

THE NATURAL HISTORY
OF SOUTH AFRICA

H.W. FITZSIMONS

BIRDS

VOL. II

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THE NATURAL HISTORY
OF SOUTH AFRICA

VOL. II.

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Extract from Letter by R. ROYCROFT, M.B., C.M.,
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“I take this opportunity to express to you my thanks for the many hours of genuine pleasure you have given me by the reading of your so charmingly worded works. It is very seldom that a scientist combines the two factors : (1) Knowledge ; and (2) the skill of being able to present that knowledge in language ‘understandable of the people.’”



PLATE VI.—(1) White-fronted Bee-Eater (*Melittophagus bullockoides*).
(2) Carmine-throated Bee-Eater (*Merops nubicoides*).
The Bee-Eater captures its insect prey on the wing.

THE NATURAL HISTORY
OF SOUTH AFRICA

59.82 (62)

BY

F. W. FITZSIMONS, F.Z.S., F.R.M.S., ETC.

DIRECTOR, PORT ELIZABETH MUSEUM

BIRDS

IN TWO VOLUMES

VOL. II.

*WITH 10 COLOURED PLATES AND NUMEROUS
ILLUSTRATIONS FROM PHOTOGRAPHS, ETC.*

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THE NATURAL HISTORY OF SOUTH AFRICA

A LIST OF SOUTH AFRICAN BIRDS AND THEIR DIET

ORDER I.—PASSERES.

White-necked Raven or Ringhals.

(*Corvultur albicollis.*)

Diet.—Carrion, snails, eggs, snakes, lizards, frogs, small tortoises, locusts, grasshoppers, beetles, termites, caterpillars, ticks from bodies of living cattle. The cattle often purposely lie down for the birds to relieve them of these parasites.

Pied Crow, or Bonte Kraai.

(*Corvus scapulatus.*)

Diet.—Same as that of the white-necked raven.

Black Crow, or South African Rook.

Koren-land Kraai.

(*Corvus capensis.*)

Diet.—Wire-worms, cockchafer, grubs, and other underground beetle larvæ. (For this purpose it frequents freshly ploughed fields.) Gorged female ticks, locusts, grasshoppers,

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beetles, caterpillars, snails, small tortoises, mice. Occasionally it eats carrion. When an animal and insect diet is insufficient for its needs, it eats sprouting grain and seeds.

Yellow-billed Oxpecker.

Tick Bird, Rhinoceros Bird, Rhinaster Vogel.

(*Buphaga africana.*)

Diet.—Consists of ticks which are taken direct from cattle and other large animals. The birds, by a special adaptation of the toes, are able to crawl all over their host. They sometimes peck at sores on oxen, and eat the flesh and drink the blood at the open part.

Red-billed Oxpecker.

Tick Bird, Camel Bird.

(*Buphaga erythrorhyncha.*)

Diet.—Same as that of the yellow-billed oxpecker.

Wattled Starling, or Locust Bird.

(*Dilophus carunculatus.*)

Diet.—Locusts. Great flocks attack swarms of migratory locusts and follow them up until they are exterminated. They also feed on the eggs and young wingless migratory locusts. When locusts are not available, this starling feeds on grasshoppers and beetles, and will in fact eat almost any kind of insect. It also subsists on the soft red substance attached to the hard black seeds of a "willow" tree, which is planted by Government on sand dunes and drifting sands along the seacoast. The black seeds are voided with the excrement or thrown up from the crop, and willows sprout up from them all over the neighbourhood. The wattled starling is one of the farmers' most efficient bird allies.



1. The Orange-breasted Bush Shrike (*Lanarius sulphureipectus*) frequents the dense thickets and lives on insects.
2. Black-collared Barbet (*Lybius torquatus*). There are several species of barbets in South Africa. They eat fruit, berries, seeds of trees, and insects. Their beaks are exceptionally strong and robust.

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Red-winged Starling.

Spreeuw, Rooivlerk.

(*Amydrus morio.*)

Diet.—Insects and their larvæ. They also feed on wingless and winged locusts and termites. During the fruit season they devour soft fruits in the orchards. This diet is supplemented by wild fruits and berries. They search the ground for the gorged female ticks which drop from cattle. These they greedily swallow.

Pale-winged Starling.

(*Amydrus caffer.*)

Diet.—Locusts, grasshoppers, wire-worms, cut-worms, snails, slugs, caterpillars, termites, wild fruits, and berries.

Pied Starling.

Witgat Spreeuw, White-rumped Starling.

(*Spreo bicolor.*)

Diet.—These starlings visit cattle pastures, outspans, stock kraals, and sheep-runs, and eat the gorged female ticks which fall from their hosts. They also pick the ticks from the bodies of the animals. The pied starling feeds greedily on locusts, grasshoppers, wire-worms, cut-worms, beetles, slugs, snails, termites, and other ground frequenting insects and allied forms of life. Wild berries are also eaten. During the fruit season they are sometimes troublesome in orchards.

The Glossy Starling, or Shiny Spreeo.

There are several species and three genera (*Lamprotornis*, *Lamprocolius*, *Pholidauges*) of these glossy starlings in South Africa.

Diet.—Their diet consists of insects and larvæ of various kinds; also wild fruit, berries, and seeds of weeds and native

SOUTH AFRICAN BIRDS AND THEIR DIET

shrubs and trees. They feed eagerly on winged termites. Glossy starlings, when numerous, sometimes invade orchards when the fruit is ripe, and do more or less damage.

Golden Oriole.

(*Oriolus galbula*.)

Andersson's oriole (*Oriole notatus*); black-headed oriole (*Oriolus larvatus*).

Diet.—Consists of winged termites, caterpillars, beetles, and a large variety of other insects; also wild fruits, berries, and soft seeds. Caterpillars, however, are the oriole's chief diet. The black-headed species is the commonest oriole in South Africa. It is a policeman of the forests.

Weaver Birds, commonly known as Finks or Vinks.

There are several species of the weaver birds of the genus *Hyphantornis*.

Diet.—All feed on grain, seeds, berries, and insects of various kinds. Their young are fed exclusively on soft larvæ, caterpillars, young grasshoppers, and other forms of insect life. When winged termites emerge, these birds feed exclusively on them. A pair of winged termites is a potential colony of termites.

When weaver birds increase unduly in numbers they often make serious inroads on the ripening grain in the fields.

Smith's Weaver Bird.

(*Sitagra ocellaria*.)

Diet.—Wood bugs, caterpillars, small beetles which feed on bark, twigs, and leaves. They diligently search orchards, gardens, and shrubberies, in pairs, for insect pests. When insects are scarce they feed on berries and soft seeds.

Cape Weaver Bird.

(*Sitagra capensis.*)

Diet.—Seed, grain, and wild berries, and to a lesser extent on insects; also the sweet juices of the aloe, the protea, and other flowers.

Black-backed Weaver Bird.

Hinge Bird.

(*Sycobrotus bicolor.*)

Spot-headed Weaver Bird.

(*Sycobrotus stictifrons.*)

These birds associate in pairs and inhabit the forests, dense scrub, and bush-veld.

Diet.—Beetles, other insects, and larvæ which attack trees and scrub. They are very thorough and painstaking in their search for insect prey. This diet is supplemented by berries, forest fruits, and soft seeds.

Red-headed Weaver Bird.

(*Anaplectes rubriceps.*)

Sharpe's Weaver Bird.

(*Anaplectes angolensis.*)

Gurney's Weaver Bird.

(*Anaplectes gurneyi.*)

Diet.—Seeds, berries, grain, and insects. Large numbers of the latter are devoured in the winged form, including small moths which are dislodged from their hiding-places behind bark, under leaves, and other lurking places. Beetles, caterpillars, grasshoppers, and many other species of pests fall prey to them.

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Buffalo Weaver Bird.

(*Texor niger.*)

Diet.—Consists chiefly of locusts, grasshoppers, termites, beetles, and larvæ of various kinds which it usually seeks on the ground, although flying insects are taken in the air and also from trees and scrub. The insect diet is supplemented by seeds and berries. They feed in flocks, and often associate with other species of birds.

Thick-billed Weaver Bird.

(*Amblyospiza albifrons.*)

Diet.—Inhabits the forests and feeds on wild fruits, berries, seeds, insects, and larvæ which it finds on and amongst the trees. It also takes insects on the wing, such as flying termites, locusts, and beetles.

White-browed Weaver Bird.

(*Ploceipasser mahali.*)

Red-backed Weaver Bird.

(*Ploceipasser rufoscapulatus.*)

Stripe-chested Weaver Bird.

(*Ploceipasser pectoralis.*)

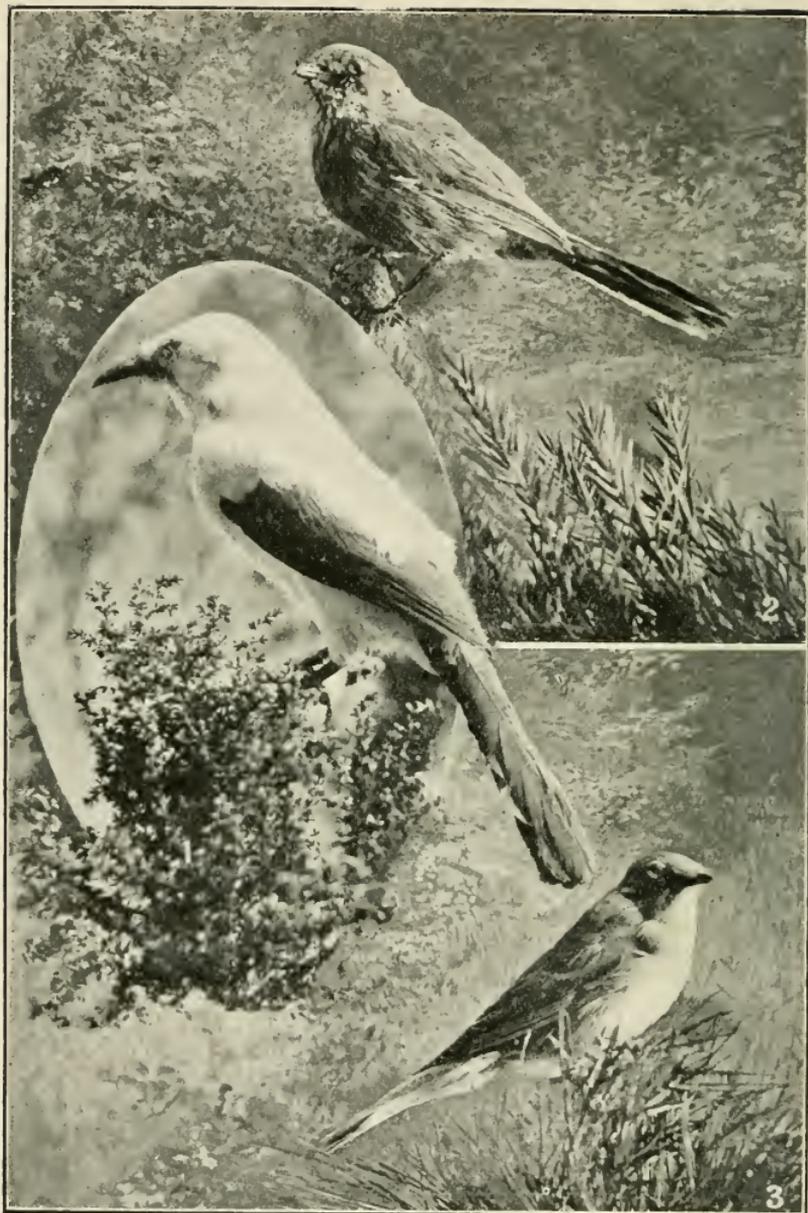
Associates in flocks and inhabits the bush-veld.

Diet.—Beetles, locusts, termites, various larvæ, and a variety of adult insects ; also seeds, berries, grain, and wild fruits.

Scaly-feathered Weaver Bird.

(*Sporopipes squamifrons.*)

Diet.—These weavers associate in small flocks and subsist on the seeds of grasses and weeds, also small insects. They invariably feed on the ground and often associate with other birds, such as finches, waxbills, and sparrows.



1. Pied Babbler (*Crateropus bicolor*). Creeps and glides amongst the mazes and tangles of dense thickets, and searches for insects on the ground beneath them.
2. Tit Babbler (*Parisoma subcæruleum*). Charms us with its song, and assists us in our war on insect pests.
3. Garden Warbler (*Sylvia simplex*). Migrates from Europe to South Africa. Although it feeds chiefly on insect life, it has a special fondness for ripe figs. It comes as far south as Port Elizabeth.

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Southern Red-faced Weaver Finch.

(*Pytelia melba.*)

Hartlaub's Red-faced Weaver Finch.

(*Pytelia nitidula.*)

Diet.—Grass and weed seeds, also small insects.

Ruddy Waxbills.

(Genus—*Lagonosticta.*)

Diet.—The seeds of grasses and weeds, chiefly the former.

Common Waxbills.

Rooibeckie, Blue-breasted Waxbill, Zebra Waxbill, Dufresne's Waxbill, Grenadine Waxbill, Orange-breasted Waxbill, etc.

(Genus—*Estrelda.*)

Diet.—These waxbills feed chiefly on the seeds of weeds and grasses ; small insects, their larvæ and eggs are also eaten.

Bar-breasted Weaver Finch, or Drinky.

(*Ortygospiza polyzona.*)

Diet.—Grass seeds, termites, and small ground larvæ and insects' eggs.

Weaver Finches.

(Genus—*Spermestes.*)

Diet.—Seeds of grasses and weeds.

Social Weaver Finch.

(*Philetærus socius.*)

Diet.—Grass seeds, small berries, beetles, and larvæ.

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Red-headed Weaver Finch.

(*Amadina erythrocephala.*)

Diet.—Grass and weed seeds, also small insects.

Red-billed Weaver.

(*Quelea quelea.*)

Diet.—Seeds of grasses, weeds, and grain, also insects.

Bishop Birds.

Grenadier, Red Kafir Fink, Taha Bishop Bird,
Yellow Kafir Fink.

(Genus—*Pyromelana.*)

Diet.—Grass and weed seeds, also insects.

Bishop birds collect in flocks in the autumn and, in association with weavers and widow birds, attack and feed on the ripening wheat and millet.

Widow Birds and Widow Finches.

Flop or Entaka, Kafir Fink or Isa-Kabuli,
Koning-Roodebec.

(Genera—*Urobrachya*, *Coliopasser*, and *Vidua.*)

Diet.—The widow birds, of which there are several species, feed during the spring and summer largely on insect food from the veld, supplemented by seeds of grasses and weeds. In the autumn and winter some of the species assemble in flocks and attack millet and other grain crops. They and the bishop birds, as well as the weavers, are commonly termed “finks” in Natal and “vinks” elsewhere.

South African Rock Sparrow.

(Genus—*Petronia petronella.*)

Diet.—This sparrow feeds principally on beetles and other insects which it finds on the stems and branches of trees and

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under the bark. It may often be seen searching for insects in the crevices of rocks. It also eats seeds of grasses and weeds, and sometimes the young buds of trees.

Cape Sparrow, or Mossie.

(*Passer arcuatus.*)

Diet.—Seeds of grasses and weeds. They prey largely on insects. In autumn and winter these birds assemble in flocks and often consort with weavers and finches and do much damage to crops of grain, chiefly wheat and millet. There are two other less known species whose diet is similar to that of the mossie.

Seed-Eaters and Canaries.

Streep-Kop Seisje, Geel Saysie, Kleine Seisje, Dik-Bek Seisje, Berg Canarie, Pietje Canarie.

(Genera—*Poliospiza, Serinus, Alario, and Chrysomitris.*)

Diet.—Seeds of grasses and weeds, and a large assortment of insects and their larvæ. The larger seed-eaters also feed on berries and buds.

The Buntings.

Streep-Kopje, Streep-Kop Mossie.

(Genera—*Emberiza and Fringillaria.*)

Diet.—Consists largely of insects, and to a lesser degree on seeds of weeds and grasses.

Larks.

Dubhelde Leeuwick, Clapart Leeuwick, Inkelde Leeuwick, Kalkœntje, Cut-throat lark, etc.

(Genera—*Pyrrhulanda, Ammomanes, Calendula, Galerita, Mirafra, Spizocorys, Tephrocorys, Otocorys, Heterocorys, Alæmon, Certhauda, and Macronyx.*)

Diet.—The many species of larks grouped under the above twelve genera constitute the feathered policemen of the karoo,

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the veld, and the hillsides. They seek their food upon the ground. It consists of insects, allied forms of life and their larvæ which devour all kinds of good pasturage. When foolish parents allow their boys to destroy the larks or permit the native umfaans to carry off the nestlings and trap the parents, the insects on which these larks prey increase enormously in numbers. After demolishing the pasturage they invade the crops, plantations, and orchards, and work havoc in them. When insect food is scarce, larks subsist on the seeds of grasses and weeds.

I have examined the stomach contents of a hundred larks at varying periods of the year and never found grain, corn, or buds of cultivated plants in them. Larks of all species are of the highest economic value to man.

The Pipit.

(Genus—*Anthus*.)

Diet.—There are a number of species of pipits in South Africa. They belong to the lark family, and their habits and diet are similar. They are, in consequence, in the front rank of useful birds.

The Wagtail, or Quick Stertje.

(Genus—*Motacilla*.)

Diet.—The wagtails, of which there are several species, feed almost exclusively on insects and their larvæ, including the disease-spreading house fly, blood-sucking fly, and mosquito. The Cape wagtail (*Motacilla capensis*) is the species which frequents the vicinity of homesteads, and is common in our villages and towns. Notwithstanding the inestimable services rendered to us by the wagtail, we continue to allow our boys to persecute it and rob its nest.



Two fruit pests.

1. Sombre Bulbul (*Andropadus importunus*).
2. Cape Bulbul (*Pycnonotus capensis*). There are several species of bulbuls in South Africa variously known under the names of Geelgat, Toppie, Blackhead, Kuif-Kop. They all greedily devour fruit, and are, in consequence, a serious pest to fruit growers.

