Mr. Gurney (*Ibis*, 1881, p. 456) the Damara bird referred by him to this species was *C. tinnunculoides*, and the occurrence of the Common Kestrel in South Africa has yet to be confirmed.

Page 62. *CERCHNEIS RUPICOLA*.

Native name at Capangombe *Banvo*, at Huilla *Katebi* (*Anchieta*).

Potchefstroom (*Ayres*).

Abundant near Newcastle, nesting in holes and crevices of the cliffs (*B., F., and R.*).

Spalding's, Hart River, February 3rd; scarce in this part of the country (*Ayres*).

Page 63. *CERCHNEIS RUPICOLOIDES*.

Lydenburg district; near Pretoria; Potchefstroom; Rustenberg; and between Bloemfontein and Potchefstroom (*Barratt*).

Not observed nearer to Newcastle than Rorke's Drift, where Reid found a pair breeding; iris white; common near Ladysmith (*B., F., and R.*).

Page 64. *CERCHNEIS NAUMANNI*.

This species should bear the name *Cerchneis tinnunculoides* (*Tennm.*).

Huilla; native name *Katebi* (*Anchieta*).

Near Kingwilliamstown (*Trevelyan*).

Near Rustenberg; Potchefstroom district (*Barratt*).

Holfontein, November 25th (*F. Oates*).

Inshlangen River, November 4th (*Ayres*).

Page 66. CERCHNEIS AMURENSIS.

Potchefstroom, January (*Ayres*).

Between Sibanani and Tamasancha, December 9th (*F. Oates*).

Boatlanami Pan, December 31st (*Ayres*).

Page 67. CERCHNEIS ARDESIACA.

Quanza River (Mus. Brit.).

Page 68. CERCHNEIS DICKERSONI.

Dr. Sclater informs us that the discoverer of this species spelt his name "Dickinson" not "Dickerson," and the species should stand as *Cerchneis dickinsoni*. We forget who it was that informed us that our orthography was right, but we know that we had good reason for altering the name at the time.

Page 68. PANDION HALIAETUS.

One seen at the mouth of the Umgeni River, Durban, December (*Reid*).

Page 69. SCOTOPELIA PELI.

Zululand (*Gordge*: Mus. G. E. Shelley).

We have also seen a specimen said to have been procured on the upper Quanza River.

Page 70. BUBO CAPENSIS.

Newcastle, June 5th (*Feilden*).

Page 71. BUBO LACTEUS.

Inkwesi River, August 5th (*F. Oates*).

Page 73. BUBO MACULOSUS.

Common everywhere on the Orange River (*Bradshaw*).

Humbe; native name *Cimbi* (*Anchieta*).

Between Bloemfontein and Potchefstroom; between the latter place and Rustenberg, and near Pretoria (*Barratt*).

Very scarce about Rustenberg (*Ayres*).

Common everywhere, and breeding near Newcastle (*B., F., and R.*).

Mashoona Land (*Ayres*).

Page 74. SCOPS LEUCOTIS.

Near Umvungu River, November 3rd; native name, *Secova* (*F. Oates*).

Page 75. SCOPS CAPENSIS.

One example obtained in the Drakensberg kloofs, near Newcastle, on August 23rd (*B., F., and R.*).

Page 76. SYRNIUM WOODFORDI.

Near Potchefstroom (*Barratt*).

Page 76. Insert:—*SYRNIUM NUCHALE*, Sharpe. Fantee Wood Owl.

In the same collection as *Scotopelia peli* and *Cerchneis ardesiaca* was an example of this bird also, which was said, like the others, to have been collected on the upper Quanza. Mr. Whitely, of Woolwich, through whose hands this collection passed, believed the locality to be thoroughly genuine, but he may have been deceived by the person who sold the collection to him.

Similar to *S. woodfordi*, but much darker in colour; the hind neck marked with broad white bands, the breast dark brown broadly banded with white.

Page 77. *CARINE CAPENSIS*.

This species should stand as *Glaucidium capense* (cf. Sharpe, Cat. B. Brit. Mus. ii, p. 223).

A common bird throughout Mashoona Land (*Ayres*).

Page 77. *CARINE PERLATA*.

This species also belongs to *Glaucidium*, and should stand as *Glaucidium perlatum* (cf. Sharpe, Cat. B. Brit. Mus. ii, p. 209).

— Huilla, Kiulo, and Humbe; native name *Cahombo* (*Anchieta*).

Near Rustenberg (*Ayres*).

Tati (*F. Oates*).

Umvuli River; by no means uncommon; Matabili name *Mandoo-gooloo* (*Ayres*).

Page 78. *ASIO CAPENSIS*.

Huilla; native name *Eculo* (*Anchieta*).

Very common in the grass-grown edges of the vleys near Newcastle (*B., F., and R.*).

Pietermaritzburg (*F. Oates*).

Mashoona Land (*Ayres*).

Page 79. *ASIO BRACHYOTUS*.

Should be called *A. accipitrinus* (*Gm.*), cf. Sharpe, Cat. B. ii, p. 234.

Page 81. *STRIX CAPENSIS*.

Common, but not so numerous as *Asio capensis*, in the Newcastle district. Reid found a pair at Richmond Road Camp, near Pietermaritzburg, on the 5th of December, and obtained a female which contained three enormously developed eggs, and was evidently just about to nest (*B., F., and R.*).

Sand Spruit, Transvaal (*F. Oates*).

Page 82. *STRIX FLAMMEA*.

Common along the Orange River; also found in the Zambesi, but scarce there (*Bradshaw*).

Not uncommon in the town of Potchefstroom (*Ayres*).

Natal (*Gueinzus; Mus. Norv.*).

Near Camperdown Station in Natal (*Reid*).

Tati (*F. Oates*).

Shongo River; pretty generally distributed over the country (*Ayres*).

Page 83. CAPRIMULGUS EUROPEUS.

Near Kronstadt and Potchefstroom; near Rustenberg; also received from Marico (*Barratt*).

Transvaal during the summer (*Ayres*).

Lydenburg (*Ayres*).

Camperdown, Natal, December 15th (*Reid*).

Page 84. Insert:—CAPRIMULGUS SHELLEYI, *Bocage*. Shelley's Goatsucker.

Close to *C. pectoralis*, but with the colours brighter; the breast rayed with black on a rufous ground. Caconda: native name *Quimbamba* (*Anchieta*).

Country of Talla Magongo: native name *Huicumbamba* (*Capello and Ivens*).

Page 85. CAPRIMULGUS RUFIGENA.

Lydenburg (*Ayres*).

Tati, March and October; Semokwe River, September and October (*F. Oates*).

Caconda (*Anchieta*).

Page 85. Insert:—CAPRIMULGUS FOSSII, *Verr.* Mozambique Goatsucker.

Benguela, native name *Ximbamba* (*Anchieta*).

Page 87. CAPRIMULGUS LENTIGINOSUS.

Rustenberg (*Ayres*).

Page 88. CAPRIMULGUS MOSSAMBICUS.

During Mr. Jameson's expedition to Mashoona Land this species was found first on the Umvuli River on the 27th of August, when they were not very common, but towards the end of September they were very abundant near the Ganyani. Breeding commences in September. On the 19th of October an egg was taken on the Bembesi River (*Ayres*).

Tati, March 21st (*F. Oates*).

Page 89. COSMETORNIS VEXILLARIUS.

Mashoona name *Amadaniba*: Matabele name *Manovella*. First met with in Mashoona Land late in August. First specimen shot September 13th; after this they gradually became plentiful, breeding at the end of September (*Ayres*).

Victoria Falls, January (*F. Oates*).

Page 90. CYPSELUS APUS.

Numbers seen on the 12th of January at Potchefstroom; a good many seen flying northwards on the 8th of February (*Ayres*).

Between Sibanani and Tamasancha, December 9th (*F. Oates*).

“About eleven o'clock in the morning of the 27th of November we saw a large number of Swifts on their migration towards the south-east. We also saw a few at the Umvuli in September and October, and at Dry Hart River in December and January” (*Ayres*).

Towards the middle of September appeared in the neighbourhood of Newcastle, and apparently nested (*B., F., and R.*).

Page 92. CYPSELUS PALLIDUS.

Capangombe: native name *Kapiapia* (*Anchieta*).

Page 92. CYPSELUS CAFFER.

Mashoona Land (*Ayres*).

First appeared near Newcastle on October 27th, afterwards common; a pair breeding at Sunday's River on November 17th (*B., F., and R.*).

Page 95. CYPSELUS MELBA.

Appears in North-western Natal early in September. Observed in Maritzburg on August 23rd (*B., F., and R.*).

Page 95. MEROPS APIASTER.

Crocodile River, November 15th. Inshlangeen, December. Hendrik's Vley, December 18th (*F. Oates*).

Page 97. MEROPS SUPERCILIOSUS.

Near the mouth of the Mooi, at the junction of that river with the Vaal; also received from Marico (*Barratt*).

Transvaal (*Ayres*).

Hendrik's Vley, December 18th (*F. Oates*).

Native name in Benguela, *Lengué* (*Anchieta*).

Page 99. MEROPS BULLOCKOIDES.

Near Rustenberg; Pretoria (*Barratt*).

Exceedingly common about Rustenberg (*Ayres*).

Ganyani River, September 18th. Appears about this date and pairs off for breeding, but not in great numbers (*Ayres*).

Crocodile River, July and November (*F. Oates*).

Page 99. MEROPS NUBICOIDES.

Appeared in considerable numbers on the Umvuli River about the 14th of September. Matabili name *Inconjani* (*Ayres*).

Daka River, January 20th. Geruah, January 24th (*F. Oates*).

Caconda, Benguela (*Anchieta*).

Page 100. *MEROPS PUSILLUS*.

Rustenberg (*Ayres*).

Not uncommon about the Umvuli River on the 11th of August

Found breeding at the Quae-Quae River on October 20 (*Ayres*).

Tati, March 24th (*F. Oates*).

Ambaca; Dombe: native name *Kaceibinongo*, at Humbe *Lengua* and *Kalungumba*; Huilla (*Anchieta*).

Page 101. *DICROCERCUS HIRUNDINACEUS*.

Potchefstroom (*Ayres*).

Near the Pantamatenka River, January 12th (*F. Oates*).

Page 102. *CORACIAS GARRULA*.

Near Rustenberg; received also from Marico, about twenty miles north of Pretoria (*Barratt*).

Lydenburg (*Ayres*)

Tati, March 26th and 28th (*F. Oates*).

Palatswie Pan, Bamangwato, December 18th (*Ayres*).

Page 103. *CORACIAS NÆVIA*.

Rustenberg (*Ayres*).

Bamangwato, May 28th. Matabili name *Chegala*. Umvuli River (*Ayres*).

First Makalaka kraal on Zambesi road, August 24th. Second Makalaka kraal, September 9th (*F. Oates*).

Capangombe. Native names at Humbe, *Ambeta*, *Cicoca* and *Kahanana* (*Anchieta*).

Page 104. *CORACIAS CAUDATA*.

Near Rustenberg and on the Vaal River; Marico (*Barratt*).

Rustenberg (*Ayres*).

Palatswie Pan, June 4th; Umvuli River, September 4th. Plentiful throughout the Transvaal, Matabili, and Mashoona countries (*Ayres*). Between Pantamatenka River and Zambesi, January 11th. Geruah, January 24th (*F. Oates*).

Page 106. Insert:—*CORACIAS SPATULATA*, *Trimen*.

This species is distinguished by the form of the tail, which is spatulated, the two long feathers ending in a broadened racket. It is otherwise very similar to *C. caudata*. It was discovered by Dr. Bradshaw in the Zambesi region. He states: "It was not seen far from the Zambesi, except once or twice, when I noticed it at about eighty miles' distance to the south of the river. The species chiefly frequents the so-called 'Sand-veldt,' a tract of heavy sand-ridges, keeping about the tallest timber. In the

winter months it makes its appearance in small companies of from four to ten or a dozen, but is out of plumage and very scarce during the rainy season, viz., from November to April. In flight and action these birds resemble the other Rollers, and are usually difficult to approach. They have a most peculiar harsh cry, which differs from that of the other species, and when once heard is easily recognized on repetition. The male specimen brought down was shot on the 23rd May, 1878, on the western boundary of the Leshuno Valley, through the whole length of which water only runs during heavy rains. All the specimens sent had the extremities of the long tail-feathers expanded into the battledore form."

It was also procured on the Umvuli River by Mr. Jameson's expedition, and Senor Anchieta has forwarded a specimen from Caconda in Benguela.

Page 106. EURYSTOMUS AFER.

Transvaal, November 26th (*Ayres*).

Umvuli River, October 8: very scarce in this part of Mashoona Land (*Ayres*).

Near the Umvungu River, November 3rd. Native name *Tchegala* (*F. Oates*).

Page 106. HAPALODERMA NARINA.

Capangombe. Native names at Biballa, *Kissai* and *Kinzamba-muzito* (*Anchieta*).

Page 107. ALCEDO SEMITORQUATA.

Rustenberg (*Ayres*).

Common on the Umvuli River, Mashoona Land (*Ayres*).

Not common near Newcastle: seen occasionally along the upper waters of the Incandu and its tributaries (*B., F., and R.*).

Page 108. CORYTHORNIS CYANOSTIGMA.

Shot in different places between Bloemfontein and Potchefstroom, from the latter place to Pretoria, and thence to Lydenburg; Rustenberg; also met with in British Caffraria, and over the Kei in the Fingoe country (*Barratt*).

Lydenburg; Rustenberg (*Ayres*).

Sibanani, December 11th (*F. Oates*).

Numerous on the Mooli River, and not uncommon on all the streams passed up to the Umvuli (*Ayres*).

Exceedingly common on all the rivers in Natal (*B., F., and R.*)

Capangombe. Native name *Sumbo* (*Anchieta*).

Page 110. CERYLE RUDIS.

Potchefstroom, March 22nd (*Ayres*).

Marico River, November 17th; High Veldt, Transvaal, December 7th
(*F. Oates*).

Common on all the rivers of Mashoona Land (*Ayres*).

Common on the Incandu and other streams in the Newcastle district;
Rorke's Drift (breeding), Colenso, Estcourt, &c.; in fact generally
distributed throughout the Colony. Mouth of the Umgeni in
December (*B., F., and R.*).

Page 111. CERYLE MAXIMA.

Very scarce in Rustenberg district (*Ayres*).

Matengwe River, December 2nd (*F. Oates*).

Mashoona Land (*Ayres*).

Umgeni River, November 24th (*Reid*).

River Chimba; Huilla (*Anchieta*).

Page 113. ISPIDINA NATALENSIS.