They supplement their fruit and berry diet with insects, their larvæ, and eggs. In the bush-lands they serve a good purpose in sowing the seeds of native trees and shrubs. The seeds pass through their digestive tract unchanged.

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The Creeper.

(Genus—*Salpornis*.)

Diet.—Insects which it obtains from and under the bark of tree trunks and on the branches. The crops of several examined contained caterpillars, grubs, beetles, and a few moths.

The Sugar Bird, or Zuiker Vogel.

(Genus—*Promerops*.)

Diet.—The sweet juices of the flowers of the protea, aloe, heath, honeysuckle, etc. ; also a large variety of insects. They are very expert at catching flies and other winged insects. The sugar bird is a valuable insect eater. It also plays an important part in the fertilisation of the protea and other shrubs by carrying the pollen from plant to plant.

The Sun Bird, or Honeysucker.

(Genera—*Nectarinia*, *Cinnyris*, and *Anthothreptes*.)

Diet.—The sun birds, of which there are a considerable number of species inhabiting South Africa, all feed on small insects and the nectar of flowers. They are valuable agents in the fertilisation of plants by transporting pollen on their heads. Sun birds prey largely on flies and other winged pests. Sun birds are all of the utmost possible economic value.

The White Eye.

Witte-Oogie, Glas-Oogie, Karre-Oogie, Kers-Oogie.

(Genus—*Zosterops*.)

Diet.—The white eye, when not breeding, is invariably seen in small flocks. They make a systematic search of shrubs and trees for insects, peering into flowers, cracks in the bark, under leaves, on twigs, etc. These birds perform invaluable services in ridding shrubs and trees of larvæ and adult insects, as well as the eggs. They also prey largely on some of the

SOUTH AFRICAN BIRDS AND THEIR DIET

dreaded scale insects (*Schizoneuræ*) and sip the nectar of eucalyptus flowers. At certain seasons the white eye supplements its insect diet with soft fruits, berries, and the sweet juices of flowers. The latter habit aids largely in the cross fertilisation of plants. In orchards when the fruit is ripe it does some harm if in large flocks.

The Tits.

(Genera—*Parus* and *Egithalus*.)

Diet.—The food of the tits consists entirely of insects which they capture amongst stones and rocks and amidst small bushes, shrubs, and scrub. One species frequents the forests and bush-veld, where it may be seen in little parties searching the tops of the trees for small caterpillars and beetles.

The Shrike.

Jack Hangman or Butcher Bird, Cock-a-Vick,
Spook Vogel, etc.

(Genera—*Urolestes*, *Lanius*, *Eurocephalus*, *Nilaus*, *Telephonus*, *Dryoscopus*, *Lanarius*, *Nicator*, *Lanioturdus*, *Sigmodus*, and *Prionops*.)

Diet.—The above eleven genera of shrikes include the typical shrikes, the bush shrikes, and the helmet shrikes. The food of every species consists of insects and their larvæ. They take a considerable number of insects on the wing. They are the policemen of the veld, the crops, the orchards, and the forests. Shrikes are in the front rank of birds of economic value. They devour caterpillars and beetles which are noxious to other families of birds, also mice.

The Babblers.

(Genus—*Crateropodidæ*.)

Diet.—Insects and their larvæ which they obtain on the ground and amidst tangled undergrowth and dense thickets.

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The Bulbuls.

Variouly known as the Geelgat, Kuif-Kop, Toppie, Blackhead, Ipoti, Bosch Vogel, Iwili.

(Genera—*Pycnonotus* and *Andropadus*.)

Diet.—The diet of all the species of bulbuls consists mainly of fruit and berries, and they are consequently a great pest to fruit growers. They also feed on insects and their larvæ and the nectar of flowers.

Out in the forests and elsewhere, when away from the neighbourhood of fruit gardens, the bulbul is of economic value; but it is otherwise an unqualified pest owing to its great fondness for fruit. The bulbuls feed their young entirely on insect life.

The Tit-Babbler.

(Genus—*Parisoma*.)

Diet.—Insects and their larvæ which it finds in bushes, scrub, and trees.

The Warblers.

Variouly known as Grass Birds, Ting-Ting, Kloppertje, Ndogwe, Tinky, etc.

(Genera—*Sylvia*, *Prinia*, *Phylloscopus*, *Locustella*, *Acrocephalus*, *Hypolais*, *Schænicola*, *Bradypterus*, *Phlexis*, *Apalis*, *Spiloptila*, *Euryptila*, *Chlorodyta*, *Chætops*, *Pinavornis*, *Cryptolopha*, *Sylviella*, *Eremomela*, *Camaroptera*, *Calamonastes*, and *Cisticola*.)

Diet.—The diet of the warblers consists entirely of insects and allied forms of life. There are a large number of genera and a host of species of warblers in South Africa. Some species inhabit the open veld (karoo and grass veld); others frequent the reedy and rush-covered swamps and margins of rivers; other species make their homes in patches of weeds, amongst the crops, in scrub, bushes, and trees.

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The warblers are all small birds, and their prey, in consequence, consists of the smaller species of insects and the eggs and small young of the larger kinds of insect life. The warblers are in the front rank as destroyers of insect pests. They take no payment at all for their invaluable services, as do some of the species of other birds. To wantonly kill a warbler or rob its nest is a mean and dastardly act. Warblers feed largely on plant lice.

The Rock Jumper.

(Genus—*Chætops*.)

Diet.—The rock jumpers, as their name implies, inhabit rock-strewn slopes, hills, and mountain ranges, where they prey upon the insects and their larvæ which devour the sparse pasturage of these localities. In doing this they render the stock farmer invaluable services, and indirectly prevent the soil from being denuded of vegetation, and as a consequence washed away by rain, leaving the hills and slopes barren and bare.

The Grass Bird.

“Idle Dick” or “Lazy Dick.”

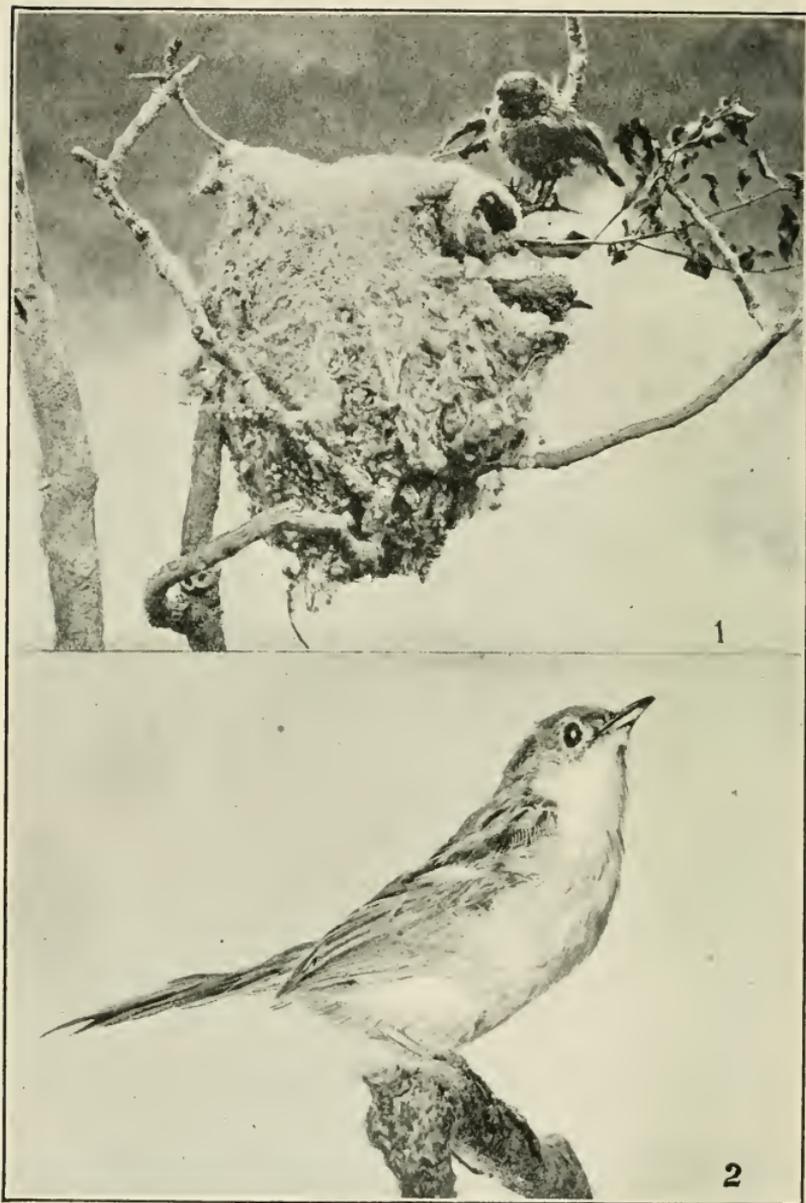
(Genus—*Sphenæacus*.)

Diet.—Insects and their larvæ which they find among the low bushes, reeds, long grass, on the veld, valleys, hillsides, and marshes.

The Thrushes, Chats, Bush-Robins, and Ground Robins.

(Genera—*Turdus*, *Erithacus*, *Myrmecocichla*, *Pratincola*, *Monticola*, *Saxicola*, *Emarginala*, *Thamnolæa*, *Cossypha*, *Cichladasa*, *Tarsiger*, and *Erythropygia*.)

Diet.—All these genera of thrushes, chats, and robins feed on insects of a great variety of kinds which are sought on the wing, on the ground, in the scrub, shrubs, trees, and amidst



1. Cape Penduline Tit (*Egithalus capensis*), Cotton Bird, or Kapok Vogel, and nest. This tiny bird builds a large and strong nest of wild cotton or sheep's wool in a low bush.
2. Grey-backed Warbler (*Cisticola subruficapilla*). One of the many species of warblers which help man in his war on insect pests.

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the farmers' crops ; or in reed and rush-covered lands. The larvæ of insects are eagerly sought for by these birds. Some species also eat seeds, berries, wild fruits, and sip the nectar from the flowers of the aloe and protea. Some of the chats frequent cattle kraals and the resorts of cattle in the bush and veld, and feed on the gorged female ticks which fall from the animals.

The Fly-Catcher.

(Genera—*Lioptilus*, *Chloropeta*, *Bradyornis*, *Musicapa*, *Hyliota*, *Pachyprora*, *Platystira*, *Alseonax*, *Smithornis*, *Bias*, *Erythrocerus*, *Trochosereus*, and *Terpsiphone*.)

Diet.—There are a large number of species of fly-catchers grouped under the above thirteen genera in South Africa. Their diet consists entirely of insects and kindred forms of life which they capture in the air, on the ground, and in the midst of trees and shrubs.

Examination of the stomach contents of the majority of the fly-catchers when I was studying the economic side of bird life in Natal revealed small insects, their eggs, and larvæ only. A goodly proportion of the stomach contents were mature winged insects which, unless destroyed, would have laid thousands of eggs.

All the species of fly-catchers render the highest services to man in his war on injurious insects.

The Drongo.

Katekorve, Bijvreter, Black Fork-Tail, Smoke Bird,
Intengu.

(Genus—*Dicrurus*.)

Diet.—The drongos, of which there are two species in South Africa, feed on insects which are usually taken on the wing.

The drongo (*Dicrurus afer*), to which the above vernacular names apply, is particularly fond of bees, and feeds on little

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else when they are plentiful. This drongo is, in consequence, a pest to bee-keepers. Otherwise, it is of considerable value as an insect destroyer.

The Cuckoo Shrike.

(Genera—*Campophaga* and *Graucalus*.)

Diet.—The food of the cuckoo shrikes consists entirely of insect life. In the stomachs of those I examined there was an assortment of caterpillars, beetles, grasshoppers, locusts, moths, flies, gnats, etc.

Swallows and Martins.

(Genera—*Chelidon*, *Cotile*, *Ptyonoprogne*, *Hirundo*, *Petrochelidon*, and *Psalidoprocne*.)

Diet.—The food of swallows and martins is made up of insects which are taken on the wing. Small beetles, gnats, flies, moths, winged termites, mosquitoes, and a host of other injurious creatures fall prey to these eminently useful birds. To kill a swallow or rob its nest is a stupid, idiotic, cruel, and criminal act.

The Pitta.

(Genus—*Pitta*.)

Diet.—Insect life. This bird does not occur further south in Africa than the Zambesi Valley.

Note.—The whole of the above-mentioned birds grouped under the order Passeres feed their young on insects, their larvæ, and kindred forms of life. Ninety-five per cent. of the insect diet of these birds and their nestlings is noxious to man. This fact is highly important to know and to reason on.

ORDER II.—PICARIÆ.

The Hoopoe.

(Genus—*Upupa*.)

Diet.—The food of the hoopoe consists entirely of insects and their caterpillars, beetles and their grubs, grasshoppers, and other pasture, forest, and root-destroying pests.

With their long bills they probe the ground and scrutinise the crevices in rocks, bark of trees, etc., in their search for prey. There is only one species of hoopoe in South Africa under the genus *Upupa*, viz., *Upupa africana*.

The Wood Hoopoe.

(Genera—*Irrisor* and *Rhinopomastus*.)

Diet.—Insects of various kinds which they find on the trunks and branches of trees and in the crevices in the bark. Like the woodpeckers, they act as Nature's policemen of the forests.

The Swifts.

(Genera—*Cypselus*, *Tachornis*, and *Chaetura*.)

Diet.—Insects which are taken on the wing. The stomachs of a number which I examined contained various species of flies and beetles. Others were full of winged (fertile) termites. The swift subsists entirely on insect life harmful to man by reason of the diseases they spread, and the harm their larvæ do to crops, pasturage, forests, and orchards.

The Night-Jar.

Nacht-Uil (Night Owl), Goatsucker, Isavolo.

(Genus—*Caprimulgus*.)

Diet.—The night-jar is the only insect-eating bird which seeks its food by night. Resting during the daylight hours, the night-jar issues forth at dusk and hawks insects on the wing

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until dawn. Its food consists of night-flying beetles, moths, mosquitoes, etc. The beetles and moths issue from their hiding-places in order to mate and lay their eggs in crops, pasturage, orchards, gardens, and forests. The night-jar, assisted by insectivorous bats, preys nightly upon these pests, and by so doing destroys the potential parents of untold numbers of destructive larvæ. The night-jar is so extremely valuable to man that a very heavy fine, or imprisonment without a fine, should be the penalty to anyone who deliberately destroys a night-jar.

The Roller.

(Genera—*Coracias* and *Eurystomus*.)

Diet.—The rollers, or blue jays as they are commonly called, feed on an insect diet, chiefly beetles, grasshoppers, and locusts. The roller perches motionless on the top of an isolated tree or the end of a branch and keeps a lookout for insects. I have found young snakes and lizards occasionally in the crops of these birds, and have seen them devour the eggs and young of sparrows and weaver birds. The small amount of harm they may do now and then by destroying the eggs and young of useful birds and lizards is as nothing against the immense services they render in the destruction of grasshoppers and other injurious forms of life.

The Bee-Eater.

(Genera—*Merops*, *Dicrocercus*, and *Melittophagus*.)

Diet.—The diet of the bee-eater, as its name implies, is chiefly wild bees. It also preys on wasps, hornets, and other flying insects. These birds would seem to be more harmful than beneficial to man. Bees are of value in the production of honey and wax, and also in aiding to a very large degree in the cross fertilisation of plant life. Wasps and hornets feed their larvæ largely on caterpillars and other injurious insects, although many wasps prey on the spider, which is of very high economic value to man.



1. Ground-scraper Thrush (*Turdus litsipsirupa*). It spends its daylight hours scratching amongst fallen leaves for the insects on which it subsists.
2. Natal Thrush (*Turdus guttatus*), whose habits are the same as its cousin, the Ground-scraper Thrush.
3. Eastern Cape Grass Bird (*Sphenæacus intermedius*) is incessantly on the hunt among brushwood, heath, shrubs, reeds, and grass for insects, their larvæ, and eggs.

The Kingfisher.

(Genera—*Ceryle*, *Alcedo*, *Corythornis*, and *Ispidina*.)

Diet.—The food of the kingfishers of the above genera consists chiefly of fishes, supplemented by small reptiles, batrachia, shrimps, small crabs, and insects. The kingfishers are consequently not of much, if any, economic value to man. Fish, reptiles, and batrachia feed largely on injurious insects and their larvæ, and crabs are the scavengers of the rivers.

The Bush Kingfisher.

(Genus—*Halcyon*.)

Diet.—These kingfishers inhabit the bush-veld, and although often far from water they are usually to be found in trees fringing rivers, ponds, and marshes. Their food consists of the larger insects, such as grasshoppers, grubs, crickets, beetles, etc., which they take on the ground. They do not prey on fish. I have seen them now and then capture and eat small snakes. Kingfishers of the genus *Halcyon* are of considerable economic value to man.

The Coly.

Mouse Bird, or Muis Vogel.

(Genus—*Colius*.)

Diet.—The coly or mouse bird feeds almost exclusively on fruit. It also attacks and eats ripe pumpkins, tomatoes, and other soft vegetables. In captivity it eagerly devours all kinds of root crops, such as carrots, turnips, sweet potatoes, beets, etc. The coly or mouse bird, of which there are several species, may be written off as vermin.

The Ground Hornbill.

Brom Vogel, or Turkey Buzzard.

(*Bucorax cafer*.)

Diet.—This large ground bird feeds on insects and their larvæ which devour pasturage. They dig up the larvæ with

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their large, powerful bills. They also eat snakes, lizards, tortoises, rats, and mice. Snakes feed largely on rats and mice, and the lizard feeds exclusively on insects. However, the large number of insects, rats, mice, and tortoises consumed by the ground hornbill makes it of great value to man.

The Hornbill.

(Genera—*Bycanistes* and *Lophoceros*.)

Diet.—The hornbills feed on the larger insects, such as locusts, grasshoppers, beetles, caterpillars. They also eat fruit and berries. They are especially fond of bananas, and often do much harm in the banana plantations. I have seen them feeding greedily on ripe tomatoes. The hornbill keeps, as a general rule, to the bush-lands, and seldom invades orchards.

The Trogon, or Bosch Lourie.

(*Hapaloderma narina*.)

Diet.—The narina trogon inhabits the forests and thickets, and feeds on a great variety of insect life which it takes on the wing. This bird supplements its insect diet occasionally with the soft portions of forest fruits and berries. The trogon is one of our policemen of the forests, and renders sterling services.

The Woodpecker.

(Genera—*Campothera*, *Dendropicus*, *Thripias*, and *Mesopicus*.)

Diet.—The woodpeckers of these genera inhabit the forests and other bush-lands, of which they are Nature's chief conservators. From early morning to dusk they are on the move in search of food, which consists of insects on and in trees. Every inch of the bark is explored, and crevices are peered into for the lurking insect enemy of the tree. To get at the larvæ or grubs of the wood-boring beetles, the bark is pecked off and the grub is drawn out of the wood and devoured. Dead



1. Cape Rock Thrush (*Monticola rupestris*). Inhabits stony localities and feeds on insects taken from the ground.
2. Cape Thrush (*Turdus olivaceus*). Like others of the same genus, it hunts for insects under dead leaves and other rubbish. It sometimes does injury in orchards owing to its fondness for soft, ripe fruits.

It is one of Nature's checks on the blood-sucking flies which cause sleeping sickness and tse-tse fly disease.

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patches in tree trunks or dead boughs are also pecked away by woodpeckers in search of these destructive grubs. Woodpeckers in South Africa do not damage sound trees in their search for insects, or when making their nest holes. The long, barbed tongue of the woodpecker is specially adapted for thrusting into holes in trees made by wood-boring insects.

Ground Woodpecker.

(*Geocolaptes olivaceus.*)

Diet.—Unlike other woodpeckers, this species lives almost entirely on the ground, chiefly on rock and boulder-strewn treeless hillsides. Their food consists entirely of insects which they find on the ground and in crevices amongst the boulders and stones.

The Wryneck.

(*Lynx ruficollis.*)

Diet.—Consists of insects which it captures in the crevices in the bark of the trunks and branches of trees. The wryneck has a long, retractile, sticky tongue to which insects adhere. The bird does not peck wood, as is the case with woodpeckers. It inhabits the trees of the bush-veld and open country generally, and is seldom seen in thick forests. The wrynecks render good service in plantations.

The Honey Guide.

(Genera—*Indicator* and *Prodotiscus.*)

Diet.—The honey guides feed on bees, their larvæ, and honey. When this source of food fails they resort to insects of various kinds. In consequence of the damage they do to the useful bee, and their parasitic habits, these birds are of little economic value to man. Their mission in the past was to help to keep down the too rapid increase of the honey bee. Their services are no longer needed for that purpose.

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The Barbet.

(Genera—*Lybius*, *Tricholæma*, *Stactolæma*, *Barbatula*, and *Trachyphonus*.)

Diet.—The many species of barbets inhabiting South Africa all feed on wild fruits and berries, and in a minor degree on insects. They may sometimes be noticed in orchards in pairs feeding on the fruit. The resorts of the barbet are the forests, thickets, and bushy country generally.

The Cuckoo.

(Genera—*Cuculus*, *Chrysococcyx*, and *Coccytes*.)

Diet.—The cuckoos of these genera feed principally on caterpillars taken from trees and shrubs. I have found caterpillars of various species in their stomachs, including the hairy kinds. The hairs are partly removed by running the caterpillars through the bill from side to side. The digestive tract is tough and impervious to injury by the stiff hairs on the prey they swallow.

The caterpillar diet is supplemented by various other larvæ and adult insects, including beetles, grasshoppers, and winged termites.

These genera of cuckoos lay their eggs in other birds' nests, and do not rear their own young.

Cuckoos are in the front rank of birds of economic value to man. They devour species of caterpillars which are distasteful to other birds.

The Coucal.

(*Centropus* and *Ceuthmochares*.)

Diet.—The food of these coucals is the same as that of the cuckoos. Several species are known as vlei louries, and the other (*Ceuthmochares*) is the green coucal. The vlei louries eat mice in addition to insects.

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The Lourie.

(Genera—*Turacus*, *Gallirex*, and *Schizorhis*.)

Diet.—The louries inhabit the forests, and feed on wild fruits and berries which are swallowed whole, if sufficiently small. One species, viz. (*Turacus corythaix*), sometimes invades banana plantations and feeds on the fruit. Louries are shy birds, and seldom venture into orchards unless they happen to be adjacent to their forest home.

ORDER III.—PSITTACI.

Parrots and Love Birds.

(Genera—*Pæocephalus* and *Agapornis*.)

Diet.—The parrots and love birds inhabit the forests and bush-covered localities generally, and feed on wild fruits, nuts, and berries. One of the South African parrots (*Pæocephalus fuscicapillus*) sometimes frequents mealie fields and feasts on the milky immature corn.

ORDER IV.—STRIGES.

The Barn Owl, or Dood Vogel.

(*Strix flammea*.)

Diet.—The barn owl frequents the habitations of man, and feeds on mice and small species of rats which it captures during the hours of darkness. When these rodents are insufficient for its needs, it preys on the larger insects. This owl is of inestimable value to the farmer.

Impelled by the stupid superstition that these owls are unlucky, many people foolishly destroy them.

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Grass Owl.

(*Strix capensis.*)

Diet.—The grass owl frequents grass-lands, vleis, and the rushes on the margins of streams, and feeds on the rats and mice native to the country. It also eats locusts, grasshoppers, and various larvæ.

Marsh Owl.

(*Asio capensis.*)

Diet.—The marsh owl inhabits swampy lands, and preys on rats and mice and the larger insects inhabiting those localities.

White-faced Owl.

(*Asio cucotis.*)

Diet.—Same as that of the grass owl.

Woodford's Owl.

(*Syrnium woodfordi.*)

Diet.—This owl inhabits the deep, dark recesses of the woods, and feeds on mice, grasshoppers, beetles, and various larvæ.

Cape Eagle Owl.

(*Bubo capensis.*)

Diet.—The food of the Cape owl consists mainly of rats and mice. It also preys on larger rodent pests, such as the hare and the springhaas. Birds sometimes fall a prey to these great owls, but not often. I have frequently found the remains of various kinds of large insects in their cast-up pellets.

Spotted Eagle Owl.

(*Bubo maculosus.*)

Diet.—Same as that of the Cape eagle owl.

This species of owl is often seen in gardens and parks, attracted thereto by the abundance of rats.



1. Cape Robin Chat, or Jan Fredric (*Cossypha caffra*). One of our most familiar and useful birds. It is known to the Zulus as the "Ugaka."
2. Cape Ground Robin (*Erythropygia coryphaeus*). Also known as the Bosch-Creeper and Slang Verclicker. A familiar little friend of man. It creeps through the dense scrub in search of insects.
3. Noisy Robin Chat, or Piet-myn-vrouw (*Cossypha bicolor*). An active and efficient policeman of the forests and dense scrub on the eastern side of South Africa.

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Verreaux's Eagle Owl.

(*Bubo lacteus.*)

Diet.—Rats, mice, hares, large insects, and occasionally the larger ground frequenting birds. When poultry roost in trees and other unprotected places at night, this owl sometimes preys upon them. When this occurs the farmer should provide suitable protection for his poultry.

Pearl-spotted Owl.

(*Glaucidium perlatum.*)

Barred Owl.

(*Glaucidium capense.*)

Diet.—These small owls are diurnal in their habits. They prey on mice and insects.

Pel's Fishing Owl.

(*Scotopelia peli.*)

Diet.—Fish, rodents, and insects. When guinea-fowls roost in trees they often fall prey to this owl.

ORDER V.—ACCIPITRES.

The Falcons.

(Genus—*Falco.*)

Diet.—There are several species of falcons. They prey on rats, mice, birds, grasshoppers, locusts, and other large insects. They, the South African lanner in particular, often haunt the vicinity of homesteads and carry off domestic pigeons and chickens. When not troublesome in the latter respect, the falcons help largely in maintaining the balance of Nature by

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destroying rodents and the larger insects; also by killing off feeble and sick birds and reducing those which are apt to multiply unduly, such as many species of seed-eating birds.

The Kestrel.

(Genus—*Tinnunculus*.)

Diet.—The food of the kestrels consists of mice, small birds (mostly seed-eating species), grasshoppers, locusts, termites, beetles, other insects, and kindred forms of life.

The South African kestrel or rooivalk is one of the best-known kestrels. All the species of this genus of hawks are of high economic value.

The Cuckoo Falcon.

(Genus—*Baza*.)

Diet.—There is only one species of cuckoo falcon (*Baza verreauxi*) in South Africa. It feeds largely on the highly useful insect-killing chameleon and mantis, and sometimes on insectivorous birds and their nestlings. Although it also eats locusts and certain other injurious pests, it does, on the whole, more harm than good. It cannot, therefore, be classed as a bird of economic value even when it keeps strictly to its natural habits.

The Eagle.

(Genera—*Aquila*, *Eutolmætus*, *Spizætus*, *Lophoætus*, *Haliætus*, *Helotarsus*, and *Circætus*.)

Diet.—The eagles of the species grouped under the above genera prey upon the smaller antelopes, hares, dassies, monkeys, small carnivorous animals, the larger birds, rats, and the small stock and poultry of the farmer. Away from the haunts of man, the eagle helps in a considerable degree to maintain the balance of Nature; but the farmer who rears small stock and poultry cannot afford to permit eagles to live in his neighbourhood. On purely agricultural farms, where monkeys and rats

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are troublesome, eagles would help in keeping these thieving and mischievous animals in check. They would, of course, also prey on hares and small antelopes; but, after all, these animals are not only of no economic value, but are distinctly destructive in their habits.

Vulturine Sea Eagle.

(*Gypohierax angolensis*.)

Diet.—The food of this eagle is fish, on which it suddenly descends when they are swimming on or near the surface of the water. It also eats various crustacea, including crabs. It frequents the seacoast and the larger rivers, but is rare in South Africa.

Southern Lammergeyer.

(*Gypactus ossifragus*.)

Diet.—The lammervanger, as it is known in South Africa, is confined to the mountain ranges, and is now seldom seen. It feeds on carrion and bones. The latter are swallowed and completely digested. It also preys on the smaller mammals, such as the klip dassie. It is said to kill sickly sheep and lambs.

African Buzzard Eagle.

(*Asturina monogrammica*.)

Diet.—This small falcon-like eagle preys almost entirely on insect life, and it is therefore of considerable economic value. The crop of one examined was crammed with large termites, and in the crops of others an assortment of insects was found.

The Buzzard.

(Genus—*Buteo*.)

Diet.—The food consists chiefly of small mammals, lizards, snakes, frogs, and game birds. When the opportunity offers the buzzards prey on poultry. Doubt has been thrown

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on the statement that these birds eat snakes, and I have found snakes on several occasions in their crops, but in every instance they were of the back-fanged (*Opisthoglypha*) or solid-toothed (*Aglypha*) species. This fact, however, does not add to the usefulness of these birds for the reason that the majority of non-venomous and slightly venomous snakes are of great economic value to man.

The buzzards are birds which may safely be listed as pests.

The Kite.

(Genus—*Milvus*.)

Diet.—The kite is a fearless and rapacious bird, and has become a noted chicken thief. It preys on almost any species of living creature it is able to overpower. It is extremely fond of locusts which it captures on the wing. Even carrion does not come amiss to this greedy bird.

Black-shouldered Kite.

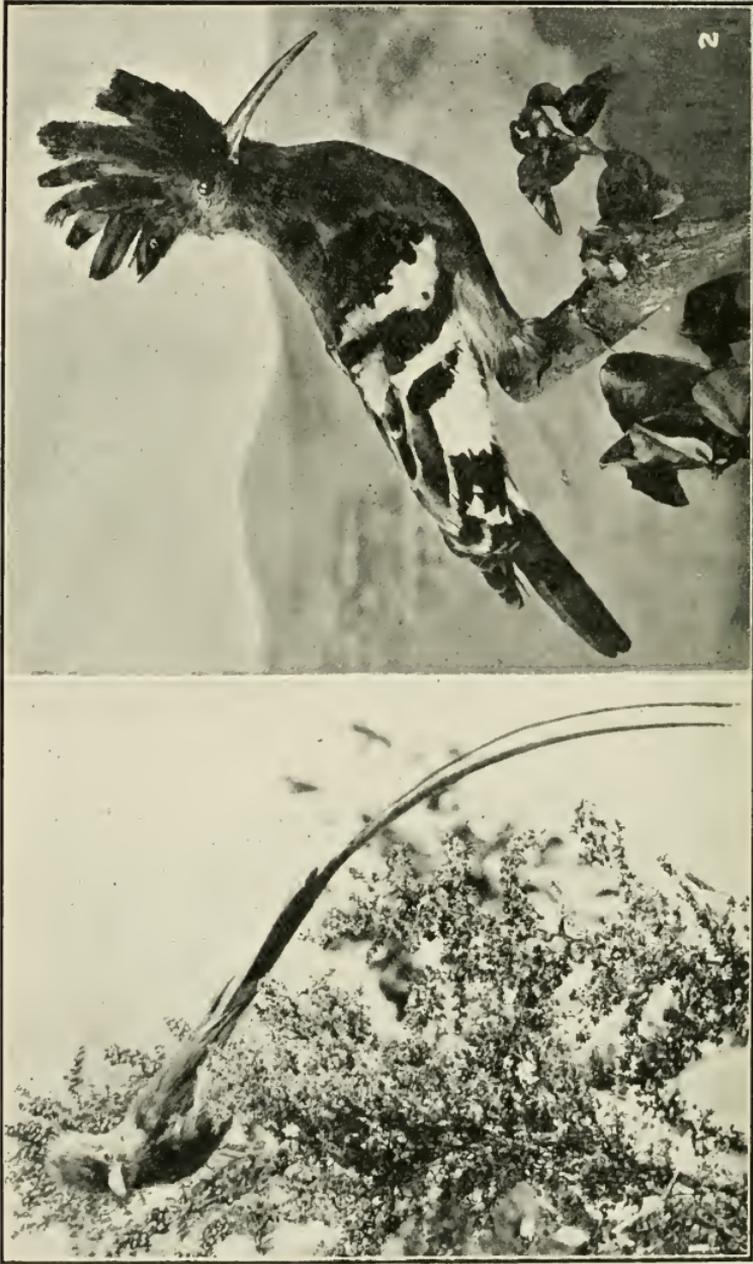
(*Elanus caeruleus*.)

Diet.—The witte sperwel, as this bird is often termed, feeds chiefly on rats, mice, and large insects. It preys occasionally on small birds, but those it captures are usually sick or feeble specimens. When driven by hunger this hawk will swoop down on unprotected chickens, but it does very little harm in this way. It is a bird of considerable economic value. Should any individual hawk become a chicken thief, it should certainly be shot, but it is foolish and criminal to shoot all others at sight. I have carefully observed this kite for twenty years, and I have never known it to take chickens. The contents of the crops examined have shown the diet to be insects, rats, and mice. Locusts often predominated.

Honey Buzzard.

(*Pernis apivorus*.)

Diet.—Rodents, lizards, and insects.



1. The Paradise Fly-Catcher (*Terpsiphone perspicillata*) clears the air of winged insects, and picks their eggs and larvæ from the twigs.
2. The lovely South African Hoopoe (*Upupa africana*), whose diet is purely insectivorous. With its long bill it probes the ground for grubs.

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The Sparrow Hawk.

(Genus—*Accipiter*.)

Diet.—These bold, fearless little hawks prey on small birds, rats, mice, lizards, and insects. They often swoop from a tree or copse on to unsuspecting chickens and carry them off; or, if too large, the prey is killed and the hawk feeds upon it on the ground.

In localities where grain-eating birds are a pest the sparrow hawk is very useful, but otherwise it does more harm than good.

The Goshawk.

(Genus—*Astur*.)

Diet.—The goshawk of the genus *Astur* preys chiefly on rats and mice. It also feeds in a minor degree on lizards, small birds, and insects. I made long and careful observations on the goshawk in Natal, and have seen them scores of times feeding on rats and dismembering them for their nestlings. The crop examinations usually disclosed the remains of rats and insects. On two occasions only have I found traces of bird victims in their crops.

The Goshawk.

(Genus—*Melierax*.)

Diet.—The goshawks of this genus, viz., the chanting goshawks, mechow's goshawk, gabar goshawk, and the black gabar prey chiefly on rats, mice, lizards, and insects. Game birds and nestling birds sometimes fall victims to these goshawks.

The Harrier.

(Genus—*Circus*.)

Diet.—The food of the harriers consists chiefly of rats, mice, ground frequenting birds, lizards, frogs, and large insects. They also prey on the nestlings and eggs of birds which build their nests on the ground. All the smaller members of the hawk tribe prey on young birds which have recently left the nest and are too feeble in flight to escape.

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The Harrier Hawk.

(Genus—*Polyboroides*.)

Diet.—Rats, mice, lizards, snakes, frogs, young grass birds, and insects.

The Vulture.

(Genera—*Gyps*, *Pseudogyps*, *Lophogyps*, *Neophron*, and *Necrosyrtes*.)

Diet.—The vultures of the above genera all feed on carrion. The well-known kolbe's vulture or witte aasvogel attacks and devours helpless ewes when lambing if carrion is scarce. The black vulture or zwarte aasvogel has also been observed doing likewise. For this reason farmers have poisoned vultures in great numbers. It must be borne in mind, however, that the cattle disease known as lamziekte is largely due to cattle chewing the bones of animals which have died and rotted on the veld. Vultures, by picking the bones clean and freeing them of decayed flesh, may be very helpful in controlling this dreaded disease.

The Osprey.

(*Pandion haliaetus*.)

Diet.—The osprey frequents the mouths of tidal rivers and shallow lagoons along the coast, and feeds almost exclusively on fish.

The Secretary Bird.

(*Serpentarius secretarius*.)