Near the mouth of the Umgeni in December. Colenso, November 20th
(*Reid*).

Page 114. HALCYON SEMICERULEA.

Umvuli River; Mashoona Land, very scarce. A young bird on the
Tatin River, December 13th (*Ayres*).

Gernah, December 15th (*F. Oates*).

Capangombe; Humbe (*Anchieta*).

Professor Cabanis has named the species from South-western Africa
Halcyon pallidiventris (J. f. O. 1880, p. 349).

Page 115. HALCYON ALBIVENTRIS.

Near Rustenberg and Oliphant's Nek; also noticed several in the Mega-
liesberg Mountains; near Pretoria (*Barratt*).

Common in Rustenberg district (*Ayres*).

Crocodile River (*F. Oates*).

Ladysmith (*B., F., and R.*).

Page 116. HALCYON ORIENTALIS.

Caconda (*Anchieta*).

Page 117. HALCYON CHELICUTENSIS.

Common in Rustenberg district (*Ayres*).

Crocodile River, July (*F. Oates*).

Umvuli River, August; not uncommon (*Ayres*).

Quillengues; Capangombe; native name *Sumbo* (*Anchieta*).

Page 120. HALCYON CYANOLEUCA.

Crocodile River, November 15th. Nata River, December 6th (*F. Oates*).

Page 121. HALCYON SENEGALENSIS.

Katumbella (*Anchieta*).

Page 121. HALCYON MALIMBICA.

The specimens from South-western Africa belong to the race named by Drs. Cabanis and Reichenow, *Halcyon cyanescens* (J. f. O. 1877, p. 103).

Page 121. TOCKUS FLAVIROSTRIS.

Sparsely distributed about the wooded hill-sides in the Magaliesbergen (*Ayres*).

Page 122. BUCORAX CAFER.

Mashoona Land (*Ayres*).

Page 130. TOCKUS FLAVIROSTRIS.

Crocodile River, July; Motloutsi River, August 24th (*F. Oates*).

Mashoona Land (*Ayres*).

Maconjo and Huilla (*Anchieta*).

Page 133. TOCKUS NASUTUS.

Huilla (*Anchieta*).

Not common about Rustenberg (*Ayres*).

Page 134. UPUPA AFRICANA.

A great many seen about the mimosa thorns on the Rhinoster River, between Kronstadt and the Vaal River; Modder River near Bloemfontein; between the Mooi River and Rustenberg (*Barratt*).

Not numerous near Rustenberg (*Ayres*).

Mashoona Land (*Ayres*).

Ingagane River, July 9th; near Ladysmith, August 21st; Blauw Kranz River, November 22nd; Pietermaritzburg, August 30th and September (*B., F., and R.*).

Page 137. IRRISOR ERYTHRORHYNCHUS.

Oliphant's Nek, near Rustenberg; British Caffraria, and Oliphant Hoek, district Alexandria (*Barratt*).

Rustenberg (*Ayres*).

Crocodile River, November; Tati, June 26th; First Makalaka kraal on Zambesi road, August 30th (*F. Oates*).

Not uncommon on Umvuli River. Matabili name *Inshlaza* (*Ayres*).

Page 138. RHINOPOMASTES CYANOMELAS.

Marico (*Barratt*).

Near Metli River, August 10th; Seruli River, October 18th; Palat-
swie River, October 20th; Tati, October (*F. Oates*).

Ladysmith in the winter (*Reid*).

Page 144. SCHIZORHIS CONCOLOR.

Common about Rustenberg; from Marico (*Barratt*).

By no means uncommon in Mashoona Land (*Ayres*).

Dombe: native name *Guere*; Capangombe; Humbe: native name
Kuele (*Anchieta*).

Page 149. CUCULUS SOLITARIUS.

Near Newcastle, September 27th (*Butler*).

Page 147. CUCULUS CANORUS.

Transvaal, December 27th (*Ayres*).

Page 148. CUCULUS GULARIS.

Plentiful at Kanye in Sechele's country in January. Liberally distributed throughout South-central Africa; arrived at Umvuli River about the middle of September in considerable numbers, when their monotonous *koo-koo* was heard all over the country. From there being no difference in the cadence of the two notes the song may be readily distinguished from that of the *Cuculus canorus* (*Ayres*).

Page 150. CUCULUS CLAMOSUS.

Crocodile River, November (*F. Oates*).

Page 151. CUCULUS SMARAGDINEUS.

Near Newcastle, October 22nd (*Jones*). Between Colenso and Maritz-
burg (*B., F., and R.*).

Page 153. CHRYSOCOCCYX CUPREUS.

By a mistake this species has been called *Chrysococcyx* instead of
Cuculus cupreus.

Potchefstroom. "Do not remain here during our winter months, June, July, and August. In the stomach was an egg partly digested, which I take to be that of *Passer arcuatus*; but I was not aware that the Cuckoos eat the eggs from the birds' nests they are accustomed to lay in" (*Ayres*).

Crocodile River (*F. Oates*)

Umvuli River, October 6th. "I see Mr. Sharpe thinks I am mistaken as to the identification of the eggs of this species, but I am

perfectly certain that I am not. Perhaps the bird sometimes lays white eggs; but I have never found such to be the case" (*Ayres*). Mr. Ayres has very kindly presented to the British Museum some specimens which prove the correctness of his statements.

Page 157. *COCCYSTES GLANDARIUS*.

A solitary-bird shot on the 18th of January about fifteen miles from Potchefstroom (*Ayres*).

A male, breeding, at Blauw Kranz River, November 23rd (*Reid*).

Page 158. *COCCYSTES CAFER*.

Caconda (*Anchieta*).

Crocodile River, November 15th. Tati, October 17th (*F. Oates*).

Page 158. *COCCYSTES JACOBINUS*.

Summer visitor in the Transvaal; first seen in September (*Ayres*).

Newcastle; Colenso in November; Blauw Kranz River, November 23rd (*B., F., and R.*).

Page 160. *COCCYSTES SERRATUS*.

Rocky ranges near Potchefstroom, November 3rd (*Ayres*).

Page 162. *CENTROPUS SENEGALENSIS*.

Tati, August 28th. Ramaqueban River, September 4th (*F. Oates*).

Page 163. *CENTROPUS SUPERCILIOSUS*.

Captain Shelley (*Ibis*, 1883, p. 246) has named this species *C. natalensis*, as he considers it to be different from the true *Centropus superciliosus* of Hemprich and Ehrenberg from North-eastern Africa.

Between Durban and the Umgeni River, December 24th. Female with eggs considerably enlarged (*Reid*).

Page 165. *CENTROPUS NIGRORUFUS*.

Quillengues (*Anchieta*).

Page 166. *INDICATOR SPARMANNI*.

Rustenberg (*Ayres*).

Holfontein, July (*F. Oates*).

On the Drakensberg, near Newcastle, October 9th; Blauw Kranz (*Butler*).

Page 167. *INDICATOR VARIEGATUS*.

Fifteen lines from bottom of page, read *I. major* instead of *I. variegatus*.

Page 168. *INDICATOR MAJOR*.

By no means plentiful about Rustenberg (*Ayres*).

Humbe; native name *Sequi* (*Anchieta*).

Page 170. INDICATOR MINOR.

Humbe (*Anchieta*).

Page 171. PRODOTISCUS REGULUS.

Caconda (*Anchieta*).

Page 172. POGONORHYNCHUS TORQUATUS.

Very common near Rustenberg; "sometimes four or five of them may be seen together on the same bough, bowing and scraping to each other in a most comical manner, and singing out most lustily, *ko-korro, ko-korro*, rapidly repeated" (*Ayres*).

Umvuli River, August; somewhat scarce. Matabili name *Trima-cope* (*Ayres*).

Ladysmith, spring (*Harkness; teste B., F., and R.*).

Page 173. POGONORHYNCHUS LEUCOMELAS.

Not uncommon in Rustenberg district, wherever bushy ranges are found (*Ayres*).

Page 173. Insert:—POGONORHYNCHUS AFFINIS, *Shelley*. Arnold's Barbet.

Discovered by the late Mr. Arnold near Weenen in Natal. Capt. Shelley remarks:—"In size and colouring this species resembles *P. leucomelas*, excepting that the entire forehead and crown are black, as in *P. melanocephalus*. In the bill and rictal bristles it resembles *P. leucomelas*, but the tooth on the upper mandible is barely indicated and the culmen between the nostrils is not quite so wide. Total length, 6·2 inches; culmen, 0·7; wing, 3·15; tail, 2·1; tarsus, 0·8.

Page 176. BARBATULA EXTONI.

Not at all uncommon near Rustenberg in the Magaliesbergen (*Ayres*).

Kanye, January 7th. Sparsely distributed throughout the country from the Umvuli southward (*Ayres*).

Page 176. Insert: BARBATULA CHRYSOCOMA. Small Yellow-headed Barbet.

This species is included by Professor Barboza du Bocage in his "Ornithologie d'Angola" as having been obtained at Biballa and Caconda by Senor Anchieta.

Fig. Marshall, Monogr. Capit. pl. 49, fig. 2.

Page 178. TRACHYPHONUS CAFER.

Boatlanami Pan, December 30th. Not seen in Mashoona Land.

First met with in the Matabili country near the Tati River; occasionally heard in various parts of the country; common in the Rustenberg district of the Transvaal (*Ayres*).

Page 181. CAMPOTHERA BENNETTI.

Not common among the Magaliesbergen near Rustenberg (*Ayres*).

Second Makalaka kraal on Zambesi road, September 7th (*F. Oates*).

Capangombe and Huilla (*Anchieta*).

Page 184. CAMPOTHERA SMITHII.

Tati, October 6th (*F. Oates*).

Not very scarce on the Umvuli River (*Ayres*).

Rio Chimba (*Anchieta*).

Rustenberg district (*Ayres: Mus. G. E. S.*).

Page 187. GEOLAPTES OLIVACEUS.

Exceedingly common in Natal, especially in the upper portions of the colony. Bred in August (*B., F., and R.*).

Page 188. DENDROPICUS NAMAQUUS.

Should be placed in the genus *Mesopicus* (cf. *Hargitt, Ibis, 1883, p. 407*).

Scarce species near Rustenberg among the Magaliesbergen (*Ayres*).

Motloutsi River, August; Ramaqueban River, July and August (*F. Oates*).

Umvuli River, August; Quac-Quac River, October (*Ayres*).

Caconda; Humbe; native name *Bangula* (*Anchieta*).

Page 189. DENDROPICUS HARTLAUBL.

This is only the fully adult of *D. cardinalis* "with the red colour of the rump strongly developed with age" (*Hargitt, Ibis, 1883, p. 441*).

Transvaal (*Ayres*).

Page 190. DENDROPICUS CARDINALIS.

Rustenberg (*Ayres*).

Ramaqueban River, September 4th; Tati, October 7th (*F. Oates*).

Blauw Kranz, Natal, November (*Butler*).

Biballa (*Anchieta*). Native name at Capangombe *Bangula*, at Humbe *Balambamba*.

Page 191. DENDROPICUS MENSTRUUS.

Should be called *Mesopicus griseocephalus* (cf. *Hargitt, Ibis, 1883, p. 317*).

In a kloof underneath the Drakensberg, not far from the Leo Kop mountain; and near Newcastle (*B., F., and R.*).

Page 191. YUNX PECTORALIS.

Should be written *Iynx pectoralis*.

Rustenberg; very scarce (*Ayres*).

Blauw Kranz River, Natal, May 22nd (*F. Oates*).

Ladysmith, Natal (*Harkness*). Common along the Tugela at Colenso (*Reid*).

Page 195. *PSITTACUS MEYERI*.

Second Makalaka kraal on Zambesi road, September 4th. Tati, October (*F. Oates*).

Common throughout the bush country; plentiful in Mashoona Land at the Umvuli River and in the other parts. Matabili name *Zignonine* (*Ayres*).

Page 198. *TURDUS LITSITSIRUPA*.

Placed by Mr. Seebohm in the genus *Geocichla* (Cat. B. Brit. Mus. v, p. 182).

Eland's River, July; Tati, March (*F. Oates*).

Scantly scattered throughout Mashoona Land (*Ayres*).

Page 199. *TURDUS LIBONYANUS*.

Quillengues (*Anchieta*). Caconda (*Anchieta*, s. n. *T. verreauxi*).

Makalaka country (*Dr. Bradshaw*).

Commonest Thrush in the Magaliesbergen (*Ayres*).

A pair occasionally to be found, here and there, about the country of the Mashoonas. Matabele name *Inshlara* (*Ayres*).

Page 200. *TURDUS OLIVACEUS*.

Kingwilliamstown (*Trevelyan*).

Very numerous along the Orange River (*Bradshaw*).

Page 202. *TURDUS CABANISI*, *Bp.* Cabanis' Thrush.

Distinguished from *T. olivaceus* by having the belly orange-chestnut and the flanks brown. In *T. olivaceus* the flanks are orange-chestnut like the belly.

Mr. Seebohm gives the above diagnosis (*t. c.* p. 187). The references in the present work to the Olivaceous Thrush from the Transvaal and Lake N'gami, belong to this species.

Page 202. *TURDUS VERREAUXII*.

This species is the young of *T. libonyanus* (cf. Seebohm, Cat. B. Brit. Mus. v, p. 230).

Page 202. *TURDUS GURNEYI*.

Referred by Mr. Seebohm (*t. c.* p. 270) to the genus *Geocichla*. In the note to p. 202, for "Macairac," read "Macamac."

Lydenburg district, Transvaal: exceedingly scarce (*Ayres*).

Page 203. *CRINIGER FLAVIVENTRIS*.

This is not a true *Cringer*, and has been placed in a distinct genus,

Ohlorocichla, by the editor (cf. Sharpe, Brit. Mus. Cat. B. vi, p. 113). The true *C. flaviventris* inhabits the eastern portion of the continent, ranging from Natal to Mombas. The western birds are different and have been separated by the editor as

186a. CHLOROCICHLA OCCIDENTALIS, Sharpe.

Western Yellow-breasted Bulbul.

This is the western representative of *C. flaviventris*, and occurs in Damara Land, Benguela, and extends into Angola. Quillengues and Capangombe (*Anchieta*).

It may be distinguished by having the lores grey, and the ring round the eye white, the ear-coverts lighter and more ashy brown than the crown of the head.

Fig. Sharpe, Cat. B. Birt. Mus. vi, pl. viii.

Page 203. PHYLLOSTREPHUS CAPENSIS.

The generic name should be written *Phyllostrophus* (cf. Sharpe, Cat. B. Brit. Mus. vi, p. 116). By an oversight too it has been called a "Thrush" instead of a Bulbul.

Humbe: native names *Utena* and *Caxexe* (*Anchieta*).

Page 204. Insert :—PHYLLOSTROPHUS FULVIVENTRIS, Cab.

Buff-bellied Bristle-necked Bulbul.

Differs from *P. capensis* in having the back pale olive-brown, contrasting with the upper tail-coverts and the tail, which are rufous. The head is dark ashy brown. Wing, 3.35 inches.

It is the species referred to under the heading of *P. capensis*, as having been met with at Biballa and the Chimba River, by Anchieta.

Page 204. ANDROPADUS IMPORTUNUS.

Breeding near Camperdown Station, Natal, in December (*Reid*).

Page 205. ANDROPADUS HYPOXANTHUS, Sharpe.

This must bear the name of *A. olcaginus*, Peters, discovered in Inhambane, from which place it extends to the Zambesi.

Page 206. ANDROPADUS FLAVOSTRIATUS.

Has been placed in the genus *Xenocichla* by the editor (cf. Sharpe, Cat. B. Brit. Mus. vi, p. 100).

Page 206. PYCNONOTUS CAPENSIS.

The editor expressed his doubts as to the number of species of *Pycnonotus* to be recognized in South Africa. Since then Mr.

Gurney has distinguished *P. layardi*, and the editor in the "Catalogue of Birds" admits three species as follows:

a, with no black cap.

a, with a red eyelid; underparts dark brown: the centre of the abdomen only white *capensis*.

b, with a black eyelid; underparts white, from the breast downwards; throat and chest brown *tricolor*.

b, with a black cap.

c, eyelid black; throat brown, only the chin black *layardi*.

d, eyelid red; throat black *nigricans*.

The ranges of the species are as follows, and all notes on the habits of the birds quoted by us, must be transferred accordingly.

P. capensis. Confined to the Cape Colony, not extending beyond Port Elizabeth. Not found on the Orange River (*Bradshaw*).

P. tricolor. From Damara Land to Benguela, and thence to Angola proper and the Congo region.

P. layardi. Eastern Cape Colony from the vicinity of Grahamstown ranging through Natal and the Transvaal to the Zambesi, and up the east coast to Mombas, extending into Damara Land on the west. Umvuli River (*Ayres*). Common everywhere in the Newcastle district (*B., F., and R.*).

P. nigricans. Eastern Cape Colony through Natal and the Transvaal to Damara Land. Very common along the Orange River (*Bradshaw*).

Page 210. CRATEROPUS BICOLOR.

Tati (*F. Oates*).

Rustenberg (*Ayres*).

Tatin River, December (*Ayres*)

Page 212. CRATEROPUS JARDINII.

Quillengues (*Anchieta*).

Inkwesi River, October; Marico River, November; Tati, October (*F. Oates*).

Common about the mountains near Rustenberg (*Ayres*).

Near Ladysmith, November (*Harkness: teste B., F., and R.*).

Linokana, western Transvaal (*Holub*).

Page 213. CRATEROPUS KIRKI.

Umvuli River, Mashoona Land (*Ayres*).

Page 214. CRATEROPUS MELANOPS.

Kiulo and Humbe. Native name, *Numbela* (*Anchieta*).

Page 214. CRATEROPUS HARTLAUBI.

Zambesi (*Bradshaw: Mus. G. E. Shelley*).*Fig.* Bocage, Orn. Angola, pl. i, fig. 1.

Page 215. AETHOCICHLA GYMNOPENYS.

Fig. Sharpe, Cat. B. vii, pl. xii.

Page 215. NEOCICHLA GUTTURALIS.

Fig. Bocage, Orn. Angola, pl. i, fig. 2.

Page 219. CHÆTUPS PYCNOPYGIUS.

Capangombe: native name *Kankiria-Kiria*.Quillengues: native name *Elequete (Anchieta)*.

Page 219. MONTICOLA RUPESTRIS.

Scarce in the Lydenburg district of the Transvaal (*Ayres*).Common in the kloofs at the foot of the Drakensberg, near Newcastle, and evidently breeds in the neighbourhood (*B., F., and R.*).

Page 220. MONTICOLA EXPLORATOR.

Kingwilliamstown (*Trevelyan*).Macamac (*T. Ayres*).Kaar Kloof heights (*F. Oates*).The specimen recorded by us as having been obtained at Hope Town by Mr. T. C. Atmore is referred by Mr. Seebohm to *M. brevipes* (cf. Cat. B. Brit. Mus. v, p. 325).Numerous in all parts of the Newcastle district throughout the winter, but only a few pairs remained to breed (*B., F., and R.*).

Page 221. MONTICOLA BREVIPES.

Near Potchefstroom, August (*Ayres*).Widely distributed about the mountains of the Transvaal, but not very common (*Ayres*).

Page 222. COSSYPHA BICOLOR.

Kingwilliamstown (*Trevelyan*).Exceedingly scarce in the Lydenburg forests (*Ayres*).Zulu Land (*Gordge: Mus. G. E. Shelley*).

Page 224. COSSYPHA CAFFRA.

Kingwilliamstown (*Trevelyan*).Newcastle (*Butler*). Ladysmith (*Harkness: teste B., F., and R.*).Linokana, Western Transvaal (*Holub*).Very common along the Orange River (*Bradshaw*).

Page 225. *COSSYPHA BOCAGII*.

Fig. Bocage, Orn. Angola, pl. ii, fig. 1.

Page 227. *COSSYPHA HEUGLINI*.

This should be *C. subrufescens*, Bocage, a western form of *C. heuglini*, distinguished by its dark brown or black central tail-feathers. Obtained also by Anchieta at Quillengues: native names *Quitone* and *Quiandamuchito*.

Page 227. Insert:—*COSSYPHA HEUGLINI*.

The true *C. heuglini* certainly occurs within our limits, and is distinguished by having the two central tail-feathers olive.

Chobè River, Zambesi (*Dr. Bradshaw*).

Umvuli River (*Ayres*).

Fig. Heuglin, *t. c.*

Page 227. Insert:—*COSSYPHA BARBATA*.

Quillengues: native name *Quiepele* (*Anchieta*).

Fig. Bocage, Orn. Angola, pl. ii, fig. 2.

Page 228. *COSSYPHA HUMERALIS*.

Natal (*Ayres*).

Rustenberg, February (*Ayres*).

Page 229. *COSSYPHA SIGNATA*.

Considered by the editor to be generically distinct from the *Cossyphe*, and separated by him as *Ædonopsis signata* (Cat. B. Brit. Mus. vii, p. 68).

Kingwilliamstown (*Trevelyan*).

A specimen from Natal is in the British Museum, and Captain Shelley also has it from that colony.

Page 230. *CICHLADUSA RUFICAUDA*.

Quillengues, abundant: native name *Kitole* (*Anchieta*).

Page 230. *PINARORNIS PLUMOSUS*.

Umvuli River, Mashoona Land, August and October. "I found a pair of these curious birds on a rocky spur of a low range of mountains, well-wooded with high trees. Their habits are decidedly those of a Chat; and although shy and retiring they are at once conspicuous by their large size and the peculiar graceful movements imparted to them by their lax soft plumage and ample wings and tail, as they hop and flit about the the large boulders and rocks, alighting on them as softly as a falling snow-flake. The male is darker and brighter in plumage than the female, which gives the latter a somewhat faded appearance" (*Ayres*).

Fig. Sharpe, Cat. B. vii, pl. ix.

Page 231. MYRMECOCICHLA FORMICIVORA.

Kingwilliamstown (*Trevelyan*).

Rustenberg, July, common on all the open country (*Ayres*).

Common near Spalding's on the Hart River. Exceedingly common after passing Estcourt; breeding near Newcastle (*B., F., and R.*).

Page 232. THAMNOBIA CINNAMOMEIVENTRIS.

Should be called *Thamnolea cinnamomeiventris* (cf. Sharpe, Cat. B. vii, p. 49).

Rustenberg, May, very local (*Ayres*).

Hills near the Shongo River, November 1st; Kanye, Matabele Land (*Ayres*).

Page 233. SAXICOLA INFUSCATA.

Is not a true *Saxicola*, and is referred by Mr. Seebohm to the genus *Bradyornis*. It should, therefore, be called *Bradyornis infuscata* (*vide infra*, p. 844).

Page 234. SAXICOLA GALTONI.

Ladysmith (*F. Oates*).

Inyati (*F. Oates*).

A common species throughout the Rustenberg district (*Ayres*).

Rocky kopjes near the Shongo River on November 1st: breeding (*Ayres*).

Ladysmith, August (*Reid*).

Page 236. SAXICOLA SINUATA.

Referred by Mr. Seebohm to the genus *Myrmecocichla* (Cat. B. Brit. Mus. vi, p. 359).

Page 236. SAXICOLA LAYARDI.

Fig. Seebohm, Cat. B. Brit. Mus. vi, pl. xviii.

Page 237. SAXICOLA SCHLEGELI.

Referred by Mr. Seebohm to *Myrmecocichla cinerea* (*vide infra*).

Page 238. SAXICOLA PILEATA.

Kingwilliamstown (*Trevelyan*).

Potchefstroom (*Lucas*); John Scott's Farm, Transvaal (*F. Oates*).

Mashoona Land, September and October (*Ayres*).

A familiar bird in the vicinity of habitations throughout the Newcastle district, nesting about September (*B., F., and R.*).

Common all over the country near the Orange River (*Bradshaw*).

Page 240. SAXICOLA BIFASCIATA.

Referred to the genus *Myrmecocichla* by Mr. Seebohm (Cat. B. Brit. Mus. vi, p. 355).

Plentiful in the neighbourhood of the Drakensberg at the foot of the slopes, breeding there in considerable numbers (*B., F., and R.*).

Ingagane River (*Reid*).

Page 242. SAXICOLA CINEREA.

Is a *Myrmecocichla*, according to Mr. Seebohm (Cat. B. v, p. 358), who considers that *S. schlegeli* (p. 237 of this work) belongs to the same species.

Page 243. SAXICOLA DILUTA.

Referred to *S. leucomelæna* by Mr. Seebohm (*t. c.* p. 377).

Page 243. SAXICOLA CASTOR.

Mr. Seebohm (*t. c.* p. 380) considers this to be only a stage of *S. monticola*.

Page 244. SAXICOLA POLLUX.

Is a *Myrmecocichla*, according to Mr. Seebohm (*t. c.* p. 357).

Page 245. SAXICOLA ARNOTTI.

Is not a true Chat, and is referred by the editor to the genus *Thamnotæa* (Cat. B. vii, p. 53).

Page 246. SAXICOLA SHELLEYI.

Also referred to *Thamnotæa* by the editor (*t. c.* p. 52.)

Ramaqueban River, on the way to Gubuleweyo June 24; near Sibanane, December 8 (*F. Oates*).

Umvuli River, Mashoona Land, August 10th. Native name *Inquelechaine*. "This is an arboreal Chat, frequenting the woods on the banks of rivers: only met with on the Umvuli" (*Ayres*).

Fig. Sharpe in Oates, Matabele Land, App. pl. A.

Page 246. SAXICOLA MONTICOLA.

We have already referred (p. 247) to the difficulty of following the sequence of plumage undergone by this Chat, and so dissatisfied were we with the incompleteness of our information on the subject, that we wrote to all our friends in South Africa to ask them to work up the question and send us specimens. In answer to this appeal our excellent correspondents Dr. Exton, Mr. Lucas and Captain Trevelyan sent us altogether twenty specimens, and with this increased material Mr. Seebohm went to work at the species for the British Museum "Catalogue of Birds." The result he arrived at was that there was a white-headed form, *Saxicola leucomelæna*, inhabiting Benguela and Damara Land (to which our *S. anderssoni*, p. 249, is to be referred), and a southern form, *S. monticola*, extending from the Cape Colony to Great Namaqua Land on the west and from Bloemfontein to the Transvaal in the centre of South Africa. These two forms interbreed and produce an infinite series of intermediate specimens, the strain of *S. leu-*

comelæna being sometimes predominant and sometimes that of *S. monticola*.

Majors Butler and Feilden and Captain Reid, on the other hand, who paid great attention to the changes of plumage in this species, believe that the female does not change her livery, while the male goes through successive changes, sufficient to account for all the links which are included in Mr. Seebohm's chain of hybridization. They believe that the progress from youth to age may be tabulated as follows:—

1st stage. Birds of the year in immature plumage, very similar to the females, though perhaps slightly darker.

2nd stage. Shoulders white, though the patch is not so conspicuous as in the next stages. The whole of the lower parts black or blackish-brown.

3rd stage. Shoulders white. Traces of white on the abdomen.

4th stage. Shoulders white. Head not so black as in the second and third stages, but a few shades lighter, indicating the commencement of the change to grey. Below, from breast to vent, white.

5th stage. Head grey or greyish-white. Below white, from breast to vent.

6th stage. Head grey or greyish-white. Below, black from belly to vent, with, in some cases, traces of white on the lower abdomen. They consider stages six and seven to be of about the same period of the bird's life, but that in some the white head is gained before the white belly, while in others the white belly is assumed before the head changes.

7th stage. Grey, with greyish-white shoulders.

8th stage. Grey, shoulders white.

9th stage. Paler than seventh stage, becoming whitish-grey; shoulders white.

We can only say that, as far as the British Museum series goes, the observations of the above authors seem to be confirmed.

Dr. Bradshaw collected a series in the Orange River district, and says that the species is tolerably plentiful about three miles from the river in rocky mountainous veldts.

Page 249. SAXICOLA ANDERSSONI.

Is a stage of plumage of *S. monticola*.

Page 250. PRATINCOLA TORQUATA.

Universally distributed and very abundant in the Newcastle district: breeds (*B.*, *F.*, and *R.*).

Linokana, Western Transvaal (*Holub*).

Not met with on the Orange River: common from the Transvaal to the Zambesi (*Bradshaw*).

Page 251. AEDON CORYPHEA. Coryphée Chat-Thrush.

Is not a true *Ædon*, but an *Erythropygia* (cf. Sharpe, Cat. B. Brit. Mus. vii, p. 73). It should be called *E. coryphæus*.

"Chat-Thrush" is a better English name for these birds.

Page 252. AEDON LEUCOPHRYS. White-eyebrowed Chat-Thrush.

Should also be referred to the genus *Erythropygia*.

By no means plentiful in the Rustenberg district (*Ayres*).

Matje Umschlope, November; Kanye, January 7 (*Ayres*).

Page 253. AEDON PÆNA. Sir Andrew Smith's Chat-Thrush.

Should be called *Erythropygia pæna* (cf. Sharpe, Cat. B. vi, p. 76).

Common at Bamangwato on the 26th December: breeding (*Ayres*).