Diet.—This handsome and unique bird seeks its prey out on the open veld and treeless hillsides. It walks great distances, and seldom flies unless alarmed. Its diet is very varied, and consists of nearly all the species of small creatures which live on the ground. It preys largely on rats, mice, small tortoises, insects, snakes, and the eggs and young of ground birds; hares also add to its dietary. The secretary bird is of considerable

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economic value, notwithstanding the game birds and hares it sometimes kills. Hares are vermin, and comparatively few game birds fall prey to the secretary bird. Rats and mice destroy great quantities of pasturage; they carry the plague flea, and are exceedingly destructive to young trees, and this bird is one of their most dreaded enemies. Moreover, the secretary bird is a slow breeder and is nowhere common, and it would be a great pity to exterminate a bird which is so strikingly graceful and handsome.

ORDER VI.—STEGANOPODES.

The Cormorant.

(Genus—*Phalacrocorax*.)

Diet.—The trek duiker, as the cormorant is generally known in South Africa, frequents the seacoasts and tidal rivers, and feeds exclusively on fish. One species, viz., the reed duiker (*Phalacrocorax africanus*), inhabits rivers, lagoons, and lakes as well as the seacoast, and feeds on insects and mollusca in addition to fish.

The Darter, or Snake Bird.

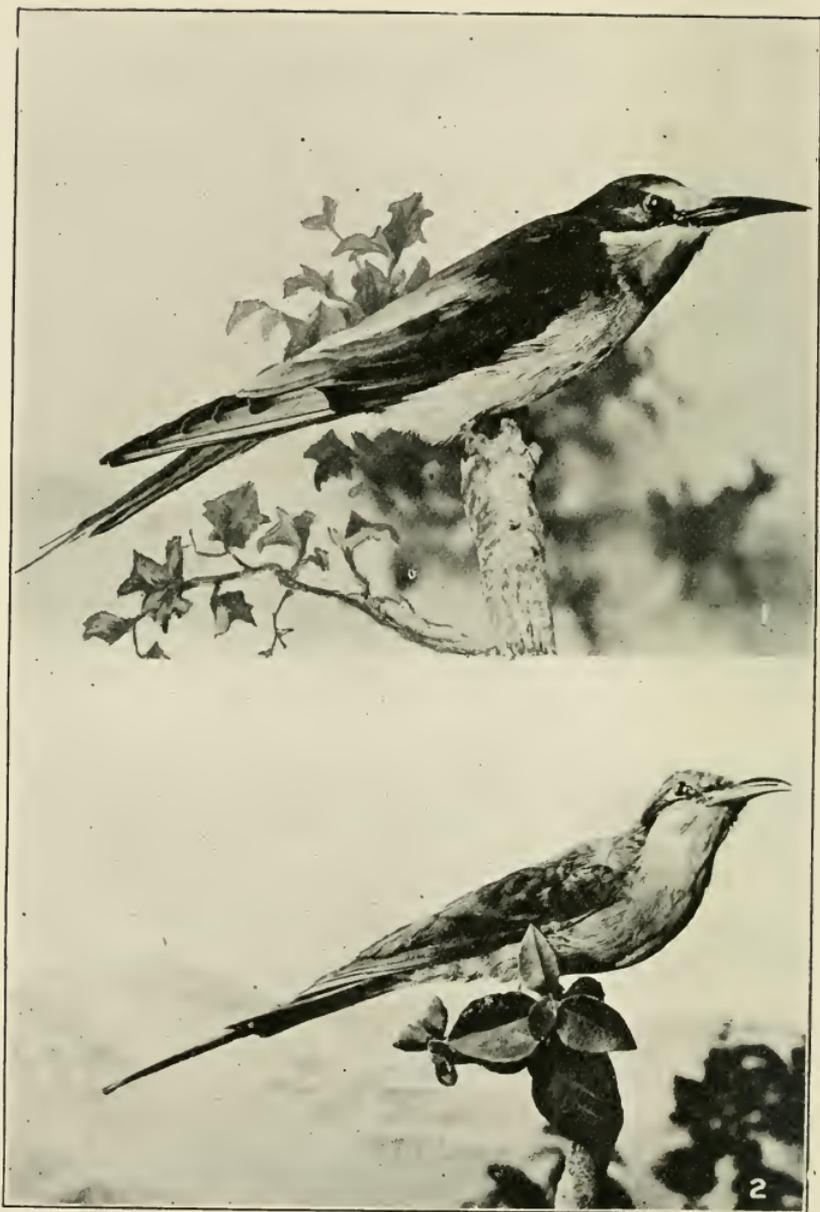
(*Plotus rufus*.)

Diet.—The darter inhabits the rivers, and its food consists almost entirely of fishes, which it impales on its long, sharp bill.

The Malagash, or Cape Gannet.

(*Sula capensis*.)

Diet.—The malagash inhabits the oceans around the South African coast, and feeds on marine fish which it secures by diving. There are two other species of the genus. They also feed on fish.



1. European Bee-Eater, or Berg Zwaluw (*Merops apiaster*).

2. Carmine-throated Bee-Eater (*Merops nubicoides*).

The Bee-Eaters, as their name implies, subsist largely on bees. They, however, feed on a great variety of other winged insects.

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The Pelican.

(Genus—*Pelecanus*.)

Diet.—These birds frequent the seacoasts and are sometimes found along the larger rivers and in marshes. Their diet consists exclusively of fish.

ORDER VII.—HERODIONES.

White-bellied Stork.

(*Abdimia abdimii*.)

Diet.—Inhabits open, grassy country in the vicinity of swamps and rivers, and feeds on small reptiles, fishes, crustacea, and a large assortment of insects. It is especially fond of grasshoppers and locusts.

Another stork of the genus *Dissura* frequents the bays and swamps along the coast of Natal, and feeds on shellfish, crabs, etc. It is rare in South Africa.

The White Stork.

Springhaans Vogel, Great Locust Bird.

(*Ciconia alba*.)

Diet.—Insects of various kinds which it finds on the ground. This stork is extremely valuable on account of the tremendous number of locusts it devours. For this reason alone the white stork should be held sacred.

Black Stork.

(*Ciconia nigra*.)

Diet.—In the drier inland districts the black stork feeds chiefly on insects. It is fond, however, of frequenting the mouths of tidal rivers and lagoons along the coasts, where it feeds on small fishes, crustacea, mollusca, etc.

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Another genus of stork, viz., *Anastomus*, frequents the marshes and watercourses in the upper parts of South Africa, and preys on fish and other aquatic and semi-aquatic creatures.

The saddle-bill or African jabiru has similar feeding habits, but they are usually found in the bays at the mouths of rivers.

The Marabou.

(*Leptoptilus crumeniferus*.)

Diet.—Carrion, fish, small reptiles, crabs, and insects. The marabou is rare in South Africa.

Wood Ibis.

(*Pseudotantalus ibis*.)

Diet.—Insects and small aquatic forms of life which it finds along the muddy and sandy banks of rivers. It is rare in South Africa.

Hammerkop.

Paddevanger, Mud-Lark.

(*Scopus umbretta*.)

Diet.—The hammerkop is a well-known bird. It frequents the banks of rivers, spruits, ponds, marshes, and lakes, and preys on small fishes, frogs, tadpoles, etc. It also feeds on grasshoppers and other insects.

The Heron.

(Genera—*Ardea*, *Melanophoyx*, *Ardeola*, *Erythrocnus*, *Butorides*, and *Nycticorax*.)

Diet.—All the species of herons are usually found seeking their food in lagoons, marshes, and at the edges of rivers and ponds. They feed on frogs, crustacea, fish, water insects, etc. When food is insufficient in these resorts, and during times of drought, herons may be seen out on the veld and on farm lands far from water, seeking grasshoppers, beetles, and other insect pests. They destroy great numbers of mice and veld rats.

SOUTH AFRICAN BIRDS AND THEIR DIET

The Egret.

(Genus—*Herodias*.)

Diet.—The egrets of this genus are similar to the herons in their diet and habits.

Cattle Egret.

(*Bubulcus ibis*.)

Diet.—Grasshoppers, locusts, beetles, and a variety of other ground frequenting insects and their larvæ. The cattle egret is usually seen in the company of cattle and herds of large antelopes, buffaloes, and elephants, and does magnificent service in picking ticks from the bodies of these animals and feeding on the gorged female ticks which drop from their hosts to crawl away and lay their many thousands of eggs. The cattle egret is therefore of the highest possible economic value.

The Bittern.

(Genera—*Ardetta* and *Botaurus*.)

Diet.—The bitterns skulk in the reed beds and the rushes of swamps, and feed on lizards, frogs, tadpoles, and the various kinds of insects which frequent these damp, marshy places. The bittern often ventures out into the grass and scrub in search of grasshoppers, caterpillars, and other insect life. The Cape bittern or roerdomp is the best-known species.

Sacred Ibis.

(*Ibis æthiopica*.)

Diet.—The sacred ibis or schoorsteen-veger (chimney sweeper) frequents the coast and the margins of rivers, lakes, ponds, and swampy lands in search of its food, which consists of shellfish, small crabs, worms, and insects.



Rufous-cheeked Night-Jar (*Caprimulgus rufigena*). The Night-Jar, when at rest on the ground or on a branch, blends so harmoniously with its surroundings that it is practically invisible to human vision. In this picture a pair of Night-Jars with a nestling and an egg are sitting on a piece of bark. The nestling is on the left. The nest, with one infertile egg in it, is on the right near the head of an adult Night-Jar.

SOUTH AFRICAN BIRDS AND THEIR DIET

Bald Ibis.

(*Geronticus calvus.*)

Diet.—The wilde kalkoen or wild turkey, as it is known in South Africa, feeds on locusts, grasshoppers, caterpillars, beetles, other insects, and earth worms, for which it probes with its long, tough beak. It eats carrion on occasion.

The Hadada Ibis.

(*Hagedashia hagedash.*)

Diet.—The food consists chiefly of insect life. This diet is supplemented by small fish, tadpoles, frogs, crustacea, and mollusca.

Glossy Ibis.

(*Plegadis falcinellus.*)

Diet.—The glossy ibis frequents marshes and the banks of rivers, and feeds on small fishes, batrachia, crustacea, and various insects.

African Spoonbill.

(*Platalea alba.*)

Diet.—It haunts lagoons and the muddy banks of rivers, and devours small fishes, mollusca, crustacea, and aquatic insects.

ORDER VIII.—ODONTOGLOSSÆ.

The Flamingo.

(Genus—*Phœnicopterus.*)

Diet.—Flamingoes frequent mud flats, lagoons, salt water lakes, and the seashore, and subsists on small mollusca and crustacea which they sift out of the mud with their bills, which are specially adapted for the purpose. They also eat certain seaweeds and grasses.

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ORDER IX.—ANSERES.

The Spur-winged Goose.

(*Plectropterus gambensis.*)

Diet.—This species of goose feeds in marshes and shallows on aquatic life, grasses, and weeds. It also resorts to the corn-lands and veld in search of grain, insects, and worms.

Dwarf Goose.

(*Nettopus auritus.*)

Diet.—This small goose frequents lagoons, lakes, ponds, and rivers, and lives on aquatic life and vegetation.

Egyptian Goose, or Berg Gans.

(*Alopochen ægyptiacus.*)

Diet.—Resorts to grass-lands and vleis, and subsists on young grass, other vegetation, berries, seeds, insects, slugs, and snails.

The Ducks.

(Genera—*Sarcidiornis*, *Dendrocycna*, *Alopochen*, *Casarca*, *Anas*, *Nettion*, *Pæcilonetta*, *Spatula*, *Nyroca*, *Thalassornis*, and *Erismatura.*)

Diet.—The ducks of the above genera frequent rivers, marshes, lagoons, and ponds, and feed on vegetation and various kinds of aquatic creatures. They often wander short distances from water in search of insects and allied forms of life. They render great service in preying on the fresh water snails, which are the hosts of the bilharzia parasite and the liver fluke. For these reasons they should be strictly protected.

SOUTH AFRICAN BIRDS AND THEIR DIET

ORDER X.—COLUMBÆ.

Delalande's Green Pigeon.

(*Vinago delalandii.*)

Diet.—This beautiful pigeon inhabits the forests, and sustains itself on wild fruits and berries.

The Pigeons and Doves.

(Genera—*Columba*, *Turturæna*, *Turtur*, *Æna*, *Trypanistria*, *Chalcopelia*, and *Haplopelia.*)

Diet.—Pigeons and doves live on wild fruits, berries, weed seeds, and grain. Some of the species invade the newly planted grain fields and feed on the visible seeds and pull up and eat those which are sprouting. They also visit the grain and corn-fields when the crops are ripening, and do considerable damage.

There are many exceptions, however. The olive pigeon (*Columba arquatrix*) frequents the forests and feeds on wild fruits and berries, especially those of the wild olive tree.

The tambourine dove (*Tympanistria bicolor*) confines itself to the thick bush, and eats seeds, berries, etc.

The emerald-spotted dove (*Chalcopelia afra*) also frequents thickets, but ventures out more into the open in search of grass seeds.

The lemon dove (*Haplopelia larvata*) has similar habits to those of the tambourine dove.

These four bush-loving species and the green pigeon do little or no harm, but most of the remainder of the pigeon and dove tribe, when too numerous, are more or less a pest to the grower of grain of any description. The nestlings of all the pigeon and dove tribe are fed on half-digested seeds, berries, and grain regurgitated from the crops of the parents.

Pigeons and doves readily devour winged termites and a limited number of insects. The ring dove and the laughing dove are the two species which are the most troublesome to growers of grain crops.

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ORDER XI.—PTEROCLETES.

The Sand-Grouse.

(*Pterocles and Pteroclorus.*)

Diet.—The sand-grouse feed on seeds and berries which they obtain on the ground, or from low shrubs reached from the ground. They also eat large numbers of insects and larvæ of various kinds.

The namaqua sand-grouse, or namaqua partridge as it is usually termed, is the best-known species. It occurs out on the flats in the drier and more arid parts of South Africa.

ORDER XII.—GALLINÆ.

Partridges, or Francolins.

(Genera—*Francolinus and Pternistes.*)

Diet.—The various species of partridges usually associate in small coveys, except at the breeding time. They seek their food on the ground out on the treeless veld, the grass veld, hills, and mountain-sides. It consists of bulbous roots, tender shoots, the larvæ of blood-sucking flies, termites (white ants), the wire-worm, grasshopper, locust, cut-worm, and a host of other injurious insects, including the gorged female ticks which drop from cattle. Occasionally they invade the outskirts of newly planted grain fields, and pull up and eat the sprouting seeds or feed on the freshly planted grain. Unless very abundant, which is seldom the case, the partridge does little damage in this way, and even when it does, the services it renders in destroying insect pests usually compensates fifty-fold. The young partridges are active from birth, the same as domestic chicks, and their diet consists chiefly of insects, their larvæ, and eggs. The partridge is a bird of considerable economic value, and should not be persecuted unless it happens to increase so abnormally as to be a



1. The Malachite Kingfisher (*Corythornis cyanostigma*) flits like a living gem over the ponds and rivers.
2. Pair of Brown-hooded or Bush Kingfishers (*Halcyon albiventris*), with young, in the author's garden. The parents fed the nestlings from morn to eve on grasshoppers.

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pest to the grower of grain. To shoot so useful an ally for mere sport or the pot is a poor return for the services these birds render to man.

The francolins of the genus *Pternistes* inhabit the thick scrub, plantations, and forests. When surprised feeding out in the open, they instantly fly into their bushy retreats.

The Quail.

(Genera—*Coturnix* and *Excalfactoria*.)

Diet.—The seeds of grasses and weeds. They also destroy large quantities of ground frequenting insects, their larvæ, and eggs. The quail is of high economic value, and should be brought under the protection of the law. To shoot a bird of such economic value as the quail is distinctly wrong, both from individual and State points of view. The chicks feed chiefly on insect food. A hen quail lays up to eighteen eggs, and the young are active at birth like the chicks of domestic fowls. The quails migrate all over South Africa. Examinations of crops of quails in the shooting season (winter) usually disclose seeds of weeds and grasses. This is because the insect food is scarce at this season, and insects are rapidly dissolved by the digestive juices.

The Guinea-Fowl.

(Genera—*Numida* and *Guttera*.)

Diet.—Small wild bulbs, roots of certain grasses, seeds, and a multitude of species of insects. The guinea-fowl renders immense services to man by devouring locusts in both the winged and wingless stages. It also digs up the locust eggs with its powerful bill and feasts on them. It is incessantly digging into the soil and scratching about in search of the larvæ of destructive insects and gorged female ticks.

The guinea-fowl is a most valuable ally in our struggle against insect pests. When guinea-fowls are abundant in the neighbourhood of grain and corn-lands, they will certainly do a good deal of damage; and when this occurs it is essential to

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reduce their numbers, and frighten off the remainder when the crop has been sown and is very young and also when about to be reaped. Otherwise, it is exceedingly foolish to persecute this eminently useful bird. The guinea-fowl feeds greedily on the maggots and pupæ of disease-carrying, blood-sucking flies, house flies, and also those of the blow flies. It therefore aids largely in reducing diseases which ravage the human and sub-human races. The guinea-fowl, by feeding on the maggots and chrysalides of the flies which transmit sleeping sickness to man, and n'gana or tse-tse fly disease to domestic animals, renders highly valuable services; yet we shoot this splendid ally for "sport" and the pot.

ORDER XIII.—HEMIPODII.

The Hottentot Quail.

Sand Quail, or Reit Quartel.

(Genus—*Turnix*.)

Diet.—This little quail-like bird lives on the ground in the grass, and feeds on the seeds of grasses and weeds and also on insects, their larvæ, and eggs.

ORDER XIV.—FULICARIÆ.

The Rails and Crakes.

(Genera—*Rallus*, *Crex*, *Orthygometra*, *Sarothrura*, *Coturnicops*, *Limnobenus*, and *Limnocorax*.)

Diet.—The rails and crakes live upon the ground and frequent the grass-lands, marshes, reed beds, margins of rivers and ponds, according to the species. Their diet consists of a great variety of species of insects and their larvæ, and also worms. All the species of rails and crakes are highly useful allies of man, yet they are shot for so-called sport; and we find authors enlarging on the tenderness and excellence of their flesh. A live bird of economic value is worth a thousand dead ones. One

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wonders when we will cease to slay our feathered allies for what is termed "sport."

These birds keep the fresh water snails in check. These snails are the hosts of the liver fluke and bilharzia parasites.

The Moor Hen.

(Genus—*Gallinula*.)

Diet.—Insect larvæ, worms, slugs, small crabs, snails, seeds, young grass, and other shoots which it obtains in marshes and the margins of rivers, ponds, lakes, etc.

The Reed Hen.

(Genus—*Porphyrio*.)

Diet.—Water plants, shoots of reeds, seeds, and other food of a vegetable nature, and also insects, their larvæ, and fresh water mollusca.

Red-knobbed Coot.

(*Fulica cristata*.)

Diet.—Seeds of shoots and leaves of water plants, also aquatic insects and fresh water mollusca.

Peter's Fin-Foot.

(*Podica petersi*.)

Diet.—Various aquatic creatures, including fish and fresh water mollusca.

ORDER XV.—ALECTORIDES.

Wattled Crane.

(*Burgeranus carunculatus*.)

Diet.—Reptiles, fishes, frogs, crustacea, mollusca, and grain.



1. Giant Kingfisher (*Ceryle maxima*). It is the largest of its kind in South Africa. It feeds on fishes, crabs, and other water-dwelling creatures.
2. Pied Kingfisher (*Ceryle rudis*). Lends charm to the ponds and rivers of South Africa.

When fishing, the Giant and the Pied Kingfishers drop upon their prey from aloft.

Blue Crane, or Stanley Crane.

(*Tetrapteryx paradisea.*)

Diet.—Various aquatic creatures, insects and their larvæ, seeds, and grain. These cranes may be seen in pairs, or a pair and the last season's young, seeking food in swamps, shallows, or out on the dry veld. They are very fond of grasshoppers and locusts. The blue or Stanley crane occasionally invades cultivated lands and feeds on grain. They, however, prefer an insect diet supplemented by tender shoots of grasses, weeds, etc. At the Port Elizabeth Museum a pair keep the extensive grounds free of insects and the destructive garden snail (*Helix adspersa*).

Crowned Crane.

Kafir Crane, or Mahem.

(*Balearica regulorum.*)

Diet.—Same as that of the blue crane.

The Bustard.

Otherwise known as Knorhaan and Paauw.

(Genus—*Otis.*)

Diet.—The bustards inhabit the open veld, bush-veld, or forest country, according to the species. They are all insect feeders, and the services they render to man in this connection are far-reaching. The insect diet is supplemented by soft shoots, leaves, and seeds. They are in the fore-rank of birds of economic value, yet strange as it may seem, they are shot for sport and the pot. It is nothing short of crime to our fellows and posterity to shoot these birds which serve us so well and so faithfully. Grasshoppers, locusts, and all forms of grass and shrub-destroying insect pests are devoured by bustards. All the bustard genus should be strictly protected all the year round, and those who shoot them off on their farms are very short-sighted and foolish.

ORDER XVI.—LIMICOLÆ.

The Dikkop.

(Genus—*Edicnemus*.)

Diet.—The dikkop (*Edicnemus capensis*) frequents the veld, stony flats, and slopes of low hills, and feeds on the insects which frequent these localities. It also feeds sparingly on the seeds of grasses and wild shrubs.

The dikkop, although often seen abroad during the daylight hours, is most active at dusk and after in its quest for the insects which issue forth after sundown and at night. This bird therefore renders specially good service in destroying insects which, by reason of their nocturnal habits, escape the other insect-eating birds.

The water dikkop (*Edicnemus vermiculatus*) frequents the margins of rivers and ponds, and its diet consists of insects, worms, and crustacea.

Crab Plover.

(*Dromas ardeola*.)

Diet.—Chiefly crabs which it finds along the seacoast and margins of salt water lakes.

The Courser.

(Genera—*Cursorius* and *Rhinoptilus*.)

Diet.—The coursers frequent the treeless veld and feed on insects supplemented by seeds of grasses, etc.

The Pratincole.

(Genus—*Glareola*.)

Diet.—The pratincoles feed upon insect life on the veld. The best known is Nordmann's pratincole (*Glareola melanoptera*). It is better known as the little locust bird or klein springhaan

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vogel. This bird, with the assistance of the white stork and the wattled starling, attacks the migratory locusts on the wing and in the wingless stages on the ground, and destroys entire swarms. Those only who are aware of the devastation to crops and pasturage caused by these locusts can fully appreciate the incalculable services rendered by this bird and its colleagues. Yet, notwithstanding the immense services it renders, it is a common practice for people to shoot into flocks of these birds with shot-guns to obtain the bodies of the victims for the pot. This is one of the many results of neglecting to teach South African economic natural history in our schools.

The Jacana.

(Genera—*Actophilus* and *Microparra*.)

Diet.—Insects, fresh water crustacea, and mollusca; also the seeds of water plants which it obtains by turning over the floating vegetation.

The Turnstone.

(*Arenaria interpres*.)

Diet.—The turnstone frequents the seashore and feeds on small mollusca and crustacea which it obtains by turning over stones and seaweed.

The Wattled Plover.

(Genera—*Lobivanellus* and *Xiphidiopterus*.)

Diet.—These birds haunt the sandy margins of rivers, ponds, lakes, etc., and feed on insect and allied forms of life.

The Lapwings and Plovers.

(Genera—*Hemiparra*, *Hoplopterus*, *Stephanibyx*, *Squatarola*, and *Ægialitis*.)

Diet.—The lapwings and plovers frequent the open veld, margins of rivers, lakes, ponds, lagoons, and swamps. Some species live almost exclusively on the veld, while others are



The Coly, otherwise known as the Mouse Bird or Muis Vogel (*Colius striatus*). There are several species of Muis Vogels in South Africa. They are all destructive to fruit and vegetables, and have no economic value as far as Man is concerned.

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never found far from water. The food of these birds consists of insects of various species and various small aquatic creatures. The best known and most useful veld-loving species is the crowned lapwing or kiewitje (*Stephanibyx coronatus*). It feeds entirely on insect life which it finds on the ground and the low veld bushes and grass. It is one of our most efficient guardians of the veld. It subsists largely on grasshoppers and weevils when these pests are abundant. All species of lapwings and plovers are of considerable economic value.

Black Oyster Catcher.

(*Hæmatopus moquini*.)

Diet.—This handsome bird finds its food along the seashores. It consists of small fishes, crustacea, and mollusca.

The Stilt.

(Genus—*Himantopus*.)

Diet.—Aquatic insects, small snails, etc., which it captures in and at the margins of water.

The Avocet.

(*Recurvirostra avocetta*.)

Diet.—Insects, worms, small crustacea, and mollusca which it finds along the coast and the mud banks of tidal rivers and lagoons.

The Curlew.

(*Numenius arquatus*.)

Diet.—The curlew seeks its food on the marshy flats of tidal rivers, the mud banks and margins of lagoons, and the sandy sea beach. It consists of a great variety of small marine creatures. The curlew is often met with on the veld several miles from the coast. The crops of those shot on the veld contained grasshoppers and beetles.

SOUTH AFRICAN BIRDS AND THEIR DIET

The Whimbrel.

(*Numenius phaeopus.*)

Diet.—The habits and diet of this bird are similar to those of the curlew. It is often seen in association with the curlew.

Red Shanks, Green Shanks, and Sandpipers.

(Genus—*Totanus.*)

Diet.—These birds, of which there are a good many species, haunt the mud flats, sandy seashores, margins of rivers, ponds, lakes, and swamps, and their diet consists of the many kinds of insects, worms, crustacea, and mollusca which frequent those localities. All the birds of this genus are of economic value.

The Ruff.

(*Pavonella pugnax.*)

Diet.—The ruff finds its food by wading in the shallows of ponds, rivers, lagoons, and on the seashore. Its diet is the same as that of the sandpipers.

The Knots and Stints.

(Genera—*Tringa and Calidris.*)

Diet.—The birds of these genera feed on aquatic insects, mollusca, and crustacea which they find in the shallows or at the margins of rivers, ponds, lagoons, and on the seashore.

The Snipe.

(Genus—*Gallinago.*)

Diet.—Worms and aquatic insects which they obtain by probing with their long beaks in the mud of swamps and vleis. All the species of snipe are of economic value. They are at present very largely shot off for sport.

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The Gull.

(Genus—*Larus*.)

Diet.—The gulls are the scavengers of the ocean and its shores. They feed on the dead bodies of whales, seals, fish, and other forms of marine life cast up by the waves. They also eat small crustacea, mollusca, and kindred creatures. They seldom take live fish other than small ones isolated at low tide in shallow pools. Gulls often travel considerable distances inland, and prey on carrion and noxious insect life, chiefly grasshoppers and crickets on the veld. All species of gulls are of considerable economic value. On the various islands around the South African coast the black-backed gulls (*Larus dominicanus*) destroy the eggs and young of the jackass penguin.

The Tern.

(Genera—*Hydrochelidon* and *Sterna*.)

Diet.—The terns frequent the ocean, the coast, lagoons, rivers, marshes, ponds, and lakes in search of fish and crustacea which constitute the bulk of their diet.

The African Skimmer.

(*Rhynchops flavirostris*.)

Diet.—Various aquatic creatures including fish, also fresh water algæ. It frequents the larger rivers of South Africa.

The Skua.

(Genus—*Stercorarius*.)

Diet.—The skua, sea hen, or sea hawk attacks and robs gulls, gannets, and other birds of the fish they catch. It also feeds on the cast-up bodies of whales, seals, and large fish. The skua attacks and kills various kinds of sea birds.

The southern skua (*S. antarcticus*) is the best-known skua along the South African coasts.

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The Petrel.

(Genera—*Oceanites*, *Garrodia*, *Priocella*, *Priofinus*, *Fregetta*,
Procellaria, *Oceanodroma*, and *Estrelata*.)

Diet.—Crustacea, mollusca, other small marine creatures, and fish. The petrels inhabit the ocean and its shores.

The Shearwater.

(Genus—*Puffinus*.)

Diet.—Various marine life, chiefly cuttle fish.

Cape Hen.

(*Majaqueus æquinocialis*.)

Diet.—The chief food of the Cape hen is the cuttle. It also eats fish of various kinds, and sometimes seaweeds.

Giant Petrel.

(*Ossifraga gigantea*.)

Diet.—This large sea bird feeds on carrion, edible scraps cast out of ships, and various kinds of rubbish thrown up by the waves on the shore. It also attacks other sea birds and devours them.

The Blue Petrel.

(Genus—*Prion*.)

Diet.—Various kinds of edible matter floating on the surface of the ocean; also small living fish and other marine forms of life.

Cape Pigeon.

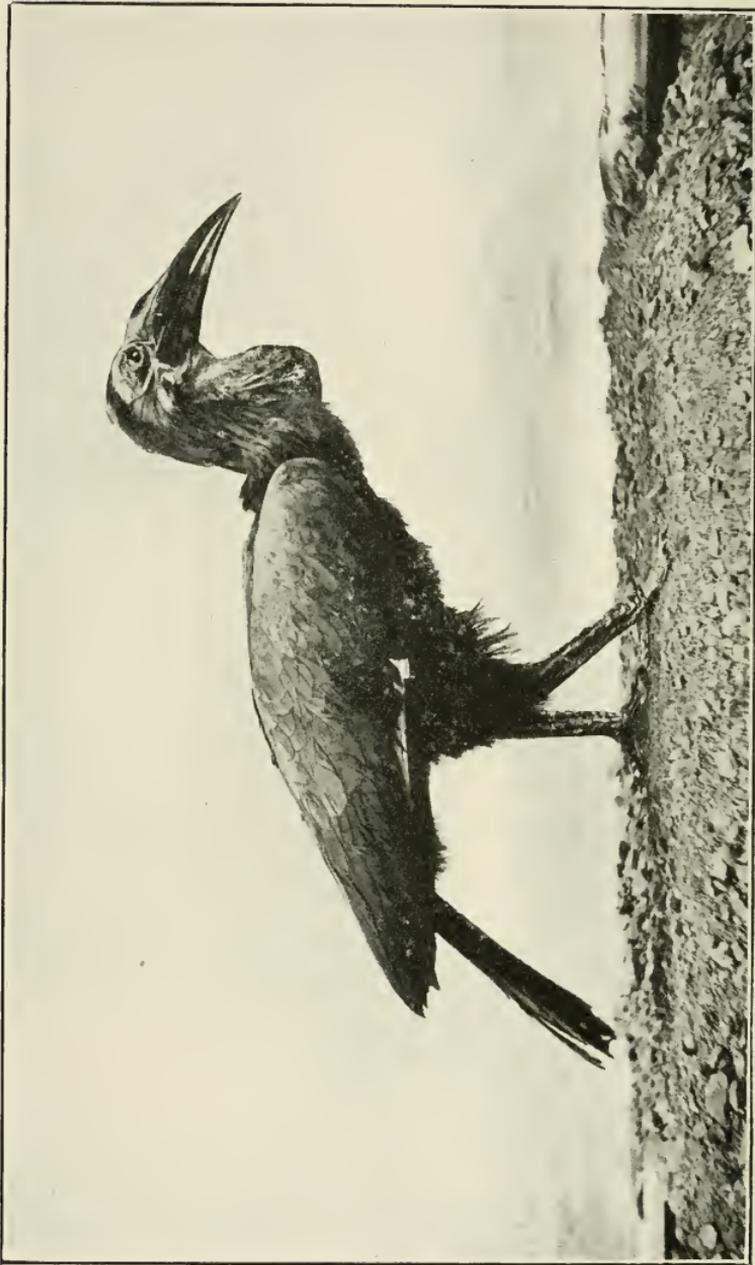
(*Daphion capensis*.)

Diet.—Chiefly the cuttle. It also feeds on fish.

Diving Petrel.

(*Pelicanoides exul*.)

Diet.—Marine fish, which it obtains by diving.



The Ground Hornbill renders excellent service in clearing the veld of rats, mice, venomous snakes, and insect pests. Specimen hunters and thoughtless folk are exterminating these unique and useful birds.

SOUTH AFRICAN BIRDS AND THEIR DIET

Wandering Albatross.

(*Diomedea exulans.*)

Diet.—This great sea bird feeds principally on the squid and octopus. It supplements this diet with carrion and garbage; also fish and a variety of marine creatures.

Sooty Albatross.

(*Phœbetria fuliginosa.*)

Diet.—Same as that of the wandering albatross.

The Mollymawk.

(Genus—*Thalassogeron.*)

Diet.—The food is the same as that of the albatross.

ORDER XVII.—PYGOPODES.

Grebes and Dabchicks.

(Genus—*Podicipes.*)

Diet.—These birds inhabit lagoons, ponds, vleis, rivers, and marshes. The grebes feed on small fishes, crustacea, mollusca, insects, and water grasses.

The dabchick (*Podicipes capensis*) subsists almost entirely on water insects.

The Jackass Penguin.

(*Spheniscus demersus.*)

Diet.—The food of this penguin consists entirely of fishes which are caught by diving. Their eggs are collected and sold on the South African markets.

DESCRIPTION, DISTRIBUTION, AND HABITS OF THE BIRDS

Illustrated in Volumes I. and II.

The Volume and page after the name of each Bird refer to the position of the illustrations throughout the text.

NOTE

The classification in Stark and Sclater's "Fauna of South Africa" (Birds, vols. i.-iv.) has been followed in this list. The Common, Vernacular, and Native names have also been adopted.

Drs J. W. B. Gunning and Alwin Haagner compiled a check list of the birds of South Africa in 1910. They adopted Dr Reichenow's "Vogel Africes" as the foundation of the list, holding that his was the only complete modern work on African ornithology.

However, curators of museums, ornithologists, and students generally are so familiar with the scientific and common names adopted by Layard and Sharp, Stark and Sclater, that the author considers it unwise to cause confusion by altering them until a complete and permanent revision of the genera and species has been accomplished.

Those who prefer to follow Dr Reichenow's classification are referred to the above-mentioned check list by Gunning and Haagner: also a *Review of the Nomenclature of South African Birds*, by Austin Roberts. These records are published in the "Annals of the Transvaal Museum," vol. ii., July 1910, and vol. viii., Part 4, 30th October 1922 respectively.

NATURAL HISTORY OF SOUTH AFRICA

Black Crow (*Corvus capensis*). (Vol. I., p. 162.)

NOTE.—Throughout this book the measurement of birds are given in inches and fractions of inches.

Total length in every instance means the measurement from the tip of the beak to the tip of the tail.

Description.—Male and female: glossy black. Iris dark brown. Bill and feet dark horn colour.

Length, from the tip of the beak to the tip of the tail, 18.00; tail, 7.70; wing, 13.80.

Distribution.—From the Cape to Central and North-East Africa.

Habits.—Associates in pairs or family parties. Usually seen out on cultivated lands. The cry is a succession of discordant croaks. The nest is built of twigs in a tree, or on a rocky ledge. Clutch, 3 to 5. Eggs pink, spotted with red; size, 2.25 by 1.20.

Wattled Starling (*Dilophus carunculatus*). (Vol. I., p. 168.)

Description.—Male in full breeding plumage: head and throat bare and bright yellow. Wattles black. Body drab or grey. Primary coverts, quills, and tail black. Iris brown. Bill yellow. Feet pale pink.

Total length, 8.75; tail, 3; wing, 4.75.

The majority of the male birds are not wattled. In a large flock only a few individuals are fully wattled. The female is paler than the male; head feathered; bare skin only round eyes and on throat.

Distribution.—Whole of Africa and Southern Arabia.

Habits.—The wattled starlings associate in large flocks, sometimes numbering many thousands. They are migratory, and follow up the vast swarms of locusts until they exterminate

DESCRIPTION, DISTRIBUTION, HABITS

them. Often seen in flocks of 100 to 500 on the veld. They breed in colonies, filling trees with their nests, which are cup shaped. Clutch, 4 to 5; eggs pale blue, sometimes spotted; size, 1.20 by 0.90.

Black-vented Glossy Starling (*Lamprocolius melanogaster*). (Vol. I., p. 168.)

Description.—Male: dull black on abdomen; steel blue and green sheen on crown; oil-green on sides of neck and nape; purple on back, rump, and upper tail coverts. The entire plumage of the upper parts is more or less glossed with steel blue, purple, and oil-green on a black base.