Page 255. Insert:—ERYTHROPYGIA MUNDA, *Cab*. Angolan Chat-Thrush.

The birds from Damara Land and Humbe turn out not to be *E. leucophrys*, but an Angolan species *E. munda*, and the references to the habits of the bird in Damara Land, given on p. 252, belong to that species.

It differs from its ally, *E. leucophrys*, in having the flanks uniform and not streaked, the black streaks being confined to the lower throat and fore-neck.

Fig. Reichen. & Schalow, J. f. O. 1881, taf. iv, fig. 3.

Page 254. Insert:—ERYTHROPYGIA ZAMBESIANA, *Sharpe*.

Zambesi Chat-Thrush.

Procured by Sir J. Kirk at Tete on the Zambesi. Allied to *E. pæna*, like which species it has rufous tail-feathers tipped with white, with a broad subterminal bar of dark brown, but distinguished by having the wing-coverts tipped with white, and by the black streaks on the fore-neck and chest.

Fig. Sharpe, Cat. B. Brit. Mus. pl. xv, fig. 1.

Page 254. DRYMÆCA FLAVICANS.

The genus *Drymæca* is identical with the older genus *Prinia** and the species should be known as *Prinia flavicans*.

Mangwato, December 26 (*Ayres*).

Numerous on the Orange River (*Bradshaw*).

* "By an oversight the genus *Drymæca* is not given as a synonym in the Catalogue (p. 183), where the following addition is necessary: *Drymoica*, Swains. Zool. Journ. iii, p. 168 (1828) Type, *D. maculosa*."—R. B. S.

Page 256. DRYMÆCA SUBSTRIATA.

This is the single representative of the Indian genus *Burnesia* in South Africa, and should be called *Burnesia substriata* (cf. Sharpe, *t. c.* p. 206).

Orange River (*Bradshaw*).

Page 256. DRYMÆCA OCULARIA.

Is a *Spiloptila* (cf. Sharpe, *Cat. B.* vii, p. 232).

Orange River (*Bradshaw*).

Abundant in the neighbourhood of the Malope River in January; also at Spalding's on the Hart River, February 1st (*Ayres*).

Page 258. DRYMÆCA AFFINIS.

Is identical with a widely spread African species, *Prinia mystacea*, Rüpp.

Four lines from end of page read "worn" for "warm."

Caconda (*Anchieta*).

Common in the Rustenberg Mountains (*Ayres*). Umvuli River, Mashoona Land, August, scarce (*Ayres*).

The note on the habits of the bird in the Transvaal should, according to Mr. Gurney, really apply to *D. flavicans*.

Umgeni River, December 26 (*Reid*).

Page 259. DRYMÆCA MACULOSA.

Should be called *Prinia maculosa*.

Page 260. DRYMÆCA HYPOXANTHA.

Should be also referred to the genus *Prinia*.

Not uncommon in the Newcastle district (*B., F., and R.*).

Page 263. CISTICOLA CURVIROSTRIS.

This is the summer plumage of *C. natalensis* (cf. Sharpe, *Cat. B.* vii, p. 279).

Umvuli River, August: not plentiful. Native name, *Umkuwele* (*Ayres*).

Near Pietermaritzburg, August (*Reid*).

Page 265. CISTICOLA TINNIENS.

Rustenberg, scarce (*Ayres*).

Common in the neighbourhood of Newcastle (*Reid*).

Page 263. Insert:

CISTICOLA ANGOLENSIS (*Bocage*).

Angolan Grass-Warbler.

Described by Professor Barboza du Bocage as being nearly allied to *C. natalensis* and *C. curvirostris*, but having the bill perceptibly less stout. He says that Smith's figure of *C. tinniens* (*vel levail-*

lantii) gives a good idea of the colouration of *C. angolensis*, but that it is much larger. Our belief is that the Angolan bird will prove to be *C. natalensis*.

Two specimens were procured by Anchieta at Caconda in Benguela.

Page 264. CISTICOLA FULVIFRONS.

Proves to be identical with *C. lugubris* (Rüpp.), a widely spread African species.

Page 268. CISTICOLA CHINIANA (large race of *C. subruficapilla*).

Tatin River, December 8; Seruli Pan, December 17; Mangwato, December 27; commonest Warbler in that part of the country (*Ayres*).

Very common near Newcastle (*B., F., and R.*).

Page 269. CISTICOLA RUFILATA (= *C. subruficapilla*, var.)

Rustenberg (*Ayres*).

Page 269. CISTICOLA ISODACTYLA.

This is not the *C. isodactyla* of Professor Peters, which is the same as *C. lugubris*, as the editor has assured himself by an examination of the type specimen. The bird called *C. isodactyla* in the present edition is *C. subruficapilla*, adult, in winter plumage.

Page 270. CISTICOLA LAIS.

This is the young bird of *C. subruficapilla* in its first winter dress (cf. Sharpe, Cat. B. vii, p. 289).

Page 273. CISTICOLA SUBCINNAMONEA.

It has been made the type of a separate genus, *Euryptila*, by the editor (Cat. B. vii, p. 116).

Page 273. CISTICOLA FASCIOLATA.

Also separated by the editor under a different generic title, *Calamornastes* (Cat. B. Brit. Mus. vii, p. 133).

Rustenberg district, May (*Ayres*).

Tatin River, December 13 (*Ayres*).

Page 259. CISTICOLA PROCERA.

Is the large race of *C. subruficapilla* (i.e. *C. chiniana*) in breeding plumage, the type having been examined by the editor (Cat. B. vii, p. 286).

Page 271. CISTICOLA ABERRANS.

Rustenberg (*Ayres*). We think the specimen recorded by Mr. Gurney (Ibis, 1880, p. 101), probably belongs to the winter plumage of *Dryodromas fulvicapilla*. Mr. Gurney also points out that the note on the habits of this bird, in Natal, really belongs to *Prinia mystacea*.

Kanye, Matabele, January 7th; Umvuli River, August; Matje Umschlope, November 17 (*Ayres*).

Camperdown Station between Pietermaritzburg and Pinetown: Richmond Road camp (*Reid*).

275. Insert:—*CISTICOLA TERRESTRIS* (*Smith*).

It was a mistake to unite *C. terrestris* with *C. cisticola*. It is a larger bird, and is distinguished by its perfectly uniform blackish tail, with pale tips but no subterminal bar: in *C. cisticola* there is a distinct shade of rufous on the tail before the subterminal bar. All the occurrences mentioned in the body of the work under the head of *C. cursitans* belong to the present species and not to the last-named bird, which, as far as we know, has only been found in Damara Land within our limits.

Rustenberg, scarce (*Ayres*).

Kanye, Matabele (*Ayres*).

Numerous on the "veldt" near Newcastle (*B., F., and R.*).

Page 275. *CISTICOLA CURSITANS*.

Stands as *Cisticola cisticola* (Temm.). The only specimens of this European species which we have seen from South Africa are some of Mr. Andersson's from Damara Land (cf. Sharpe, Cat. B. vii, p. 263). *C. terrestris* is distinct (*vide supra*).

Page 278. *CISTICOLA CHERINA*.

The editor (Cat. B. vii, p. 264) again reiterates his belief that this species does not occur in South Africa, and that the type really came from Madagascar.

Page 279. *HEMIPTERYX TEXTRIX*.

The genus *Hemipteryx* is regarded by the editor (Cat. B. vii, p. 235) as the same as *Cisticola*. The specific name should be written *textrix*.

Page 280. *HEMIPTERYX IMMACULATA*.

Is the full breeding plumage of *C. terrestris*.

Page 280. *SPHENÆACUS AFRICANUS*.

Captain Shelley recognizes three races of this bird in South Africa, as follows:

265. *S. africanus*, from the western portion of the Cape Colony.

265a. *S. intermedius*, from the eastern parts of the colony; like the foregoing, but having the upper and under tail-coverts uniform, the head clearer rufous and the streaks on the sides of the body much narrower.

265b. *S. natalensis*, from Natal and the Transvaal, distinguished by the absence of streaks on the flanks and upper and under tail-coverts.

Magaliesbergen, not very common (*Ayres*); common near Newcastle (*B., F., and R.*).

Page 282. MELOCICHLA PYRRHOPS.

The true *M. pyrrhops* of Cabanis turns out to be *Cisticola erythrops* of Hartlaub (cf. Sharpe, Cat. B. vii, p. 250). The bird here intended is *Cisticola meridionalis*, Sharpe (*t. c. p.* 243), or *Melocichla meridionalis* for those naturalists who consider *Melocichla* anything more than a big *Cisticola*.

Page 281. Insert:—CISTICOLA GRANDIS, *Bocage*. Large Grass-Warbler. Caconda (*Anchieta*).

According to Professor Bocage this species is distinguished from its allies by its large size and by its peculiar colouration: back pale uniform earthy brown; a black moustache along the sides of the chin; lower parts white, marked with dull rufous; feet leaden brown.

Page 281. APALIS THORACICA.

Near Newcastle in a kloof in the Drakensberg (*B., F., and R.*).

Page 283. CATRISCUS APICALIS.

The genus *Schaenicola* of Blyth, 1844, being older than *Catriscus* of Cabanis, 1850, the name of this species must be *Schaenicola apicalis*.

Page 286. BRADYPTERUS BRACHYPTERUS.

Not uncommon about Richmond Road, Natal; Kaarkloof, November; occasionally in the swamps about Newcastle (*B., F., and R.*).

Page 287. BRADYPTERUS GRACILIROSTRIS.

On account of its smaller first primary Mr. Seebohm has separated this species from the other *Bradypteri*, and placed it in the genus *Iusciniola* (cf. Cat. B. v, p. 122). Speaking of the range of this Warbler, Mr. Seebohm says that it is found in South Africa from the Congo, Damara Land, and the Transvaal down to the Cape, and he adds: "It is probably a resident; but of this writers on African ornithology, with their accustomed carelessness, fail to inform us." To whom Mr. Seebohm, that "Boanerges" of ornithology, intends this somewhat ungracious taunt to apply, it is at first sight rather difficult to imagine, and we have had to consider on whose head to place the "cap" of carelessness. We expected to find that the author of a volume of the "Catalogue of Birds" would have shown at least some reason for such a strong remark,

but we notice that Mr. Layard appears to have done his best for Mr. Seebohm, when he states that he found the bird *breeding* on the Berg River, whence there are two specimens of his in the British Museum. We ourselves, as editor, do not appear to have been guilty of "carelessness" in our compilation of the facts as far as they were published up to the time of our writing the account of the species; and, therefore, as the cap is still floating about somewhere in search of a resting-place, we propose to place it on the head of Mr. Seebohm himself, who, from the facts (1) of the breeding of the bird at the Berg River, (2) of its occurrence in the Transvaal in winter, *i.e.* April and June, (3) from the presence of specimens in their breeding dress as well as in winter plumage in the British Museum, and (4) because no one has found the species *out* of South African limits, has shown on his part un-"accustomed carelessness" in not deducing from his facts that the bird *must* be a *resident* in South Africa.

Not uncommon in the thickest reeds in the vleys near Newcastle in September and October, at which season it breeds (*B., F., and R.*).

Page 288. BRADYPTERUS SYLVATICUS.

Caconda (*Anchieta*). Cf. Bocage, Orn. Angola, p. 554.

The editor has referred three specimens in the British Museum from South Africa, collected by Sir Andrew Smith, to *B. sylvaticus* of Sundevall. The under tail-coverts are dark olive-brown, lighter on their margins; the throat is slightly mottled with dark edges to the feathers; the chest is uniform ashy brown.

Fig. Sharpe, Cat. B. vii, pl. iv.

Page 289. Insert:—BRADYPTERUS BARRATTI, *Sharpe*.

This species has the under tail-coverts, as in *B. sylvaticus*, dark olive-brown with lighter margins. The upper surface is reddish chocolate-brown, the throat and breast always distinctly spotted and streaked with black.

It was discovered by Mr. F. A. Barratt in the Lydenburg district of the Transvaal, and Mr. Ayres has met with it at Macamac. His son, Mr. T. L. Ayres, has also sent some beautiful specimens to Captain Shelley from Natal.

Fig. Barratt, Ibis, 1876, pl. 4.

Page 289. ACROCEPHALUS FULVOLATERALIS.

According to Mr. Seebohm (Cat. B. v, p. 95), this supposed new species is only the ordinary *A. turdoides* (vel. *A. arundinaceus*) of Europe, after the autumn moult. Mr. Lucas has procured the species

near Potchefstroom in February, and Mr. Ayres at the same place in March.

Richmond Road, near Pietermaritzburg, December (*B., F., and R.*).

Page 290. ACROCEPHALUS BÆTICATUS.

Incandu River, near Newcastle, October (*Reid*).

Page 291. ACROCEPHALUS PALUSTRIS.

Mr. Seebohm states that, like *A. streperus*, the present bird has the second primary longer than the fifth, but instead of being olive-brown above, the back has a slight russet tinge, more decided on the rump. We notice that he does not quote the present work, and therefore he was apparently unaware of the occurrence of the species in Natal, which is considerably to the south of the winter homes accorded for it by Mr. Seebohm (*l. c.*), when he says that it winters in Central Africa.

Mr. Gurney (*Ibis*, 1878, p. 289) states that the remarks of Mr. Ayres, given by us on page 292 of this work, really belong to *A. bæticus* and not to *A. palustris*.

Page 293. ACROCEPHALUS SCHENOBANUS.

Potchefstroom, April 10 and 18 (*Ayres*).

Page 293. CAMAROPTERA OLIVACEA.

A mistake has taken place in the identification of this species. The true *C. olivacea* of Vieillot, founded on Levaillant's "*Olivert*," is the bird called by us *Camaroptera brachyura*, and the present bird must stand as *C. sundevalli*, Sharpe, *J. f. O.* 1882, p. 347.

Page 294. CAMAROPTERA BRACHYURA.

This must stand as *C. olivacea* (Vieill.). A specimen of Mr. Rickard's, from Uitenhage, is in the British Museum.

Page 296. PHYLLOSCOPUS TROCHILUS.

Quillengues in the interior of Benguela (*Anchieta*).

Potchefstroom, March (*Lucas*), November, December (*Ayres*).

Namaqua Land (*Sir A. Smith*).

Matje Umschlope, November 17th (*Ayres*).

Three miles south of Newcastle, October; and Camperdown Station, December (*Reid*).

Page 297. EREMOMELA FLAVIVENTRIS.

Kingwilliamstown (*Trevelyan*).

Caconda. Native name, *Luçando-anjobo* (*Anchieta*).

Umvuli River, August 19th (*Ayres*).

Page 298. EREMOMELA USTICOLLIS.

Rustenberg (*Ayres*).

Page 298. Insert: EREMOMELA POLIOXANTHA, *Sharpe*.

Buckley's Bush-warbler.

This species, which was discovered by Mr. T. E. Buckley in Suazi Land, differs from *E. flaviventris* in having the upper surface ashy, slightly washed with yellow on the back; the throat and chest are ashy white, the rest of the under parts being yellow, which extends on to the lower breast; whereas in *E. flaviventris* only the lower abdomen, vent, and under tail-coverts are yellow. Total length, 3·8 inches; culmen, 0·5; wing, 2·3; tail, 1·3; tarsus, 0·7.

Page 299. EREMOMELA SCOTOPS.

This species has been re-discovered in the eastern districts of the Transvaal by Mr. Ayres, who also met with it in Mashoona Land during Mr. Jameson's expedition. Mr. Seebohm named the species recently *E. hemixantha*.

Rustenberg (*Ayres*).

Umvuli River, August 23rd (*Ayres*).

Fig. Sharpe, Cat. B. vii, pl. v, fig. 1.

Page 299. Insert: EREMOMELA PULCHRA (*Bocage*).

Citron-headed Bush-warbler.

This species was described by Prof. Bocage under the name of *Tricholais pulchra*, from Caconda, where it was found by Senor Anchieta.

It belongs to the same section as *E. scotops*, with the head yellower than the back, but has the breast and abdomen white, contrasting with the yellow throat and fore-neck.

Page 299. DRYODROMAS FLAVIDA.

According to a recent arrangement of the African Warblers by the editor (Cat. B. vol. vii), the present species must be placed in the genus *Euprinodes* of Cassin.

Kingwilliamstown (*Trevelyan*).

Page 300. DRYODROMAS ALBIGULARIS.

This species must bear the older name of *icteropygialis* of Lafresnaye.

Page 301. DRYODROMAS FULVICAPILLA.

In its plumage and general aspect this bird is exactly like a *Cisticola* and is often confounded with *Cisticola aberrans*, especially in the winter plumage, when the under surface is yellowish-buff. In *C. aberrans*, however, the tail is always longer than the wing and its feathers are rather pointed.

Not uncommon in the Newcastle district; near Ladysmith, August; on the Tugela, near Colenso, November (*B., F., and R.*).

Page 302. PINDALUS RUFICAPILLUS.

Is a member of the Indian genus *Cryptolopha*, and must stand as *C. ruficapilla*.

Not uncommon in the kloofs, on the Drakensberg near Newcastle, August (*Butler*).

Found sparingly in the dense forests of the Lydenburg district (*Ayres*).
Fig. Sharpe, Cat. B. iv, pl. xii, fig. i.

Page 303. SYLVIETTA RUFESCENS.

Should be *Sylviella* not *Sylvietta*.

Not at all uncommon in the Marico district (*Ayres*): plentiful in Swart-Ruggens and Rustenberg district (*Lucas*).

Umvuli River, October 6; Chakanie Pan, December 19 (*Ayres*).

Ladysmith, August (*Harkness: teste B., F., and R.*).

Page 304. Insert: SYLVIELLA RUFICAPILLA, *Bocage*.

Rufous-headed Bush-warbler.

Discovered by Senor Anchieta at Caconda in Benguela. Native name "*Gomu-caxaca*."

Like *S. rufescens*, the upper surface is ashy grey, but the head is chestnut, as well as the ear-coverts, the belly white, the quills externally edged with olive-yellowish.

Page 304. SYLVIA SALICARIA.

The facts of the capture of this species by Mr. Andersson and Sir Andrew Smith should be reversed. It was the latter who procured two specimens, Mr. Andersson having met with only one, a male, killed on the 30th November (cf. Seebohm, Cat. B. v, p. 12).

Mr. Seebohm (*l. c.*) retains the name of *Sylvia hortensis* for this species. According to him the Garden Warbler may be distinguished from the Whitethroat by having the chin and throat not whiter than the rest of the under parts. The margins of the quills, wing-coverts, and innermost secondaries are of the same colour as the back, but somewhat paler.

Near Potchefstroom, December, January, to March (*Ayres*).

Page 304. Insert:—SYLVIA CINEREA (*L.*). Common Whitethroat.

The Common Whitethroat was met with by the late Mr. Andersson at Otniovapa in Damara Land on the 12th of January (cf. Seebohm, Cat. B. vii, p. 10).

In this species the bastard primary is very minute, according to Mr. Seebohm, falling short of the primary-coverts by 0.1 or 0.2 inches.

The chin and throat are much whiter than the rest of the underparts; the wing-coverts, and especially the secondaries, edged with pale chestnut.

Fig. Dresser, B. Eur. ii, pl. 57.

Page 306. NECTARINIA FAMOSA.

Very abundant in the Newcastle district: wintering in the Drakensberg kloofs; Ladysmith, August; common at Richmond Road in December (*B.*, *F.*, and *R.*).

Page 308. Insert:—NECTARINIA BOCAGII, *Shelley*. Bocage's Sun-bird. Senor Anchieta discovered this species near Caconda in Benguela, where it is rare.

It is of the same form and about the same size as *N. famosa*, but of quite a different colour, being in fact a southern form of *N. tacazze* of Abyssinia.

General colour coppery or violet bronze; abdomen black; upper parts and throat shaded with bluish-green. Total length, 8.1 inches; culmen, 0.9; wing, 3.05; tail, 4.2; tarsus, 0.7 (*Shelley*).

Fig. Shelley, Monogr. Nect. pl. 6, fig. 2.

Page 310. Insert:—CINNYRIS OLIVACINUS.

Described by the late Prof. Peters from Inhambane; it is said to be similar to *C. olivaceus*, but smaller.

Page 311. CINNYRIS GUTTURALIS.

Maritzburg: not uncommon in the hot months (*B.*, *F.* and *R.*).

Pantamatenka River (*Holub*).

Page 313. CINNYRIS AFER.

Common in the Rustenberg district (*Ayres*).

Kloofs of the Drakensberg, wintering there in May and June: breeding in August (*B.*, *F.*, and *R.*).

Page 313. Insert:—CINNYRIS LUDOVICENSIS.

Sent from Biballa: native names *Kanjoi* and *Kinbinja* (*Anchieta*).

Captain Shelley unites this species with *C. afer*, but it seems to us not unlikely to be identical with the recently described *C. erikssoni*, of Trimen.

The latter species has been discovered in Damara Land by Mr. Axel Eriksson, for many years the companion of the late Mr. Andersson. It has been named after the discoverer by Mr. Roland Trimen, who writes: "This Sun-bird belongs to Shelley's 'pale metallic group' of the genus *Cinnyris*, and is in colouring almost identical with *C. afer* (L.), but differs strikingly in size, being not larger than *C. chalybeus* (L.), and in the shortness of its beak. In the male

the metallic green is perhaps rather more smooth and brilliant than in *C. afer*, and the scarlet of the breast somewhat lighter; but it is in the *width* of the latter that the bird differs most, the specimens in finest plumage having the belt an inch broad, which is actually wider than the same marking in the much larger *C. afer*. It is further remarkable that the wings are as long as in *C. afer*, viz. 2 in. 6 lin., while in *C. chalybeus* they measure only 2 in. 3 lin. The bill, however, is 1 line shorter than in *C. chalybeus* (culmen 9 lin.) and 5 lines shorter than in *C. afer* (12½ to 13 lin.).

“*C. erikssoni* cannot be confounded with *C. chalybeus*, the latter having such a very narrow scarlet breast-belt; but it is more like *C. chloropygius* (Jard.), a native of all the tropical West-African coast from Senegal to Angola. This last-named bird, however, is much smaller (total length 3 in. 7 lin.), and wants both the blue upper tail-coverts and blue pectoral collar presented by *C. erikssoni*.”

Fig. Trimen, P.Z.S. 1882, pl. 32.

Page 314. CINNYRIS CHALYBEUS.

Sent from Caconda by Senor Anchieta.

Prof. Bocage has described a new species, *C. intermedius*, similar to *C. chalybeus*, but with the upper tail-coverts golden-green instead of steel-blue; the abdomen is paler and more ashy brown, inclining to yellowish-white on the vent and under tail-coverts. Captain Shelley, who has examined the type of the above species, considers it to be the same as *C. chalybeus*.

Rustenberg, May; Umvuli River, September (*Ayres*).

Very common in the Drakensberg, near Newcastle, in midwinter; also breeds (*B.*, *F.*, and *R.*).

Page 316. CINNYRIS AMETHYSTINUS.

We should not be surprised if the two specimens from Caconda recorded by Senor Anchieta turned out to be *C. kirki*, as Prof. Barboza du Bocage speaks of the *back* and rump being of a violet colour with reflections, but does not speak of the metallic upper tail-coverts.

Not uncommon from Durban to Ladysmith, but not seen beyond (*B.*, *F.*, and *R.*).

Page 317. CINNYRIS KIRKI.

Dr. Gadow has united this species to *C. amethystinus*, but, in our opinion, wrongly: and we agree with Captain Shelley that it is a distinct species. The origin of the mistake is no doubt the

specimen of Dr. Bradshaw's in British the Museum, labelled "Zambesi," which has metallic upper tail-coverts, like *C. amethystinus*. Dr. Bradshaw's skins came to the Museum without any localities attached to them, and were all said to have come from the Zambesi; but, as Dr. Bradshaw informed us, he collected all over the Matabele and Makalaka countries, and the specimen in question doubtless came from one of the latter places.

Mr. Ayres collected four adult male specimens on the Umvuli River, in Mashoona Land, in September.

By an oversight Dr. Gadow has given Dr. Bradshaw's example from the Zambesi as the type of *C. kirki*: it should have been Sir John Kirk's specimen which was the type.

Page 317. CINNYRIS FUSCUS.

The only Sunbird met with on the northern border; summer visitor and very common on the Orange River (*Bradshaw*).

"Nylefield," given by Dr. Gadow as a locality for this species, is the name of the collector, not of the place.

Page 318. CINNYRIS TALATALA.

The oldest name for this species is *C. leucogaster* (V). Cf. Shelley, Monogr. Cinnyr. Intr. p. xxxix.

Capangombe; native name *Mariapindo*; Humbe (*Anchieta*).

Common near Rustenberg (*Ayres*).

Palatswie Pan, Bamangwato, June (*F. Oates*).

Page 319. CINNYRIS MARIQUENSIS.

Palatswie Pan, Bamangwato, June; Matje Umschlope, Matabele Land, November; Mangwato, December 27 (*Ayres*).

Page 319. Insert:—CINNYRIS VENUSTUS, *Shaw*.

Met with by Senor Anchieta at Biballa, in Mossamedes.

This small Sunbird comes nearest to *C. leucogaster* (*C. talatala*, Smith) of all the South African species, but has the abdomen and thighs buff. It is a West African bird.

Fig. Shelley, Monogr. Nect. pl. 74, figs. 1, 3.

Page 319. Insert:—CINNYRIS OUSTALETI, *Bocage*. Oustalet's Sun-bird.

This species is one of Senor Anchieta's discoveries in Benguela. He met with it near Caconda, where it was very common.

It is closely allied to *C. leucogaster*, but is to be recognized by its scarlet and yellow pectoral tufts. It has a red border also to the violet-blue feathers on the upper breast. Wing, 2.2 inches.

Fig. Shelley, Monogr. Nect. pl. 72, fig. 1.

Page 322. ANTHOTHEPTES ANCHIETÆ, *Bocage*. Anchieta's Sun-bird.

Common at Caconda, in Benguela, according to Senor Anchieta. It

differs from *A. longuemarii* in having the metallic parts confined to the throat and front half of the crown, and in having a broad band of scarlet down the centre of the chest, and the under tail-coverts also scarlet. The following is Captain Shelley's description: *Adult male*.—Upper parts dusky brown, as well as the sides of the head and neck; feathers of the forehead and front of the crown broadly edged with steel blue glossed with green; lower back and upper tail-coverts shaded with olive; wings dark brown with paler brown edges to the quills; tail-feathers dark brown with very narrow paler edges; chin and throat blackish-brown with broad steel blue edges to the feathers of the throat; chest sulphur-yellow on the sides, with a broad central band of bright scarlet; abdomen and thighs pale olive-yellow, shading into sulphur-yellow towards the centre; under tail-coverts orange-red; under surface of the wings dark brown with pale inner margins to the quills, and with the coverts mottled with ashy white; bill and legs black; iris dark brown. Total length, 4·5 inches; culmen, 0·5; wing, 2·4; tail, 1·6; tarsus, 1·7.

Fig. Shelley, Monogr. Nect. pl. 106.

Page 322. Insert:—*ANTHOTHREPTES LONGUEMARI*, *Less.*

Longuemare's Sun-bird.

Also discovered by Senor Anchieta at Caconda. It is a species hitherto known only from Senegambia and Abyssinia, and Captain Shelley says that the Caconda examples are identical with others from Casamance.

The following descriptions are taken from his "Monograph:"—

Adult male.—Upper parts metallic bluish-violet; wings dark brown; the least series of wing-coverts metallic bluish-violet, with a few of the outermost ones metallic green; median series of wing-coverts narrowly edged with metallic violet; tail dark brown washed with metallic violet, and with edges of metallic violet to the feathers; sides of the head and sides of the neck dark brown; under parts white; chin and throat metallic bluish-violet; pectoral tufts sulphur-yellow; under surface of the wings dark brown, with the coverts white, mottled along the bend of the wing with dark brown; bill brown, paler towards the base of the lower mandible; irides and legs dark brown. Total length, 4·9 inches; culmen, 0·65; wing, 2·9; tail, 2·3; tarsus, 0·7.

Adult female.—Upper parts ashy brown: upper tail-coverts metallic bluish-violet; tail dark brown washed with metallic violet, and with violet edges to these feathers; a broad white eyebrow; sides

of the head and neck and the wings brown; quills slightly edged with yellowish-olive; under parts white, shaded with yellow on the abdomen, flanks, and under tail-coverts. Total length, 4·7 inches; culmen, 0·6; wing, 2·6; tail, 2·1; tarsus, 0·7.

Fig. Shelley, Monogr. Nect. pl. 108.

Page 322. *ZOSTEROPS CAPENSIS*.

Common near Newcastle and universally distributed throughout Natal.
(*B., F., and R.*).

Page 324. *ZOSTEROPS PALLIDA*.

Orange River; common (*Bradshaw*).
Rustenberg (*Ayres*).

Page 325. *ZOSTEROPS VIRENS*.

Rustenberg (*Ayres*).

Page 325. *ZOSTEROPS SENEGALENSIS*.