Total length, 8.00; tail, 3.40; wing, 4.30.

The female is not so glossy as the male.

Distribution.—Eastern Cape Province, and north to Zanzibar and Mombasa.

Habits.—Associates in flocks in the bush-veld. Pairs off when breeding. Nests in holes in tree trunks. Eggs in clutch, 3 to 4; pale blue-green, spotted with brown; size, 1.05 by 0.75.

These birds are migratory.

Burchell's Glossy Starling (*Lamprocolius australis*). (Vol. I., p. 173.)

Description.—Adult male: entire plumage glossy with shades of oil-green, purple, blue, and violet. Tail graduated and with many cross bars. Iris hazel. Bill and feet black.

Total length, 14.00; tail, 6.70; wing, 7.50.

The female is smaller than the male.

Distribution.—From centre of Cape Province, and north to Angola.

NATURAL HISTORY OF SOUTH AFRICA

Habits.—This starling is usually seen in small flocks and in pairs when breeding. The nests are in holes in trees, in crevices under the roofs of houses, etc. Clutch, 4; eggs blue-green, spotted with brown; size, 1.36 by 0.95.

Pied Starling (*Spreo bicolor*). (Vol. I., p. 173.)

Description.—Lower abdomen and under tail coverts white. Tail brown below, bronze-green above. Rest of the plumage brown with a bronze-green sheen. The female does not differ in plumage from the male. Iris pale yellow. A bare ring of white round the eye. Bill black with a yellow wattle at the base.

Total length, 10.25; tail, 4.20; wing, 5.75.

Distribution.—South Africa only. It does not occur in the very dry western parts of the country.

Habits.—Goes in flocks. Nests in holes in banks, holes in walls, under the eaves of farmhouses, and in rock crevices. Often seen out on the veld in the company of cattle. Clutch, 3 to 6; eggs bright blue, and occasionally spotted with brown; size, 1.15 by 0.85.

Red-shouldered Glossy Starling (*Lamprocolius phænicopterus*). (Vol. I., p. 178.)

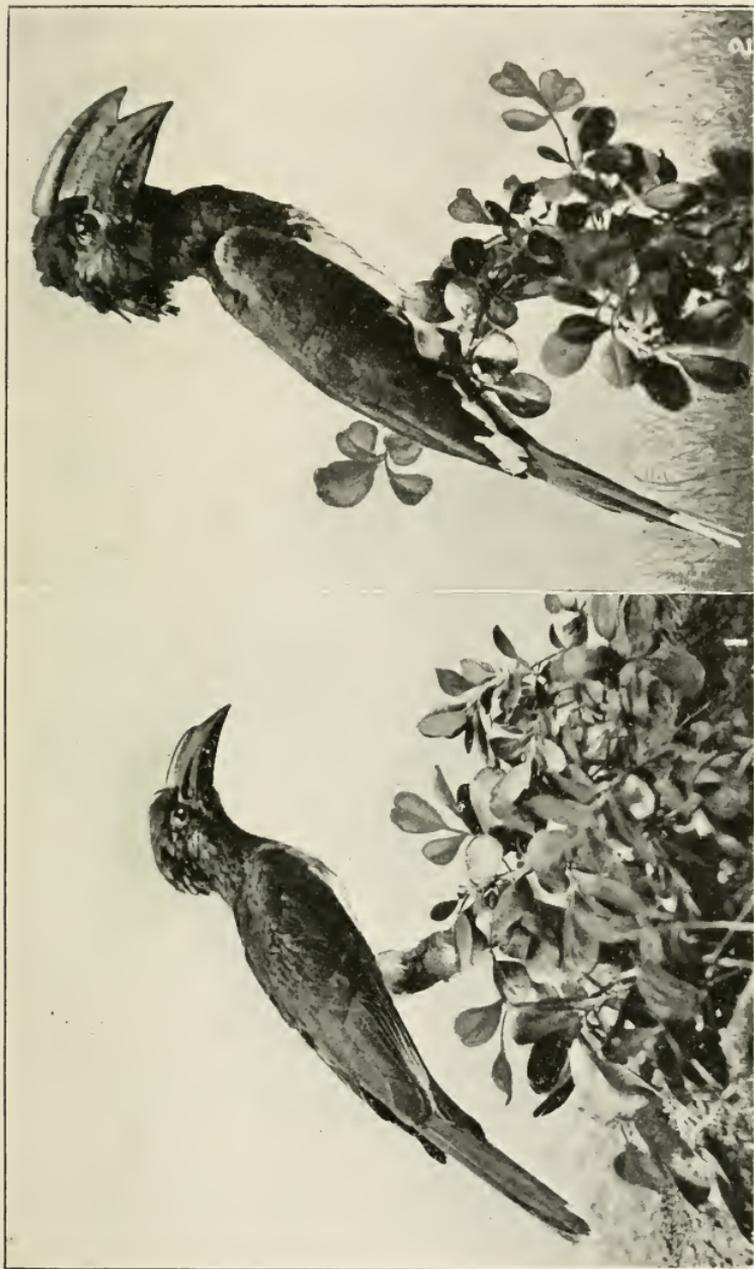
Description.—Male: glossy oil-green with purple, violet, and steel-blue reflections. Iris orange-yellow. Bill and feet black.

Length, 10.50; tail, 4; wing, 5.80.

The female is somewhat duller in plumage.

Distribution.—From Eastern Province of Cape to Orange Free State.

Habits.—Associates in flocks in winter. Pairs off in spring. Nests in holes in trees, crevices, under eaves of houses, etc. Eggs, 4 to 5; pale bluish-green, sparingly spotted with pale reddish-brown; size, 1.10 by 0.80.



1. The Crowned Hornbill, or Toucan (*Lophoceros melanoleucus*), inhabits the forests and bush-veld, and feeds on locusts, caterpillars, wild berries, and fruits.
2. Trumpeter Hornbill (*Bycanistes bucinator*) also inhabits the forests, but it lives almost exclusively on wild berries and fruits, and is especially fond of wild figs. This specimen is a male. In the female, the casque is smaller and blunt.

NATURAL HISTORY OF SOUTH AFRICA

Red-winged Starling (*Amydrus morio*). (Vol. I., p. 182.)

Description.—Male: glossy black with slight blue and purple reflections. Wing feathers chestnut or dull red. Iris dark brown, circled with crimson. Bill and feet black.

Length, 12.00; tail, 5.75; wing, 6.25.

Female: body streaked with grey, and glossy reflections not so apparent as in the male.

Distribution.—From Cape Province up to North-East Africa.

Habits.—Associates in flocks and breeds in colonies and in pairs. Builds nests of small sticks and grass in holes and crevices in rocks and under eaves of houses. Eggs, 4 to 5; bluish-green, spotted at larger end with brown; size, 1.45 by 0.95.

Verreaux's Glossy Starling (*Pholidauges verreauxi*). (Vol. I., p. 182.)

Description.—Male: upper parts, throat, and chest glittering copper colour with violet and purple reflections. Under surface pure white. Iris bright yellow. Bill and feet black.

Length, 6.60; tail, 2.40; wing, 4.25.

Female: dark brown above; feathers of crown and mantle with rufous edges. This rufous edging gets progressively paler towards the rump. Indistinct rufous collar across the chest. Throat whitish, streaked with dark brown. Outer tail feathers edged with rufous.

Distribution.—South Africa, excepting Cape Province and Great Namaqualand. It ranges as far north as the Congo and Zanzibar.

Habits.—They associate in flocks, usually consisting entirely of male or female birds. Migratory. They pair during the breeding season only. The nest is usually built in a hole in a tree. Eggs, 4; pale blue, slightly spotted with pale brown at larger end; size, 0.90 by 0.70.

DESCRIPTION, DISTRIBUTION, HABITS

Black-headed Oriole (*Oriolus larvatus*). (Vol. I., p. 187.)

Description.—Body yellow tinged with olive on the back. Head, cheeks, and throat black; the black on the throat extends down to the chest. Iris red. Bill dark red. Legs and feet black. The sexes are coloured alike. Immature birds are streaked with brown, and the parts that are jet black in the mature birds are dusky brown in immature specimens.

Length, 9.25; tail, 3.25; wing, 5.50.

Distribution.—Wooded districts of the whole of South Africa. This oriole ranges as far as Angola, Central and North-East Africa.

Habits.—They associate in pairs. The nest is composed of lichen; it is saucer shaped and placed amongst the small upper branches of tall trees. Eggs, 3 to 5; size, 1.25 by 0.87; creamy white, glossy, and marked with dark purplish-brown.

The young are fed exclusively on caterpillars.

Golden Oriole (*Oriolus galbula*). (Vol. I., p. 187.)

Description.—The entire body is golden-yellow. A black streak runs from the base of the bill to the eye. Wing coverts black. Tail black, tipped with yellow. Iris and bill red. Feet dull brown.

Length, 10.00; tail, 3.10; wing, 5.90.

Female is somewhat duller in colour than the male.

Distribution.—Wooded districts of South Africa, and north through Africa into Europe and Asia.

Habits.—The golden oriole frequents the forests in pairs. It is a very shy bird, and hides amidst the thick foliage of the trees. It is migratory, and does not breed in South Africa. Its chief breeding place is Germany.

This oriole is nowhere common in South Africa.

NATURAL HISTORY OF SOUTH AFRICA

Masked Weaver Bird (*Hyphantornis velatus*). (Vol. I., p. 193.)

Description.—Male in breeding plumage: forehead, cheeks, and throat black. Back olive-yellow, indistinctly streaked with brown. Crown and rest of body golden-yellow. Upper tail coverts yellow. Wings brown, the quills edged with brown. Tail feathers dark olive-brown with yellow edging. Iris orange-red. Bill black. Legs and feet rose colour.

Length, 5.80; tail, 2.10; wing, 3.00.

In winter the male loses most of its bright yellow colouring. It changes to ashy-brown streaked and tinged with yellow.

The female resembles the male in winter plumage.

Distribution.—From central parts of Cape Province to the regions north of the Limpopo.

Habits.—The masked weavers live and breed in large colonies. The nests are kidney shaped, suspended from the ends of branches overhanging water; they are also attached to reeds. The nest in this instance is woven to two reeds, one on each side. Eggs, 3; they vary in colour, white, blue, pink, green, or cream, sometimes unspotted, but usually spotted with various shades of red and brown; they are occasionally blotched and clouded with the same colours.

Black Widow Finch (*Hypochera funerea*). (Vol. I., p. 193.)

Description.—Adult male in breeding season: entire body purplish-black with a slight gloss. Sometimes there is a tuft of white feathers on each side of the lower back, and sometimes not. Primary wing coverts, quills, and outer secondaries light brown. Tail light brown edged with whitish. Iris brown. Bill white. Legs and feet red.

Length, 4.25; tail, 1.60; wing, 2.70.

The female is brown above, and each feather has a dark centre. Eyebrow whitish with a dusky streak above. Cheeks dull white. Under parts greyish-white; darker on the sides.

Male resembles the female in winter.



1. Narina Trogon, or Bosch Lourie (*Hapaloderma narina*). Lives a lonely life in the forests, and subsists on insects which it captures on the wing.
2. Meyer's Parrot (*Paeocephalus Meyeri*). There are several species of parrots and love birds in South Africa. They inhabit the bushlands and eat fruit, berries, seeds, young shoots, buds, etc. They sometimes invade the corn-lands, and feed on the young mealies in the milk stage.

NATURAL HISTORY OF SOUTH AFRICA

Distribution.—Eastern side of Africa from Natal to the Equator.

Habits.—Always seen in pairs. Builds a nest of a mass of straw and miscellaneous material under eaves of houses, in holes in walls, thatch, hollows in trees, or in deserted swallows' nests. Clutch, 3 to 5 ; eggs white.

Paradise Widow Bird (*Vidua paradisea*). (Vol. I., p. 193.)

Description.—Male in summer plumage : head, face, and throat black. A bright mahogany-red collar round the neck, fading into buff on the abdomen. Thighs and under tail coverts black. A white spot on each side of the lower back. Iris red-brown. Bill black. Legs and feet brown.

Length, from bill to the tip of the short tail feathers, 5.25 ; the two longest tail feathers, 12.00 ; wing, 3.00.

The male in winter loses his long tail, and changes to reddish-brown streaked with black, and marked with buff-white, tawny-red, and white.

Distribution.—Eastern side of South Africa from near King William's Town, and north to the Soudan.

Habits.—Frequents the open bush-veld. The male is polygamous, and has from half a dozen to fifty wives. The breeding habits have not been fully observed.

Pin-tailed Widow Bird (*Vidua principalis*). (Vol. I., p. 193.)

Description.—Male in breeding plumage : black and white, as shown in the illustration. The feathers of the wings are broadly edged with reddish-buff. Iris brown. Bill red. Feet light brown.

Length, to end of short tail feathers, 5.15 ; wing, 2.85.

The long tail is shed in winter, and the plumage is reddish-buff streaked with black.

Distribution.—From the Cape, north to the Soudan.



PLATE VII —(1) Rufous-breasted Swallow (*Hirundo semirufa*)
(2) Wired-tailed Swallow (*Hirundo smithi*).

The Swallows, Martins and Swifts are very valuable allies in our struggle for life against the ravening hordes of insects.

DESCRIPTION, DISTRIBUTION, HABITS

Habits.—This small widow bird inhabits grass-lands and cultivated fields. The male is polygamous, and during the breeding season he may be seen in company with ten to fifty females. During the autumn and winter they collect into large flocks. The nest is of fine grass, and domed. It is concealed in the midst of a tuft of grass a few inches off the ground. Clutch, 3 to 4.

Common Waxbill (*Estrelida astrilda*). (Vol. I., p. 198.)

Description.—Male: brown, finely barred with dusky cross lines. Upper tail coverts and rump with a red tinge. A streak of crimson in front and at the base of the eye. Throat and cheeks tinged with pink. Under tail coverts black. Breast and abdomen slightly pink. The pink is most conspicuous on the centre of the lower part of the breast and abdomen. Under parts closely barred with narrow brown lines. Iris brown. Bill red. Legs and feet brown.

Length, 4.75 ; *tail*, 2.15 ; *wing*, 2.00.

Female duller, and less tinged with pink.

Distribution.—From Cape Province, northwards to Angola.

Habits.—This well-known waxbill is common all over South Africa in the more open and fertile parts. They associate in flocks and often breed in communities, several pairs sometimes inhabiting the same nest and laying their eggs and sitting in it promiscuously. The nest is of grass, feathers, wool, rags, and anything soft and suitable, making a large mass with an elongated entrance. It is usually placed in a low bramble bush or mass of ferns within a few inches to a foot off the ground. Clutch, 3 to 5 ; eggs pure white ; size, 0.60 by 0.35.

South African Ruddy Waxbill (*Lagonosticta rubricata*). (Vol. I., p. 198.)

Description.—Male: back of neck and crown grey. Back brown. Upper tail coverts and rump crimson. Tail feathers black and crimson. Face crimson. Sides of neck and ear coverts

NATURAL HISTORY OF SOUTH AFRICA

grey, tinged with crimson. Some small white spots are present on the sides of the body. Iris dusky. Upper parts of bill blackish; lower, ashy with a pink base. Legs and feet dusky.

Length, 4.75; tail, 1.90; wing, 2.00.

The female is duller in colouring.

Distribution.—On the eastern side of South Africa from Graham's Town to the Limpopo River.

Habits.—Generally seen in pairs on the veld, rough pasture lands, and amidst scrub. The nest is circular in shape, and is made of grass stems roughly twined together. The inside is lined with feathers. It is concealed in a tuft of long grass about 6 in. from the ground. Clutch, 4 to 6; eggs pure white; size, 0.58 by 0.45.

Scaly-feathered Weaver Bird (*Sporopipes squamifrons*).

(Vol. I., p. 198.)

Description.—Head black, each feather margined with white. Body colour light brown. Feathers in front and below the eyes black. The chin and a streak on each side of the throat black. Centrè part of throat pure white. Feathers on the head and throat have a scaly appearance. Iris light brown. Bill pink. Feet fleshy.

Length, 4.30; tail, 1.75; wing, 2.25.

Female smaller, but similar in colour to the male.

Distribution.—Southern Africa from the Cape to Ngami and Benguela.

Habits.—These dainty little birds associate in flocks. They are common along the bush-fringed banks of the Orange River. They feed upon the ground on seeds of grasses and insects. The nest is an untidy-looking domed mass of grass in a bush. The entrance is at the side and is concealed by the ends of the grass which composes the nest. The interior is lined with feathers or down. The eggs are 4 to 5 in number, colour pale blue-green marked, blotched and scrawled with brown and rufous. The eggs vary somewhat in shape and colour.

DESCRIPTION, DISTRIBUTION, HABITS

Dufresne's Waxbill (*Estrela dufresnii*). (Vol. I., p. 204.)

Description.—Male: grey above. Wing coverts and back olive. Upper tail coverts and rump scarlet. Tail black. Greater wing coverts tinged with crimson. Sides of face, cheeks, and upper throat black. Under parts dull whitish tinged with grey.

The female differs from the male in having the face, cheeks, and throat grey instead of black.

Length, 3.8 ; tail, 1.8 ; wing, 1.5.

Distribution.—From the eastern side of Cape Province, north on the east side of Africa to Nyassaland.

Habits.—These little birds are greatly sought after for aviaries. When not breeding they associate in small parties of six to about a dozen. The nest is placed in a tree or shrub several feet from the ground, and is constructed of grass loosely put together and lined with down or feathers. The entrance hole is at the side. Clutch, 4 to 5. Eggs pure white and very small.