Caconda in Benguela; native name *Hoio* (*Anchieta*).

Page 326. *ZOSTEROPS ATMORII*.

The above title the editor has recently suppressed (*Cat. B. ix, p. 169*), as he believes it to be identical with *Z. poliogaster* of Heuglin from N. E. Africa.

Page 327. *ANTHOSCOPIUS CAPENSIS*.

Shot on the 15th of May on the rocky ranges near Potchefstroom (*Ayres*).

Rustenberg; common (*Ayres*).

Spalding's, Hart River (*Ayres*); nesting at Boatlanami Pan (*Jameson*).
Not very common along the Orange River (*Bradshaw*).

Page 327. *ANTHOSCOPIUS CAROLI*.

Considered by Dr. Gadow (*Cat. B. viii, p. 71*) to be a sub-species or race of *A. capensis*. The two birds are thoroughly and specifically distinct, as is shown by Dr. Gadow's plate I, bad though the latter may be.

Ganyani River. Matabele name *N'kilo* (*Ayres*).

Fig. Gadow, *Cat. B. viii, pl. i, fig. 1*.

Page 329. Insert:—*ANTHOSCOPIUS FLAVIFRONS* (*Cass*).

Yellow-fronted Penduline Titmouse.

Found by Senor Anchieta at Caconda.

This is a West African species hitherto supposed to be confined to Gaboon. It is distinguished from the African Penduline Titmice

by its bright yellow forehead, the rest of the upper surface being olive-green tinged with yellow.

Fig. Cass. Pr. Philad. Acad. 1858, pl. i, fig. 2.

Page 329. PARUS AFER.

Caconda in Benguela: native name *Caxitico* (*Anchieta*). Benguela (*Monteiro*).

Orange River; common (*Dr. Bradshaw*).

Common amongst the wooded hillsides of the Magaliesbergen (*Ayres*).

Not uncommon in Mashoona Land (*Ayres*).

Page 331. PARUS NIGER.

Common about Rustenberg (*Ayres*).

Limpopo River; a tolerably common bird throughout the bush country; equally plentiful on the Umvuli River, Mashoona Land, in September and October (*Ayres*).

Camperdown, near Pietermaritzburg, December (*Reid*).

Page 332. Insert:—PARUS RUFIVENTRIS, *Bocage*.

Rufous-bellied Titmouse.

Obtained by *Anchieta* at Caconda in Benguela: native name *Caxito*.

Easily distinguished from *P. afer* by its black ear-coverts and rufous belly. Wing, 3·35; tarsus, 0·8.

Fig. *Bocage*, Orn. Angola, pl. x, fig. 1.

Page 332. Insert:—SALPORNIS SALVADORII (*Bocage*).

Salvadori's Creeper.

This remarkable bird, which we believe *Dr. Gadow* to be perfectly right in referring to the genus *Salpornis*, is the representative in Africa of a rare Indian form of Creeper, *Salpornis spilonota*. *Senor Anchieta* procured the species first at Caconda in Benguela, and it was met with by *Mr. Jameson's* expedition on the Ganyani River in September.

The following is a translation of *Professor Bocage's* original description as given by *Dr. Gadow* (*Cat. B. viii, p. 330*):—

Above varied with rufous, white, and black; throat dull whitish with small black spots; breast and abdomen more rufescent, with scaly black margins; upper tail-coverts, as well as the under tail-coverts, whitish banded with black; ear-coverts blackish; wing-coverts and quills black, marked on both margins with rufous-white spots; three outer primaries with a slight whitish edging on the outer web; tail-feathers black, marked with three interrupted bands of white, and with a white apical spot; "bill dusky

brown; tarsi and feet ashy brown" (*T. Ayres*). Total length, 5 inches; bill, 0·55; wing, 2·85; tail, 1·65; tarsus, 0·6.

Fig. Bocage, Orn. Angola, pl. x, fig. 2.

Page 332. *PARISOMA SUBCÆRULEUM*.

Ladysmith, August (*Reid*).

Very common in the bush along the Orange River (*Bradshaw*).

Page 334. *PARISOMA LAYARDI*.

Scarce on the Orange River, and not found so near water as *P. subcæruleum* (*Bradshaw*).

Page 334. Insert:—*PARISOMA PLUMBEUM* (*Hartl.*). Plumbeous Flycatcher.

Capt. Shelley has shown me two specimens collected by Mr. T. E. Buckley in Suazi Land, which are identical with others from Senegambia and N. E. Africa. Capt. Reid's supposed specimen of *P. layardi*, recorded as being procured by him on the 26th of December between Durban and the Umgeni River, also belongs to the present species.

P. plumbea differs from *P. subcæruleum* in its white or fulvous under tail-coverts, as in *P. layardi*, but it may easily be told from the latter species by the absence of spots on the breast.

Page 336. *HYLIOTA VIOLACEA*.

Considered to be distinct from the true *H. violacea*, from Gaboon, and named *H. barbozæ* by Dr. Hartlaub (*J. f. O.* 1883, p. 329).

Page 336. Insert:—*HYLIOTA AUSTRALIS*, *Shelley*. Mashoona Flycatcher.

This is an unmistakable species, only to be confounded with *H. barbozæ*, of Benguela. It was discovered during Mr. Jameson's expedition to Mashoona Land. Mr. Ayres says it was exceedingly scarce, frequenting the upper parts of high trees, amongst the buds and young leaves of which it actively searched for insects.

Captain Shelley gives the following description of the species:—

Upper parts and sides of the head dull black, slightly glossed with metallic lilac; across the lower back a broad band of white feathers tipped with black, much hidden by the overlapping of the black feathers, giving a mottled appearance to this part; median and greater wing-coverts entirely white, with the exception of a few of the outer ones; secondaries with a white base, increasing in breadth towards the innermost ones; inner webs of the quills with white edges; under wing-coverts white; two centre tail-feathers entirely black, the others more or less narrowly and partially edged with white on both webs; the outer feather has the white extending over the entire basal portion of the external web for

about three quarters of its length; under surface of the body ochraceous yellow, deeper on the breast and paler on the vent and under tail-coverts, the latter being almost white: thighs white in front and black behind. Total length, 4.6 inches; culmen, 0.4; wing, 2.8; tail, 2; tarsus 0.75.

Fig. Shelley, *Ibis*, 1882, pl. vii, fig. 1.

Page 336. CHLOROPETA ICTERINA.

Caconda (*Anchieta*).

Page 338. MUSCICAPA GRISOLA.

Caconda (*Anchieta*).

Potchefstroom, January: moulting (*Ayres*).

Quae Quae River, October 22 (*Ayres*).

Blauw Kranz River between Colenso and Estcourt, November (*Reid*).

In summer on the Orange River; not very plentiful (*Bradshaw*).

Page 338. Insert:—MUSCICAPA FINSCHII, *Bocage*. Finsch's Flycatcher.

Discovered at Caconda by Senor Anchieta. Professor Bocage says that it is like *M. grisola* and of the same size, with the throat and breast marked with brown streaks *en chevron*.

Page 339. MUSCICAPA UNDULATA.

Should be placed in the genus *Alseonax*, which has a much broader bill than *Muscicapa*. It should be called *Alseonax adusta* (Boie). (Cf. Sharpe, *Cat. B.* iv, p. 129.)

Page 339. Insert:—ALSEONAX MINIMA (*Heugl*).

Von Heuglin's Flycatcher.

This Abyssinian species has occurred to Senor Anchieta at Caconda.

It is described by Von Heuglin as follows:—

Size very small; above greyish dusky; forehead, lores, eyelids and belly dull dusky white, the sides of the neck, breast, flanks and under wing-coverts shaded with the same colour as the back; quills internally towards the base dull buffy white; wing and tail-coverts externally margined with pale rufous; bill short, depressed, dusky black, bluish flesh-colour at the base; feet bluish-black; iris dusky. Total length, 4" 3"; bill from front, 3½"; wing, 2" 4½"; tail, 1" 9"; tarsus, 5½".

Fig. Heuglin, *Orn. N. O. Afr.* taf. xviii, fig. 1.

Page 345. Insert:—PLATYSTIRA MENTALIS, *Bocage*.

White-chinned Flycatcher.

Caconda (*Anchieta*).

Described by Professor Bocage as resembling *P. peltata*, but very much larger.

Page 346. *BATIS CAPENSIS*.

The name *Batis* having been pre-occupied in Botany, it follows that the genus *Pachyprora* must be employed, and the species will stand as *Pachyprora capensis*.

Universally distributed, and common in every wooded kloof in the Newcastle district (*B., F., and R.*).

Page 348. *BATIS MOLITOR*.

Must be called *Pachyprora molitor*.

Commonest of the Flycatchers about Rustenberg (*Ayres*).

Common on the Umvuli River, Mashoona Land (*Ayres*).

Not met with in the Newcastle district; Ladysmith, August; Colenso, November (*Reid*).

Very plentiful along the Orange River (*Bradshaw*).

Page 349. *BATIS PRIRIT*.

Must be called *Pachyprora pririt*.

Tamasetse (*Holub*).

Page 350. *BATIS MINULLA*.

Must stand as *Pachyprora minulla*.

Native name at Biballa, *Kaloqueio* (*Anchieta*).

Fig. Bocage, Orn. Angola, pl. iii.

Page 351. *LANIOTURDUS TORQUATUS*.

Capangombe (*Anchieta*).

Page 352. *STENOSTIRA SCITA*.

Very scarce in the Transvaal, but a pair are very occasionally to be seen in winter (*Ayres*).

Rustenberg (*Ayres*).

Frequent in the kloofs at the foot of the Drakensberg in July, August and September (*B., F., and R.*).

Occasionally met with on the Orange River, but not at all common (*Bradshaw*).

Page 352. *TERPSIPHONE CRISTATA*.

The proper name for this species is *Terpsiphone perspicillata* (*Swains.*).

Umvuli River: scarce in this part of Mashoona Land (*Ayres*).

Drakensberg Kloofs, near Newcastle, October: nesting at Colenso, November, and at Camperdown in December (*B., F., and R.*).

Northern Bamangwato; Central Zambesi; West Matabele Land (*Holub*).

Page 355. *ELMINIA ALBICAUDA*, *Bocage*. White-tailed Blue Flycatcher,
Sent from Caconda by Senor Anchieta. Native name *Okicecene*.

Light blue; abdomen white, washed with rose-colour; outer tail-feathers white, the three next broadly tipped with white, becoming less towards the centre of the tail. Total length, 5·9 inches; wing, 2·5; tail, 3·3; bill, 0·35; tarsus, 1·1.

Page 357. Insert:—*PSALIDOPROCNE ANTINORII*, *Salvad.*

Antinori's Rough-winged Swallow.

In a collection recently presented by Sir John Kirk to the British Museum, consisting of birds collected by him during the first Livingstone expedition, there is a specimen of this new Swallow, which was discovered in Shoa by the late Marquis Antinori. It differs from *P. holomelæna* in its white under wing-coverts.

Page 357. Insert:—*CHELIDON URBICA* (*L.*). House-Martin.

The only occurrence of this European bird in South Africa is that noted by Mr. Ayres, who met with the species on the Quae Quae River in October, during Mr. Jameson's expedition to Mashoona Land. He writes:—"For two or three days, from about 9 to 10 A.M. considerable numbers of Martins were flying up the river, at a great height, only now and then one coming within range; they were apparently migrating."

This species is dark blue with a white rump, and is white underneath. It may always be recognized by its white-feathered tarsi and toes.

Fig. Dresser, B. Eur. iii, pl. 162.

Page 357. *PETROCHELIDON SPILODERA*.

Very numerous in the Newcastle district, breeding in October (*B., F., and R.*).

Page 358. *COTYLE CINCTA*.

Cotyle must, to be correct, be written *Cotile*.

This species has been met with by Senor Anchieta at Caconda in Benguela.

Mashoona Land (*Ayres*).

First seen near Newcastle in October (*B., F., and R.*).

Page 358. Insert:—*COTILE RIPARIA* (*L.*). Common Sand-Martin.

This European species has been discovered by Mr. Ayres in the neighbourhood of Potchefstroom. It is of about the same size as *C. paludicola*, with which it consorts, but may be distinguished from that species by its white throat and dark brown chest band; it may also be recognized by the little tuft of feathers on the back of the basal part of the tarsus.

Mr. Ayres writes: "One morning, very early, I went down to the river with my rod to fish, and sitting quietly near an extensive bed of reeds and rushes, I saw many hundreds of these little Martins leave their roosts among the rushes, all together, just as the sun rose; about a quarter of an hour later many hundreds of *C. paludicola* left the same patch of reeds, or others close by, all together, or nearly so; at this time the two species were not mixed, but at other times of the day they are nearly always together, coursing for insects."

Fig. Dresser, B. Eur. iii, pl. 163

Page 360. COTILE FULIGULA.

Potchefstroom, January: one of the scarcest of the Swallow tribe in these parts (*Ayres*).

Tolerably common in the Rustenberg districts (*Ayres*).

A familiar species throughout the year in the upper part of the colony: breeds in October and November (*B., F., and R.*).

Remains throughout the year on the Orange River; is most numerous near rocky hills, where it nests under overhanging rocks: a few pairs breed at Renhardt (*Bradshaw*).

Page 361. COTILE PALUDICOLA.

A permanent and most abundant resident in the neighbourhood of Newcastle (*B., F., and R.*).

An early arrival, and stays late: common on the Orange River (*Bradshaw*).

Page 362. HIRUNDO RUSTICA.

First seen in the Newcastle district on the 19th of October; much more numerous down country; large flocks seen at Richmond Road and Durban (*B., F., and R.*).

Very plentiful on the Orange River (*Bradshaw*).

Page 364. HIRUNDO ALBIGULARIS.

Appeared at Newcastle in September in numbers, and noted all the way down to the coast: numerous at Richmond Road in December (*B., F., and R.*).

Page 364. Insert: HIRUNDO NIGRORUFA, *Bocage*.

Rufous and Black Swallow.

Found at Caconda by Senor Anchieta.

Black with a steel-blue gloss above, with the rump of the same colour as the back; below cinnamon rufous. Total length, 6·4 inches; wing, 4·1; outer tail-feather, 2·15; centre tail-feather, 1·55; culmen, 0·45; tarsus, 0·55.

Page 366. *HIRUNDO DIMIDIATA.*Caconda (*Anchieta*)Rustenberg, May, July; common during the South African winter (*Ayres*).Umvuli River, August. Native name *N'konjane* (*Ayres*).An early arrival, plentiful, nesting in every house (*Bradshaw*).Page 368. *HIRUNDO FILIFERA.*

The oldest name for this Swallow appears to be *Hirundo smithii* of Leach, described from specimens procured on the Congo by Tuckey's expedition.

Page 368. *HIRUNDO GRISEOPYGA.*Caconda (*Anchieta*).Quae Quae River, Mashoona Land, October (*Ayres*).Page 370. *HIRUNDO SEMIRUFA.*

According to Mr. Gurney, the young bird has the outer tail-feathers much shorter than in the adult; the under surface of the body is a paler rufous, and the upper surface brownish-black, instead of dark blue with a metallic lustre as in the old bird.

Mashoona Land (*Ayres*).Page 370. Insert:—*HIRUNDO RUIFIGULA, Bocage.* Bocage's Swallow.

Professor Barboza du Bocage has described this species from Caconda, where, according to Senor Anchieta, it is called *Miapia*.

He states that in the style of colouration it resembles *H. semirufa*, but is very much smaller.

Page 371. *HIRUNDO CUCULLATA.*

Mashoona Land, September, October, and December seen, but no specimens procured (*Ayres*).

Visited the upper portions of Natal rather later than *H. albigularis*; seen on October 2, from which date it was extremely abundant and nesting (*B., F., and R.*).

Scarce along the Orange River, but plentiful further south in the colony. Nests near Renhardt, a village seventy miles south of the Orange River (*Bradshaw*).

Page 373. *HIRUNDO PUELLA.*Mossamedes (*Sala*). Coroca River and Huilla (*Anchieta*).Umvuli River, Mashoona Land, October 1st (*Ayres*).Page 374. *LANIUS COLLARIS.*

One of the commonest birds all over the Magaliesbergen (*Ayres*).

Spalding's, Hart River, February (*Ayres*).

Extremely abundant everywhere from Durban to the Transvaal: breeding (*B., F., and R.*).

Page 375. LANIUS SUBCORONATUS.

“Not so common on the Orange River as *L. collaris*, but not met with in any other part of this country during my travels” (*Bradshaw*).

Page 377. Insert:—LANIUS SOUZE, *Bocage*. Souza's Shrike.

Caconda: native name, *Numbotue (Anchieta)*. Of the same group as *Lanius collaris*, but distinguished by having the crown and mantle light grey.

Page 378. ENNEOCTONUS COLLURIO.

Tatin River, December 7 and 8: common (*Ayres*).

Blauw Kranz River and Weston (Mooi River in November): common at Richmond Road, near Pietermaritzburg, and at Durban in December (*B., F., and R.*).

Rather scarce on the Orange River: very common on the Zambesi (*Bradshaw*).

Page 380. UROLESTES MELANOLEUCUS.

Rather common throughout the bush-veldt from Rustenberg into the Mashoona country, where it was breeding (*Ayres*).

Page 383. LANIARIUS RUBIGINOSUS.

A pair obtained in a kloof on the Drakensberg, near Newcastle, in August (*B., F., and R.*).

Page 385. LANIARIUS GUTTURALIS.

Extremely common near Newcastle: numerous at Colenso, nesting in November, and at Ladysmith (*B., F., and R.*).

Rather scarce along the Orange River, and not met with further north (*Bradshaw*).

Page 387. LANIARIUS POLIOCEPHALUS.

Umvuli River, Mashoona Land: exceedingly scarce (*Ayres*).

Page 389. LANIARIUS ATROCOCCINEUS.

Tatin River, Macloutsi River, Palatswie Pan and Chakanie Pan. Matabele name *Billi-bonvu* (*Ayres*).

Local near Rustenberg (*Ayres*).

Page 391. LANIARIUS MAJOR.

Rustenberg (*Lucas: teste Holub*).

Page 392. LANIARIUS CUBLA.

Pretty common in Mashoona Land (*Ayres*).

Ladysmith, August; near Newcastle, August (*B., F., and R.*).

Page 392. Insert:—LANIARIUS HAMATUS, *Hartl.*

This species was discovered by the late Captain Speke in Uniamenzi, and has been said to have been obtained by Dr. Holub at Linokana in the Marico district, Western Transvaal.

Of the South African Bush Shrikes, it would appear to come nearest to *L. cubla*, but has the whole of the upper wing-coverts, scapulars and quills entirely black, and the under surface of the body pure white.

Page 393. LANIARIUS FERRUGINEUS.

Not uncommon in dense thickets near Rustenberg (*Ayres*).

On the Drakensberg near Newcastle: near Pietermaritzburg (*B., F., and R.*).

Page 394. LANIARIUS ERYTHROPTERUS.

Common in the bush between Durban and the Umgeni River (*B., F., and R.*).

Page 394. LANIARIUS SENEGALUS.

Rustenberg, not uncommon (*Ayres*).

Page 396. LANIARIUS TRIVIRGATUS.

Rustenberg district (*Ayres*).

Pantamatenka; common between the Zambesi and Lake N'gami (*Holub*).

Page 397. NILAUS BRUBRU.

Generally distributed but not very common in the Rustenberg district (*Ayres*).

Very common on the Orange River (*Bradshaw*).

Page 398. Insert:—NILAUS AFFINIS, *Bocage*. Benguela Bush Shrike.

Discovered by Anchieta at Caconda. Native names *Caxingo-anguluwi* and *Kitikenene*.

Distinguished from *N. brubru* by the absence of rufous on the sides of the body.

Page 398. CAMPOPHAGA NIGRA.

Rustenberg (*Lucas: teste Holub*).

West Matabele Land (*Holub*).

Page 400. Insert:—GRAUCALUS PECTORALIS, *J. and S.*

Black-breasted Cuckoo Shrike.

Mr. Andersson obtained a single specimen at Ovaquenyama in June, and Senor Anchieta has met with the species once at Caconda.

We have likewise seen one collected by Dr. Bradshaw on the Zambesi, and a specimen was obtained by Mr. Jameson's expedition on the Umvuli River in Mashoona Land.

Distinguished by the light grey upper surface with no black on the forehead; the lores, sides of face, throat, and fore-neck blackish slate-colour, the rest of the under surface white. Total length 9 inches; wing, 5.65. In the female the whole under surface is white with a crescent-like band of clear grey on the fore-neck.

Fig. Jard. and Selby, *Ill. Orn.* pl. 57 (male). Sharpe, *P.Z.S.* 1870, pl. 4 (female).

Page 400. *EUROCEPHALUS ANQUITIMENS.*

Tatin, December (*Ayres*).

Between the Molapo and Zambesi Rivers (*Holub*).

Page 401. *BRADYORNIS MARIQUENSIS.*

Macloutsi River, December (*Ayres*).

Page 402. Insert:—*BRADYORNIS INFUSCATA.*

Great Wood Shrike.

Saxicola infuscata of p. 233 of this work.

Spalding's, Hart River. This species has a Shrike-like appearance, and frequents the low bushes near the river, and seems invariably to alight on the tops of them (*Ayres*).

Page 402. Insert:—*BRADYORNIS MURINA, F. and H.*

Mouse-coloured Wood Shrike.

The original specimen was collected by Senor Anchieta at Caconda, in Benguela; it seems to us probable that it is allied to *B. oatesi*, if indeed it is not identical with that species.

Page 404. *BRADYORNIS SILENS.*

Kanye, Matabele Land (*Ayres*).

Tati River (*Holub*).

Page 406. *PRIONOPS TALACOMA.*

Sparingly found throughout the wooded parts of the Rustenberg district (*Ayres*).

Not common about the Umvuli, more plentiful at the Tatin River in the Matabele country (*Ayres*).

Page 407. *SIGMODUS RETZII.*

Umvuli River: scarce (*Ayres*).

Page 408. *BUCHANGA ASSIMILIS.*

Only met with once by Mr. Ayres near Potchefstroom. He states that it was a common bird from the Umvuli River to the Transvaal, and he found it breeding at Matje Umschlope.

Linokana, Western Transvaal; Chobè River, Zambesi (*Holub*).

Met with all over the country from the south coast to the Zambesi.

They are fond of attending grass fires in common with Herons, Rollers, Hornhills, and Bee-eaters, to catch insects flying from the flames, and they often almost dart into the fire (*Bradshaw*).

Page 411. *DICRURUS LUDWIGII*.

Mashoona Land, September and October: seen but not procured (*Ayres*).

Page 413. *ORIOLUS LARVATUS*.

Not uncommon in the wooded parts of the Rustenberg Mountains (*Ayres*).

Umvuli River, August (*Ayres*).

Pantamatenka, August (*Holub*).

Page 412. *ORIOLUS NOTATUS*.

Shy, but not uncommon in Mashoona Land (*Ayres*).

This is probably the species recorded by Herr Von Pelzeln under the name of *O. auratus* from Pantamatenka and Yoruah in Eastern Bamangwato, collected by Dr. Holub.

Page 415. *HETEROCORAX CAPENSIS*.

Potchefstroom (*Ayres*).

Universally distributed between Maritzburg, or rather Howick (about twelve miles up the road), and Newcastle, breeding in the latter locality in September and October (*B., F., and R.*).

Linokana, Marico district, Western Transvaal (*Holub*).

Very common along the Orange River (*Bradshaw*).

Page 416. *CORVUS SCAPULATUS*.

Mashoona Land (*Ayres*).

Scattered throughout Natal but not observed below Howick; bred near Newcastle in October; especially abundant between Colenso and Estcourt, but far less numerous to the north and south of that district (*B., F., and R.*).

Common along the Orange River (*Bradshaw*).

Page 421. *DILOPHUS CARUNCULATUS*.

Not uncommon near Rustenberg (*Ayres*).

Near Newcastle in December (*B., F., and R.*).

Pantamatenka (*Bradshaw: teste Holub*).

Not very common on the Orange River: did not meet with it on the Zambesi (*Bradshaw*).

Page 418. *BUPHAGA AFRICANA*.

Pantamatenka River (*Holub*).

Page 420. BUPHAGA ERYTHORHYNCHA.

Near Durban: does not apparently occur any great distance inland
(*B., F., and R.*).

Page 423. LAMPROTORNIS MEYESI.

Sibanani (*Holub*).

Page 424. LAMPROTORNIS AUSTRALIS.

Mr. Ayres saw a few in Bamangwato, near Kama's town.

Page 425. LAMPROCOLIUS PHENICOPTERUS.

Blauw Kranz, November; Camperdown, December (*B., F., and R.*).

Eastern Bamangwato and West Matabele Land (*Holub*).

Common on the Orange River (*Bradshaw*).

Page 426. LAMPROCOLIUS SYCOBIUS.

According to Captain Shelley this species is identical with *L. chalybeus*
(*H. and E.*) from Abyssinia.

Umvuli River, August and September. Matabele name *Iqueeze*
(*Ayres*).

Central Transvaal: Bechuana Land (*Holub*).

Fig. Holub and Von Pelz. Beitr. Orn. Südafr. taf. iii.

Page 428. PHOLIDAUGES VERREAUXI.

Mashoona Land, September and October (*Ayres*).

Page 429. SPREO BICOLOR.

A very familiar bird in the upper portions of Natal, remaining in flocks
even after the breeding season has commenced. Nesting in
numbers on the Incandu River near Newcastle (*B., F., and R.*).

Common in the eastern part of the Colony and in the Transvaal, but
not met with on the Orange River, on the northern border, nor
seen in the Zambesi region (*Bradshaw*).

Page 430. AMYDRUS CAFFER.

Rather numerous about Kakamas: not seen anywhere else, not even
at Upington, only seventy miles away along the river (*Bradshaw*).

Page 431. AMYDRUS MORIO.

Common in flocks in rocky places in Natal, especially in the rocky
districts (*B., F., and R.*). Rustenberg (*Lucas*). Linokana in the
Marico district (*Holub*).

Page 433. HYPHANTURGUS OLIVACEUS.

Breeding near Newcastle in the middle of October: not often observed
in the winter months (*B., F., and R.*).

Rustenberg (*Ayres*).

Zambesi (*Holub*).

Page 437. *HYPHANTORNIS SPILONOTUS*.

Tugela River, near Colenso, November 21 (*Reid*).

Page 439. *HYPHANTORNIS VELATUS*.

Rustenberg (*Ayres*).

In September in small reedy vleys between Newcastle and the Drakensberg; breeding near Ladysmith, Colenso and the Blauw Kranz River (*B., F., and R.*).

Page 439. *HYPHANTORNIS VITELLINUS*.

Rustenberg (*Ayres*).

Page 443. *HYPHANTORNIS SUPERCILIOSUS* (*Shelley*).

Buff-browed Weaver-bird.

This West African species, which ranges from the Gold Coast to the Congo, has occurred at Caconda, where Senor Anchieta has found it.

In the winter plumage it may be easily recognized by the broad brownish buff eyebrow contrasting with the blackish crown, which tends to brownish on the nape. In the summer plumage the eyebrow is yellow, and the cheeks, part of the ear-coverts, chin, and upper throat are black.

Page 443. Insert:—*HYPHANTORNIS TEMPORALIS*, *Bocage*.

Benguela Weaver-bird.

Caconda (*Anchieta*).

Described by Professor Bocage as being similar to the Abyssinian *H. guerini*, but with the abdomen and top of head brighter yellow.

Page 443. *HYPHANTORNIS NIGRIFRONS*.

Hart River; Linokana; Orange Free State; Griqualand West; Bechuana Land; Transvaal (*Holub*).

Page 444. *MALIMBUS RUBRICEPS*.

Captain Shelley has named the bird procured by Mr. Jameson *Sharpia ayresii*, and the note of Mr. Ayres of course belongs to the same species.

Page 444. Insert:—*SHARPIA AYRESII*, *Shelley*. Ayres' Weaver-bird.

Captain Shelley writes: "This species appears to be most nearly allied to *Sharpia angolensis*. The black border to the forehead, and the absence of any yellow on the rump, upper tail-coverts and abdomen in the present species, appear to me to be more likely specific than sexual differences."

"*Adult male*.—Head, neck, and front of the chest yellow, or rather strongly marked with yellow, the ground colour of the crown and back of the neck being ashy, and of the throat, ear-coverts and chest white; the forehead is margined with blackish brown, gradually shading into yellow, this dark stripe extending backwards to above the centre of the eye; back uniform ashy brown, with the mantle slightly washed with yellow; wings and tail brown, the wing-coverts and inner secondaries edged with buffish yellow, the remainder of the quills and tail-feathers edged with bright yellow; under parts white, shading into yellow on the throat and front of the chest; under surface of the wings brown, with the inner margins of the quills and the coverts white, the latter slightly mottled with ashy brown and yellow. Total length in the skin, 5·2 inches; culmen, 0·65; wing, 3·1; tail, 2; tarsus, 0·75."

Fig. Shelley, *Ibis*, 1882, pl. vii, fig. 2.