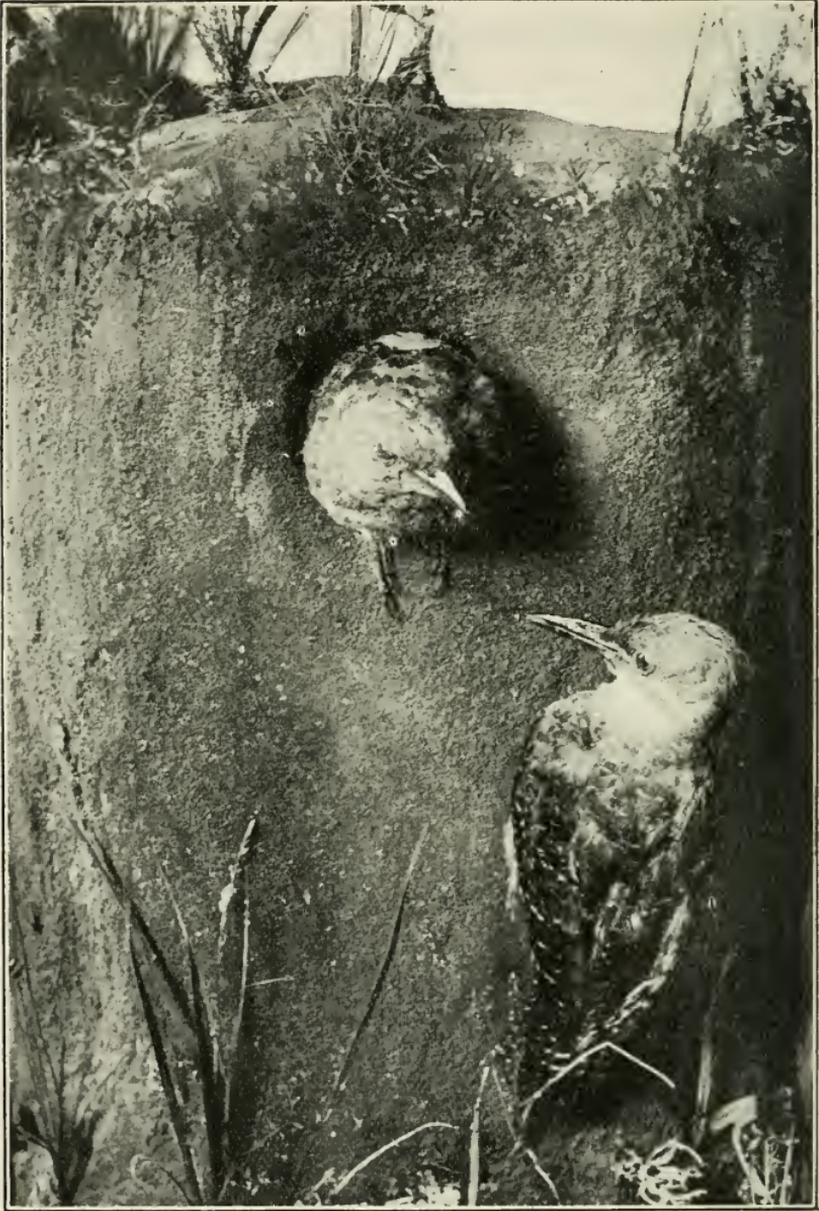
The very young nestlings are fed on small caterpillars, as is the case with nearly all seed-eating birds.

Orange-breasted Waxbill (*Estrela subflava*). (Vol. I., p. 204.)

Description.—Male: olive-brown on the upper parts. Upper tail coverts and rump crimson. Eyebrows crimson. Sides of face and cheeks grey, tinged with yellow. Lower throat orange-yellow streaked with orange-red. Sides of the breast, body, and flanks barred with yellow and black. Chin bright red. Under tail coverts crimson. Iris red-brown. Bill crimson. Legs and feet flesh colour.

Length, 3.80 ; tail, 1.35 ; wing, 1.80.

Old males are more richly coloured than younger ones of the same sex. The female lacks the crimson eyebrow, and is duller in colour.



A pair of Ground Woodpeckers (*Geocolaptes olivaceus*) at their nest hole in a bank. The Ground Woodpecker, as its name implies, frequents the ground. It lives entirely on insect life.

DESCRIPTION, DISTRIBUTION, HABITS

Distribution.—From Natal up the whole of the east side of Africa.

Habits.—They associate in small flocks on open grass-lands, marshes, and borders of streams. The construction of the nest and its situation are nearly similar to that of the common waxbill. Clutch, 3 to 4, occasionally more. Both male and female take part in the incubation process. Eggs pure white; size, 0.52 by 0.40.

Blue-breasted Waxbill (*Estrela angolensis*). (Vol. I., p. 204.)

Description.—Above reddish-brown. Lower back and tail coverts, ear coverts, and cheeks light blue. Tail dark blue. The throat, breast, sides, and flanks light blue. Centre of abdomen light brown. Iris reddish-hazel. Tip of bill black, the rest lilac. Legs and feet pale brown.

Length, 4.75; *tail*, 2.10; *wing*, 2.00.

Distribution.—Cape Province to Central Africa.

Habits.—They associate in small parties and large flocks, and frequent the bush-veld. The nest is a rough ball of dry grass with the entrance at the side. It is placed in a bush, preferably a thorny mimosa. Clutch, 3 to 5; eggs pure white; size, 0.70 by 0.55.

Grenadine Waxbill (*Estrela grenatina*). (Vol. I., p. 204.)

Description.—Male: forehead blue. Crown, neck, and back chestnut-brown, paler on the wing coverts. Black spot in front of eye. Sides of the face and cheeks lilac. Throat black. Under parts greyish-black. Rump, upper and under tail coverts blue. Feathers of tail black, edged with blue. Iris red. Bill purple at base, red at tip. Legs and feet dull purple.

Length, 5.80; *tail*, 2.80; *wing*, 2.25.

Female is not so bright in colour.

NATURAL HISTORY OF SOUTH AFRICA

Distribution.—Western side of South Africa to the Zambesi regions.

Habits.—Small family parties of half a dozen, or pairs, are usually seen in the scattered open bush-veld. The nest is round and loosely made of grass, and lined with feathers. It is usually placed in a thick thorny bush. Clutch, 3; eggs pure white; size, 0.72 by 0.50.

These waxbills breed in midwinter and in summer.

Taha Bishop Bird (*Pyromelana taha*). (Vol. I., p. 207.)

Description.—Male in breeding plumage: bright golden-yellow above, including the crown. Collar round neck and entire under surface velvety black. Iris brown. Bill black. Feet pale brown.

Length, 4.25; tail, 1.60; wing, 2.40.

Female is brown streaked with black. Wing edged with yellow. Male in winter plumage resembles the female.

Distribution.—From Natal and Orange Free State to the Limpopo.

Habits.—In autumn these birds may be seen in large flocks. They breed in small parties in the reeds in the midst of marshes, in vleis, and on the borders of streams. The nest is of fine grass attached to three or four reeds. Eggs, 4 to 5; glossy white, speckled with dark brown or black; size, 0.73 by 0.52.

Black and Yellow Bishop Bird (*Pyromelana capensis*). (Vol. I., p. 207.)

Description.—Male in breeding plumage: head, neck, and under parts of body glossy black. Lower portion of back and rump brilliant golden-yellow, the feathers being fluffy and elongated. Shoulder of wings and wing coverts golden-yellow. Tail black. Iris dark brown. Bill black. Feet pale brown.

Length, 7.00; tail, 2.80; wing, 3.35.

DESCRIPTION, DISTRIBUTION, HABITS

Female: brown, the feathers streaked with black centres. Rump olive-yellow with brown streaks. Lesser and middle wing coverts dark brown with olive-yellow edges. Male in winter plumage is the same as the female.

Distribution.—From Clanwilliam on the west to the George District on the east in Cape Province.

Habits.—Frequents vleis, reedy banks of rivers, marshes, and open veld-lands. The nest is a domed, carefully-woven structure of fine grass, with a side entrance. The nest is usually attached by its sides to three or four reed stems. Eggs, 4; pale greenish-blue, spotted, blotched, and lined with dark brown and slate colour; size, 0.85 by 0.60.

Paradise Widow Bird (*Vidua paradisea*). (Vol. I., p. 207.)

Description.—Adult male in breeding plumage: head, face, and throat jet black. Collar around neck mahogany-red extending down the breast, and fading to buff on the abdomen. Edge of wing mottled black and white. Upper surface and tail black. A white spot on each side of the lower back. Tail long and flowing. Iris reddish-brown. Bill black. Feet brown.

Length, to end of longest tail feathers, 14.75; tail, 12.00; wing, 3.00.

Female: brown streaked with black. Upper tail coverts black with white edging. Tail feathers lightly tipped with white and edged with rufous. Under surfaces buff-white, washed with tawny red. Tail, $2\frac{1}{2}$ in. long.

Distribution.—Eastern Province of the Cape and north to the Soudan.

Habits.—Frequents the long grass of the open bush-veld. The male is polygamous, and has from a dozen to fifty mates. The nest is domed and made of fine grass, and hidden in a tuft of coarse grass.

Sundevall's Seed-Eater (*Serinus scotops*). (Vol. I.,
p. 213.)

Description.—Male: greenish-yellow with narrow black streaks above, except the rump, which is unstreaked and brighter than the back. Chin black. Under surface golden-yellow. Iris brown. Bill horn. Feet and legs dusky.

Length, 5.00; tail, 1.95; wing, 2.55.

Female is not so bright as the male.

Distribution.—Cape Province to Nyassaland.

Habits.—Associates in pairs and small parties. Nest saucer shaped, and placed in aloes and low bushes.

Streaky - headed Seed - Eater (*Poliospiza gularis*).
(Vol. I., p. 213.)

Description.—Male and female: upper parts greyish-brown. Crown dark brown streaked with white. Eyebrow white. Throat white, speckled with black. Under parts dull brown. Iris hazel. Bill horn. Legs and feet pale brown.

Length, 6.05; tail, 2.4; wing, 2.9.

Distribution.—Cape Province to Zambesi.

Habits.—Frequents open bush-veld in small parties of half a dozen or so. The nest is cup shaped, and is built of grass, small twigs, and roots, and lined with cotton, thistle-down, etc. Eggs, 3 to 4; bluish-white with a few dots, or a streak of dark purple near the larger end.

Yellow - bellied Seed - Eater (*Serinus flaviventris*).
(Vol. I., p. 213.)

Description.—Male: above yellowish-green with fine streaks of black. Tail feathers blackish, edged with yellow. Under parts golden-yellow. Iris hazel. Bill horn. Feet and legs dusky.

Female somewhat duller than the male in colour, and the back more broadly streaked with black.



1. Cardinal Woodpecker (*Dendropicus cardinalis*). One of Nature's policemen of the forest. It searches the trees for beetles, and taps the trunks and branches to locate the grubs which destroy the wood.
2. South African Wryneck (*Iynx ruficollis*). The woodpecker's closest relation. The Wryneck is so called because of its peculiar habit of twisting its neck. It is entirely insectivorous.

NATURAL HISTORY OF SOUTH AFRICA

Cape Canary (*Serinus canicollis*). (Vol. I., p. 213.)

Description.—Greenish-yellow above, slightly mottled with dusky. Rump and upper tail coverts yellower than the back. Crown bright yellow. Sides and back of neck grey. Cheeks, face, and under parts golden-yellow, brighter on the breast. Iris dark brown. Bill horn. Legs and feet light brown.

Length, 5.25 ; tail, 2.20 ; wing, 3.10.

Female not as yellow as the male, and streaked with dusky brown.

Distribution.—Cape Province, Orange Free State, and Transvaal.

Habits.—The Cape canary inhabits the parts of the country where scattered bush prevails on veld and mountain. In the winter they congregate in large flocks and take to the open veld in search of food. In the spring they pair off. The nest is a small, neat, cup-shaped structure of grass, bents, and moss, and is lined with hair, downy seeds, or feathers. It is placed in a thick, low bush. When these are scarce it builds in the branches of the larger trees. Clutch, 3 to 4 ; eggs white, lightly tinged with blue and spotted and streaked at the larger end with purplish-brown and red-brown ; size, 0.75 by 0.55.

These canaries appear in September and October in large flocks on the veld at Port Elizabeth. They pair off and scatter early in November.

Capped Wheat-Ear (*Saxicola pileata*). (Vol. I., p. 216.)

Description.—Male: back rufous-brown, blending into chestnut on the back. Sides of the head and a broad band on the chest black. Throat, forehead, and a streak over the eye white. Lower chest and abdomen buff. Flanks with a rufous tinge. Iris brown. Bill and legs black.

Length, 6.50 ; tail, 2.50 ; wing, 3.65.

The female is similar to the male.

Distribution.—All over South Africa, except in the thickly-wooded parts. The northern limit of its range is the Zambesi.

DESCRIPTION, DISTRIBUTION, HABITS

Habits.—This bird is variously known as the schaapwachter (shepherd), nachtegaal, and rossignol. It is a familiar bird to the majority of South African farmers because of its tameness and preference for the kraals of stock animals and the neighbourhood of houses. It is a bird of the open veld, and is usually seen perched on a stone or a termite heap. The song is very sweet. The bird may often be heard singing during quiet moonlight nights. At times it imitates the notes of other birds and the cries of various animals, such, for instance, as the bleating of sheep and goats.

The diet of this lovable little bird is entirely insectivorous. The nest is made of dry grass; it is saucer shaped, and usually placed about 2 ft. within the entrance of the deserted hole of some small animal. Sometimes they build in a cavity in an old termite hill. These birds make a great outcry when they discover a snake, for these reptiles are ever on the lookout for the eggs and young of birds which build their nests on the ground. Other birds, hearing the wheat-ears' cries, gather and help to mob the snake, screaming, flying, and hopping round it. Often one of them gets so excited that it seems to lose control of itself and is seized by the reptile. Seeing birds chattering around a snake leads many observers to erroneously believe it is hypnotising them.

Large Yellow Seed - Eater (*Serinus sulphuratus*).

(Vol. I., p. 216.)

Description.—Male: upper parts greenish-yellow with blackish streaks. Upper tail coverts yellow, but not streaked. Golden - yellow eyebrow. Throat golden - yellow. Breast greenish-yellow. Abdomen yellow. The female is not so bright in colour as the male. Iris brown. Bill dull yellowish. Legs brown.

Length, 6.00; *tail*, 2.55; *wing*, 3.25.

Distribution.—Cape Province to East Africa. Common in the Cape, Natal, Orange Free State, and Transvaal.

Habits.—These seed-eaters associate in flocks in winter,

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and may be seen in the company of other species of finches. They pair off in the early spring. Their food consists of the seeds of grasses and weeds. Berries are their favourite diet, the hard seeds of which they crack with their strong, stout bills. The nest is small, neat, and cup shaped. It is made of grass and the stems of small plants, and is lined with fine grass or rootlets, and thistle-down or wild cotton. The nest is usually placed in a low bush or in the crown of an aloe. Clutch, 4. Eggs white, or with a bluish shade. The eggs are sometimes unspotted, but more usually with a few black spots and zigzag markings near the larger end. The nesting period is September and October.

Golden-breasted Bunting (*Emberiza flaviventris*). (Vol. I., p. 216.)

Description.—Male: back chestnut-red. Top of the head black with a white streak down the centre. Another white streak above the eye, and another below. A streak through the eye black. Nape chestnut with a grey tinge. Feathers of the tail black margined with grey, the outer four tipped with white. The outer web of the outside feathers white with a black spot. Under parts yellow. Chest tinged with orange. Iris brown. Upper part of bill black, the lower brown. Legs and feet dull brown.

Length, 6.50 ; *tail*, 2.90 ; *wing*, 3.20.

The female is deeper chestnut on the back, and the upper part of the back is streaked with black.

Distribution.—From the eastern side of Cape Province, north through Natal, Orange Free State, and Transvaal to East Africa and Nyassaland, and west to Damaraland and Benguela.

Habits.—The golden-breasted buntings associate in small flocks of about a dozen individuals during the autumn and winter, and feed on the ground, usually in open bushy country, on small beetles, various other insects, and the seeds of weeds and grasses. Like all the buntings in South Africa, they are

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very tame and unsuspecting, and when alarmed fly a few yards and perch on a stone, dead twig, or low bush. The nest is cup shaped, and composed of dry stalks of grass lined with finer grass and hair, and placed amongst the exposed roots and herbage at the foot of a ledge, or in a low bush at the side of or beneath a rock. The eggs are 4 to 5 in number, white, zigzagged, and scrawled all over with fine lines of purple-brown and black; size, 0.75 by 0.58.

Cinnamon-backed Pipit (*Anthus pyrrhonotus*). (Vol. I., p. 221.)

Description.—Male: brown above, under surface buff, lighter in the centre. Tail feathers dark brown edged with grey. Eyebrow and feathers below the eye whitish. Iris hazel. Bill dull brown. Legs and feet dark fleshy in colour.

Length, 6.60; tail, 2.35; wing, 3.65.

Female resembles the male.

Distribution.—Common on the plains all over Africa from the Cape to Abyssinia in the east, and the Congo in the west.

Habits.—It frequents the veld in pairs, and often perches on stones, termite heaps, shrubs, and trees. The nest is composed of grass lined with finer grass. It is cup shaped, and placed in a slight hollow under a tuft of grass. Clutch, 3. Eggs dull white or cream, mottled and spotted with grey, brown, and red-purple.

Length, 0.85 by 0.60.

Orange-throated Lark (*Macronyx capensis*). (Vol. I., p. 221.)

Description.—Male: brown above, the centre of the feathers darker. Lesser wing coverts edged with orange, the primaries with yellow. Tail feathers brown tipped with white, with the exception of the two centre ones. Eye brown-orange. Lores and eye-ring yellow. Ear coverts brown. Throat orange-red. Breast and abdomen orange-yellow. The throat



1. Sparrrman's Honey Guide (*Indicator sparrmani*). Male.

2. Sparrrman's Honey Guide (*Indicator sparrmani*). Female.

The Honey Guides are so-called because they lead people to the nests of the honey bee. They are fond of honey, beeswax, and young bees in the larva or maggot stage.

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is separated from the breast by a black band ; this band extends across to the base of the bill. Under wing coverts orange. Iris brown. Bill darker. Legs lighter brown.

Length, 8.00 ; tail, 3.30 ; wing, 3.85.

The female differs from the male in the throat band being narrower, and the orange and yellow colours are not so bright.

Distribution.—Cape to Rhodesia.