Page 447. *PLOCEPASSER MAHALI*.

I met with a small colony of these birds in a valley of thorn trees several miles south of the Orange River when coming down from the border in May, 1882. I have never seen them south of Bamangwato before (*Bradshaw*).

Page 449. *AMBLYOSPIZA ALBIFRONS*.

Near Newcastle in December, obtained by Lieutenant Giffard (*B., F., and R.*).

Page 449. *PHILETERUS SOCIUS*.

In central South Africa from the Orange River to 24° S. Lat. (*Holub*). Very common on the Orange River, building their enormous nests in the Kameel Thorn trees. They extend some distance into the Colony. Not found on the Zambesi (*Bradshaw*).

Page 451. *SPOROPIPES SQUAMIFRONS*.

Vaal River; and three miles from Potchefstroom (*Ayres*). Very common on the Orange River; also plentiful at the Tati River (*Bradshaw*).

Page 452. *VIDUA VERREAUXI*.

Here and there in Central South Africa from 23° S. Lat. northwards: West Matabele Land and Makalaka country (*Holub*).

Page 453. *VIDUA REGIA*.

Vaal River, northwards to the Zambesi (*Holub*).

Page 453. *VIDUA PRINCIPALIS*.

Very abundant all over Natal (*B., F., and R.*).

- Very local; met with at Upington on the Orange River; summer visitor (*Bradshaw*).
- Page 455. *VIDUA ARDENS*.
Generally distributed and fairly common in Natal (*B., F., and R.*).
- Page 457. *ORTYGOSPIZA POLYZONA*.
Rustenberg, common (*Ayres*).
Very common round Newcastle, winter and summer (*B., F., and R.*)
- Page 458. *CHERA PROGNE*.
One of the commonest birds in the upper portion of Natal, but not observed in any great numbers below Howick, or rather Riet Spruit, a few miles lower down on the Pietermaritzburg road; Richmond River Downs in December (*B., F., and R.*).
Linokana, Western Transvaal (*Holub*).
- Page 461. *PENTHETRIA AXILLARIS*.
Extremely common at Richmond Road in December; Durban; a single specimen at Calleba's Laagte, about twenty-five miles from Newcastle, but not noted further north; not seen north of the foot of the Kaarkloof (*B., F., and R.*).
- Page 462. *PYROMELANA ORYX*.
Molapo; Barolong Land (*Holub*).
Very local in South Africa, being plentiful in some places and scarce in others: have met with it from Cape Town to the Zambesi (*Bradshaw*).
- Page 463. *PYROMELANA CAPENSIS*.
Common near Newcastle (*B., F., and R.*).
Only seen in the more settled parts of the colony; found in the reeds on the Orange River, making their nests on the islands (*Bradshaw*).
- Page 467. *AMADINA ERYTHROCEPHALA*.
Very common on the Orange River; have met with it as far south as Renhardt (*Bradshaw*).
- Page 469. *ESTRELDA SUBFLAVA*.
A small flock met with near Newcastle in September; Richmond Road in December (*Butler*).
- Page 469. *ESTRELDA DUFRESNII*.
Rustenberg (*Ayres*).
- Page 470. *ESTRELDA ASTRILD*.
Everywhere common in Natal (*B., F., and R.*).
Not very common on the Orange River (*Bradshaw*).

Page 473. URÆGINTHUS CYANOÛASTER.

Natal; Ladysmith, August; Colenso and Blauw Kranz, November
not observed in the Newcastle district (*B., F., and R.*).

Hart's River, Mooi, Limpopo and the Zambesi Rivers (*Holub*).

Page 474. URÆGINTHUS GRANATINUS.

Rustenberg (*Ayres*).

Vaal River northwards to the Zambesi (*Holub*).

Page 478. PASSER ARCUATUS.

First observed near Newcastle in September; not seen there in mid-
winter, but probably remains there the whole year round (*B., F.,
and R.*).

Very common along the Orange River (*Bradshaw*).

Page 480. PASSER DIFFUSUS.

Ingagane Drift, Natal, in July; Ladysmith, in August; Dundee, in
October; numerous and generally distributed in November from
Ladysmith, as far down as Howick (*B., F., and R.*)

Very common along the Orange River (*Bradshaw*).

Page 841. PETRONIA PETRONELLA.

Rustenberg (*Ayres*).

Page 482. POLIOSPIZA GULARIS.

Common about Rustenberg (*Ayres*).

Colenso, Natal, November 21 (*Reid*).

Page 484. CRITHAGRA ANGOLENSIS.

Tolerably common on the Orange River. Food, seeds. Iris brown;
bill, brownish; legs flesh-colour (*Bradshaw*).

Page 484. CRITHAGRA ICTERA.

Pretty common about Rustenberg (*Ayres*).

Page 487. CRITHRAGA BUTYRACEA.

Very common. Found about three miles from the Orange River.
Food, insects. Iris brown; bill brown; legs blackish-brown
(*Bradshaw*).

Page 487. CRITHAGRA SCOTOPS.

Not uncommon in the kloofs on the Drakensberg, near Newcastle, in
August (*B., F., and R.*).

Page 488. SERINUS CANICOLLIS.

Common both in winter and summer in Natal, breeding in October
and November (*B., F., and R.*).

Page 489. FRINGILLARIA CAPENSIS.

Rocky ranges near Potchefstroom (*Ayres*).

Not uncommon in the Newcastle district in July and October (*B., F., and R.*).

Griqua Land West: Orange River State (*Holub*).

Page 489. FRINGILLARIA IMPETUANI.

This species is not uncommon along the Orange River (*Bradshaw*).

Page 490. FRINGILLARIA TAHAPISI.

Not uncommon about Rustenberg (*Ayres*).

Newcastle and Ladysmith in Natal, in June, July, and August (*B., F., and R.*).

Page 491. FRINGILLARIA FLAVIVENTRIS.

Very common throughout the wooded parts of the Magaliesbergen (*Ayres*).

Guinea-fowl Kop, near Ladysmith on the 21st of August (*Reid*).

Page 493. PYRRHULAUDA SMITHII.

Mangwato, December (*Ayres*).

Page 496. CERCOTILAUDA RUFULA.

Extremely abundant near Newcastle, breeding (*B., F., and R.*)

Page 499. ALEMON SEMITORQUATA.

A very abundant species on the rocky "kopjes" in Natal (*B., F., and R.*).

Page 511. TEPHROCORYS CINEREA.

Found in abundance throughout the colony of Natal, but somewhat local (*B., F., and R.*).

Page 513. MIRAFRA APIATA.

Umvuli River, September; Matabele name *Quatji* (*Ayres*).

Page 513. Insert: MIRAFRA ANGOLENSIS, *Bocage*. Angola Lark.

Two specimens were sent from Caconda by Senor Anchieta. We have unfortunately not been able to make out the species without seeing a specimen.

Page 519. MIRAFRA AFRICANA.

Rustenberg (*Ayres*).

Kanye, Matabele Land, January 8 (*Ayres*).

Page 524. MIRAFRA NÆVIA.

Rustenberg (*Ayres*).

Matje Umschlope, November (*Ayres*).

Page 528. *MIRAFRA CHENIANA*.

. Near Potchefstroom (*Ayres*).

Page 530. *MACRONYX CAPENSIS*.

"Common in the south-eastern parts of the colony and the Transvaal, but not found along the northern border of the colony: it prefers grass-country. I have not seen it on the Zambesi" (*Bradshaw*).
Southern and Western Transvaal: Linokana (*Holub*).

Page 533. *MACRONYX AMELLE*.

Pantamatenka River (*Dr. Bradshaw; teste Holub*).

Page 534. *ANTHUS CAFFER*.

Potchefstroom and Rustenberg districts (*Ayres*).

Page 539. *ANTHUS BRACHYURUS*.

Found sparsely among the open glades of the hill-sides in the Rustenberg district (*Ayres*).

Page 540. *ANTHUS LINEIVENTRIS*.

Rustenberg (*Ayres*).

Page 544. Insert:—*ANTHUS TRIVIALIS* (*L.*).

Tree Pipit.

In his "Svenska Foglarna," Professor Sundevall has recorded a specimen as having been shot on the Limpopo River between lat. 25° and 26° S. (cf. Malmgren, *Ibis*, 1867, p. 230). The following is a description of the adult male in breeding plumage. General colour above sandy brown, streaked with black, a little more narrowly on the head, all the feathers mesially centred with black streaks; the mantle rather lighter sandy buff than the rest of the upper surface; rump rather more uniform than the back; upper tail-coverts sandy brown edged with ashy fulvous, and narrowly centred with blackish; least wing-coverts like the back; median series blackish tipped with white, forming a wing-bar; greater series dark brown, edged externally with whity brown, more ashy towards the base; bastard-wing blackish brown narrowly edged with white; primary-coverts and quills dusky brown, narrowly edged with whity brown, the first primary margined with whitish, the inner secondaries browner on the outer web, and more broadly edged with dull whitish; tail-feathers brown, the two centre feathers margined with whity brown, the outermost dull white, with a dark brown shaft and a broad oblique mark of dark brown on the inner web, the outer web pale brown towards the end; penultimate tail-feather with a small wedge-shaped spot of white at the tip of the inner web; lores and a tolerably-defined

eyebrow sandy buff, as well as the eyelid and ear-coverts, rather more dusky along the upper and hinder margins; cheeks sandy buff, with an indistinct superior line of black, and separated from the throat by a blackish malar line; throat, breast and sides of body sandy buff, the chin whitish; the lower throat, fore-neck and breast broadly streaked with black, a little more narrowly on the breast, sides of body and flanks; centre of breast and abdomen buffy white, clearer sandy buff on the under tail-coverts; axillaries and under wing-coverts sandy buff, those near the edge of the wing mottled with dusky bases; lower primary-coverts and quills ashy brown, lighter on the inner webs.

Total length, 5·8 inches; culmen, 0·55; wing, 3·45; tail, 2·55; tarsus, 0·9.

Fig. Dresser, B. Eur. iii, pl. 132.

Page 545. *MOTACILLA VIDUA*.

“Very common on the Orange River, but scarce in the colony: met with sparingly about the Victoria Falls, Zambesi” (*Bradshaw*).

Page 547. *MOTACILLA CAPENSIS*.

Very common on the Orange River (*Bradshaw*).

Page 550. *BUDYTES FLAVA*.

A male shot by Wahlberg at Port Natal (cf. Sundevall, Svenska Foglarna, p. 46).

Page 551. Insert:—*BUDYTES VIRIDIS* (*Scop.*).

Grey-Headed Yellow Wagtail.

Mr. Seebohm's collection contains a specimen procured by T. Ayres in the Transvaal.

This species has the head dark grey without any pale eyebrow.

Fig. Dresser, Birds of Europe, iii, pl. 129.

Page 551. *COLIUS ERYTHROMELON*.

Tati River (*Bradshaw: teste Holub*).

Page 552. *COLIUS CAPENSIS*.

Colius erythropus, Layard, B. S. Afr. p. 221.

Very common on the Orange River; the only species found on the Border: iris dark brown; bill bluish; legs bright coral red (*Bradshaw*).

Modder River, Orange Free State (*Holub*).

Page 555. *COLIUS STRIATUS*.

Not uncommon at Estcourt, Natal, in April; Durban, December (*Reid*).

Page 559. COLUMBA PHEONOTA.

Very common on the Orange River (*Bradshaw*).

Page 568. TURTUR SENEGALENSIS.

This Dove is also very common on the Orange River (*Bradshaw*).

Page 572. CENA CAPENSIS.

Also very common on the Orange River (*Bradshaw*).

Page 574. PTEROCLES NAMAQUA.

Very common on the Orange River (*Bradshaw*).

Page 575. PTEROCLES BICINCTUS.

Very scarce on the Orange River, but takes the place of *P. namaqua* in the interior (*Bradshaw*).

Page 581. NUMIDA CORONATA.

This species is common where the bush is thick, but nothing like so plentiful as on some of the colonial rivers, and the rivers in the interior. I once counted 180 in a flock on the Chobè River as they flew to a small island to roost singly and in threes and fours. I think the absence of grass along the Orange River is the cause of their not being so plentiful, their nests being easily found by cats and other small animals (*Bradshaw*).

Page 591. FRANCOLINUS CLAMATOR.

This is the only species of Francolin on the Orange River, and the same remarks apply to it as regards scarcity as to *Numida coronata* (*Bradshaw*).

Page 595. FRANCOLINUS AFER.

Between the Orange River and the Molapo River (*Holub*).

Page 603. COTURNIX COTURNIX.

Common in the Colony, arriving in spring, but very scarce on the border, where I have only met with three or four (*Bradshaw*).

Page 639. OTIS RUFICRISTA.

Tolerably common on the Orange River (*Bradshaw*).

Page 636. OTIS LUDWIGII.

This species is also tolerably common along the Orange River (*Bradshaw*).

Page 637. OTIS SCOLOPACEA.

Tolerably common on the Orange River (*Bradshaw*).

Page 641. OTIS MELANOGASTER.

Albert's Land (*Holub*).

Page 642. OTIS AFROIDES.

More common than *O. scolopacea* on the Orange River (*Bradshaw*).

Page 645. CEDICNEMUS CAPENSIS.

Very local on the border, and not so common as in many parts of the Colony. I have met with it as far as Tati (*Bradshaw*).

Page 650. GLAREOLA MELANOPTERA.

On the Orange River I have once seen a small flock of these birds, though no locusts were about (*Bradshaw*).

Page 653. CURSORIUS RUFUS.

Not very plentiful on the Orange River, but very shy, running away swiftly when approached. Very local (*Bradshaw*).

Page 654. CURSORIUS BICINCTUS.

More plentiful on the Orange River than the last, and much tamer, but very local (*Bradshaw*).

Page 654. CURSORIUS SENEGALENSIS.

From West Griqualand and the Orange Free State, through the Southern Transvaal and Bechuana Land as far as the Zambesi (*Holub*).

Page 664. EUDROMIAS ASIATICUS.

Pantamatenka River (*Holub*).

Page 666. LOBIVANELLUS SENEGALUS.

Zambesi (*Holub*).

Page 667. LOBIVANELLUS ALBICEPS.

Dr. Holub found this species on the sand-banks in the Zambesi, and its tributaries in Albert's Land.

Page 670. CHETTUSIA CORONATA.

Not common on the Orange River, and very local, though common in the Colony and plentiful at the Tati (*Bradshaw*).

Page 679. RHYNCHÆA CAPENSIS.

I met with only one specimen of this bird, a female. I have seen it in the eastern part of the Colony, and they are tolerably common on the Zambesi (*Bradshaw*).

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