Habits.—Frequents the ground on the open veld in pairs. Settles in bushes and trees when alarmed. The nest is cup shaped, and is made of grass and root fibres, and is concealed in a hollow under a tuft of grass, or at the side of a stunted shrub. Clutch, 3 to 5 ; eggs cream, profusely spotted with shades of purple and brown ; size, 1.05 by 0.77.

Red-capped Lark (*Tephrocorys cinerea*). (Vol. I., p. 221.)

Description.—Male: the prevailing colour is the usual sombre brown and fawn peculiar to most of the larks. This species can be recognised by the crown of the head being bright chestnut-red. Iris hazel. Bill black, the base brown. Feet dark brown.

The female resembles the male, but is smaller.

Length, 6.10 ; tail, 2.35 ; wing, 3.35.

Distribution.—All over South Africa.

Habits.—This lark is common on the treeless veld. They associate in companies, except at the breeding time, when they pair off. The nest is cup shaped and made of grass, lined with finer grass and a few feathers, roots, or hairs. The nest is placed in a slight depression under the shelter of a tuft of grass or stunted shrub. Clutch, 2 to 3 ; eggs pale cream, marked all over, chiefly in the middle, with blotches of umber-brown, grey, and purple ; size, 0.78 by 0.62.

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Rufous Long-billed Lark (*Certhilauda rufula*). (Vol. I., p. 227.)

Description.—Male: rufous above, streaked with brown, some of the feathers edged with buff. Tail black, rufous near the base. Wing coverts brown edged with white.

Length, 6.0; tail, 2.6; wing, 3.7.

Distribution.—All over South Africa.

Habits.—Lives on the ground on the veld and low hillsides in pairs. Prefers stony ground. The nest is cup shaped, and constructed of grass lined with roots and finer grass, and placed under a tuft of coarse grass or a small bush. Clutch, 2 to 3.

Bar-tailed Lark (*Mirafra apiata*). (Vol. I., p. 227.)

Description.—Dark brown above with hidden bars of black and rufous. Central tail feathers blackish and mottled with rufous. Crown ashy, slightly tinged with rufous. Wing quills dull brown with ashy or rufous edgings.

Length, 5.00; tail, 2.30; wing, 3.00.

Distribution.—Western parts of Cape and eastwards to Port Elizabeth, and north-west to Angola.

Habits.—Inhabits open country sparsely covered with bush, on which it perches if alarmed. Runs with great rapidity. It rises straight up into the air 20 to 30 ft., clapping its wings and whistling in a sighing, melancholy way.. Hovering in mid-air for a moment, it drops again to earth.

The nest is the usual cup-shaped structure common to larks. It is placed in a depression under a tuft of grass or stunted shrub.

Cape Wagtail (*Motacilla capensis*). (Vol. I., p. 232.)

Description.—Dull brown and grey above. Eyebrows white. Cheeks and throat white. A crescent of black on the lower throat. Under surface yellowish-white. Iris hazel. Bill and feet dull brown.

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Length, 7.25 ; tail, 3.35 ; wing, 3.20.

Distribution.—All parts of South Africa.

Habits.—This familiar little bird may be seen in gardens and about the streets of towns and villages. It is met with almost everywhere, and especially in the neighbourhood of water. The nest is made of a mass of materials, such as roots, hair, rags, grass, and dead leaves, lined with short hair, wool, feathers, and fur. It is open and cup shaped, and placed under a stone, in a cavity amongst roots, etc., on river banks, or in crevices in walls, outhouses, creepers, and, in fact, almost anywhere. Clutch, 3 to 4 ; eggs buff, profusely spotted and blotched with brown ; size, 0.84 by 0.56.

Ray's Yellow Wagtail (*Motacilla campestris*). (Vol. I., p. 237.)

Description.—Male: olive-yellow on the back, changing to bright yellow on the rump. Upper tail coverts olive with yellow edging. Head yellow and olive-yellow. Under parts yellow, the sides tinged with greenish.

Length, 6.4 ; tail, 3.10 ; wing, 2.70.

Distribution.—Cape Coast to Europe.

Habits.—This wagtail breeds in Europe, and migrates in the autumn and appears in South Africa in the winter time. It is a comparatively rare visitor to this country. A specimen was obtained on the seashore at Humewood, Port Elizabeth, 13th April 1909. This is the only recorded instance of its appearance in the Cape Province. Ray's yellow wagtail has the same habits as the common Cape species. No instance of its breeding in South Africa is recorded.

African Pied Wagtail (*Motacilla vidua*). (Vol. I., p. 237.)

Description.—Black and pure white, as shown in the illustration.

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Length, 8.00 ; tail, 3.80 ; wing, 3.60.

Distribution.—From Cape Province through Africa to Egypt.

Habits.—The habits of the pied wagtail are similar to those of the common Cape wagtail, but it is a much shyer and less common bird. The nest is practically similar to that of the Cape wagtail. Clutch, 3 to 5 ; eggs pale brown, profusely spotted and freckled with grey and dark brown ; size, 0.90 by 0.60.

Cape Long-tailed Sugar Bird (*Promerops cafer*). (Vol. I., p. 243.)

Description.—Male : pale brown above with darker brown centres to the feathers. Rump and upper tail coverts olive-yellow. Forehead and crown buff-brown. The lower throat, upper breast, and sides of neck rufous-brown. Iris dark brown. The bill, feet, and legs black.

Length, 17.00 to 19.50 ; tail, 11.5 to 14.00 ; wing, 3.80. Six centre feathers of tail longest.

Female is paler, and the tail is much shorter.

Distribution.—Cape Province only.

Habits.—This sugar bird is usually found in districts abounding in protea bushes and aloes. They breed in winter. The nest is cup shaped, and composed of twigs, roots, heath, grass, etc., lined with the downy seeds of proteas, and is usually placed in a protea bush. Eggs reddish-brown varying to light buff, with blotches and irregular lines and scratches of dark purple, and some finer lines and spots of brown ; size, 1.00 by 0.72.

Orange-breasted Sun Bird (*Anthobaphes violacea*). (Vol. I., p. 243.)

Description.—Male : head, neck, upper back, and throat metallic-green with violet reflections ; this merges into metallic-purple on the chest. A black spot in front of the eye and chin. Lower part of back and upper tail coverts olive-yellow. Breast



1. Didric Cuckoo (*Chrysococcyx cupreus*). Male.
2. Didric Cuckoo (*Chrysococcyx cupreus*). Female.
3. Emerald Cuckoo (*Chrysococcyx smaragdineus*). Male.

The Golden Cuckoos, as these birds are called, migrate from the north into South Africa in the summer in search of caterpillars, which they greedily devour. All species of cuckoos are of great value as insect destroyers. They eat caterpillars which other birds will not touch.

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with red tinge. Flanks olive. Pectoral tufts yellow. Iris dark brown. Bill, feet, and legs black.

Length, 6.75; tail, 3.20; wing, 2.25. The two centre feathers of the tail are longest.

Distribution.—Cape Province only.

Habits.—This little sun bird frequents the heath-covered flats, hillsides, and summits of mountains. They breed in winter. The nest is usually in a heath bush. It is oval and domed, with the entrance near the top. It is constructed of twigs, grass, bits of heath, down, or leaves, and lined with the white petals of the proteas. Clutch, 2; eggs white with small spots and streaks of grey-brown; size, 0.65 by 0.48.

Greater Double-collared Sun Bird (*Cinnyris afer*).

(Vol. I., p. 243.)

Description.—Male: beautiful metallic-green above and on the throat. Upper tail coverts steel-blue. Breast scarlet, separated from the green of the throat by a line of glittering steel-blue. Pectoral tufts yellow. Iris dark brown. Bill and legs black.

Length, 5.50; tail, 2.25; wing, 2.60.

Distribution.—From eastern parts of Cape Province, north through Natal and into the Transvaal.

Habits.—Frequents the woodlands and open grassy and aloe-covered hillsides. Often seen in flower gardens. The nest is domed, with the entrance near the top. It is built of grass, cobwebs, bits of bark, lichen, etc., and is lined with hairs, feathers, and down. The nest is suspended from the end of a twig in a tree. Clutch, 2; eggs smoky-grey, profusely mottled and spotted with brown and slaty-grey; size, 0.72 by 0.52.

Black Sun Bird (*Cinnyris amethystinus*). (Vol. I., p. 247.)

Description.—Velvet black with a purple tinge. Crown glittering metallic-green. The throat, cheeks, and upper tail

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coverts shining metallic violet-purple. Iris dark brown. Bill and legs black.

Length, 5.60 ; tail, 2.10 ; wing, 2.90.

The immature male in the illustration is earth-brown above. Under parts dull olive, with a large admixture of black feathers. Forehead and throat metallic, as in the adult male.

Distribution.—From Cape Province to the Limpopo, principally towards the east.

Habits.—They associate in pairs and frequent bush-lands, gardens, open hillsides, and any situation where there are nectar-producing flowers. The nest is similar to that of the greater double-collared sun bird. Clutch, 2 ; eggs cream, profusely mottled, spotted, and streaked with purple-brown and dark grey ; size, 0.72 by 0.50.

Mouse - coloured Sun Bird (*Cinnyris verreauxi*). (Vol. I., p. 247.)

Description.—Male : upper surface of body and middle wing coverts metallic-green, the bases of the feathers olive-brown. Feathers of the tail black edged with brown. A black spot in front of the eye ; below, ash-brown. Pectoral tufts scarlet. Iris dark brown. Bill and legs black.

Length, 5.25 ; tail, 2.00 ; wing, 2.45.

Adult female is similar to the male.

Distribution. — Eastern Province of Cape, Natal, and Zululand.

Habits.—These sun birds associate in pairs and frequent the coast bush, seldom resorting to the large forest trees. The nest is domed like that of other sun birds, and is suspended from the ends of leafy twigs or from the larger leaves. It is built of fine grass, cobwebs, and bark fibre, and lined with hair and feathers. Clutch, 2 ; eggs dull white, thickly mottled and spotted with light and dark purple-brown ; size, 0.70 by 0.52.

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Malachite Sun Bird (*Nectarinia famosa*). (Vol. I., p. 251.)

Description.—Male: entire body metallic malachite-green. Pectoral tufts bright yellow. The female is pale earth-brown, and lacks the two long tail feathers of the male. Iris dark brown. Bill and feet black.

Total length, 9.50; tail, 5.00; wing, 3.00. The two centre feathers of the tail are longest.

Distribution.—All over South Africa and north to the Limpopo River.

Habits.—Frequents gardens and the open country wherever nectar-producing flowers grow. It may often be observed flitting amongst the flowering aloes on the slopes of hills and mountains, and amidst the proteas, heaths, and ericas on the veld. The nest is bulky and pear shaped, with a projection over the entrance hole. It is usually suspended from the outer twigs of a bush or tall weed. The nest is constructed of grass, fibres, twigs, and cobwebs, with bits of lichen stuck all over it. The interior is lined with fine grass, hair, or feathers. Clutch, 2; eggs pale smoky-brown, mottled and spotted all over with slaty-grey and dark brown; size, 0.84 by 0.52.

Scarlet - chested Sun Bird (*Cinnyris gutturalis*). (Vol. I., p. 251.)

Description.—Male: head and body velvety black with brown shading on back. Forehead dark metallic-green. Upper throat golden-green. Centre of lower throat and chest scarlet, each feather with a subterminal bar of metallic-blue. Tail and wing golden-brown. Iris dark brown. Bill and legs black.

Total length, 6.00; tail, 2.25; wing, 3.00.

Distribution.—From Great Fish River in Eastern Province of Cape to Mombasa, and from Damaraland to the Congo River.

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Habits.—These lovely sun birds associate in pairs, and may be seen sipping the nectar from the flowering trees, such as the Kafir-boom, and from the aloes, heath, erica, and other flowers of the veld and hillsides. The nest is suspended from the end of a thin branch of a tree. It is very similar in shape to that of the malachite sun bird. Clutch, 2; eggs smoky grey, profusely mottled and streaked with brown and purple-brown; size, 0.75 by 0.52.

Fiscal Shrike (*Lanius collaris*). (Vol. I., p. 256.)

Description.—Black and white, as shown in the illustration. Iris brown. Bill and legs black.

Total length, 8.00; tail, 4.25; wing, 4.00.

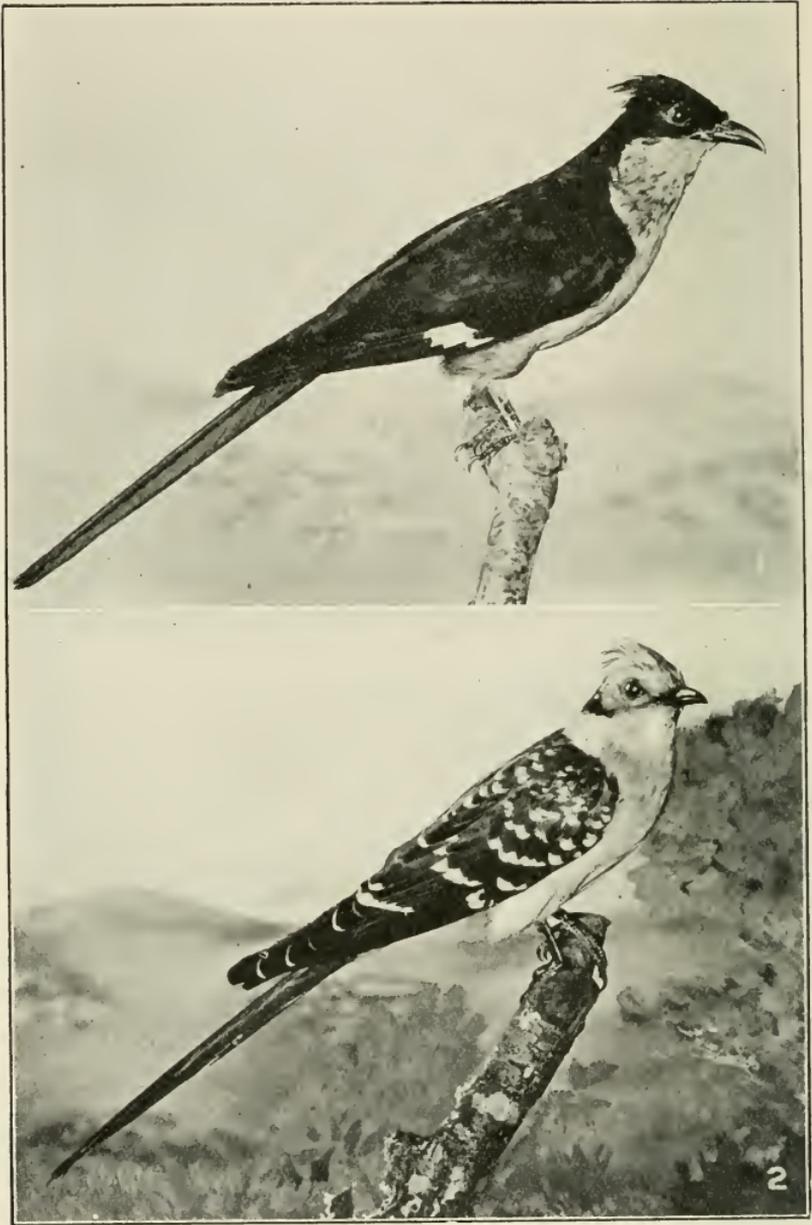
The female has a chestnut-coloured streak along the flanks, and the mantle is not so intensely black as that of the male.

Distribution.—Common throughout Africa from the Cape to Somaliland and Abyssinia.

Habits.—These well-known shrikes may be seen in pairs in any garden or field perched on posts, trees, telegraph wires, etc., on the lookout for insect prey. The nest is cup shaped, and wedged between two branches, or placed amongst the twigs of a dense bush. The nest is built of stems of plants, usually the Kafir tea plant. The inside is lined with root fibres, hair, and feathers. Clutch, 3 to 4; eggs pale greenish, spotted with pale brown, and usually a ring of brownish-purple blotches at the larger end; size, 1.0 by .70 to .90 by .75.

Fiscal Shrike (*Lanius collaris*). (Also known as the
Jack Hangman and Butcher Bird.) (Vol. I.,
p. 261.)

This familiar bird is strictly territorial in its habits. When a pair obtain possession of a suitable locality, they resent the intrusion of others of their species. Although the fiscal shrike breeds several times during the year and rears three to four young ones each time, its numbers never increase in any area.



1. Black and Grey Cuckoo (*Coccyzus hypoleucus*).

2. Great Spotted Cuckoo (*Coccyzus glandarius*).

Birds which lay their eggs in other birds' nests; but, nevertheless, they are of great economic value owing to their caterpillar-eating propensities.

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When the young birds are fully fledged and able to provide for themselves, the parents chase them off. When food is exceptionally plentiful, several pairs of fiscal shrikes will live in harmony because they realise there is food for all. If the food supply should only prove to be sufficient for one pair, the weaker ones are driven off to find another hunting ground, or to perish.

The fiscal shrike is of exceptional economic value. It preys on a great variety of insect pests, and eats various species of hairy caterpillars which only the cuckoos, among other birds, will touch.

It renders good service by destroying weakly and diseased birds.

Black-headed Bush Shrike (*Telephonus senegalus*). (Vol. I., p. 267.)

Description.—Male: back olive-brown. Crown black. Narrow black streak from the base of the bill, passing through the eye. Eyebrow white, becoming ferruginous behind. Wing coverts chestnut-red. Under parts greyish-white and tinged with ochreous on the vent and thighs. Iris hazel. Bill black. Legs greyish-brown.

Total length, 8.40 ; *tail*, 4.00 ; *wing*, 3.40.

Distribution.—Eastern Province of the Cape, and north to Gambia.

Habits.—This shrike is usually met with amidst shrubs and patches of bush, in pairs. The nest is cup shaped, and constructed of fibres and roots and covered with lichen. Clutch, 3 ; eggs white, with pale purple blotches and red-brown streaks, chiefly at the larger end ; size, .95 by .72.

Four-coloured Bush Shrike (*Lanarius quadricolor*). (Vol. I., p. 267.)

Description.—Male: all the upper parts grass green. Two centre feathers green with black ends ; the rest of the tail

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feathers black. A line over the eye orange. A black streak through the eye. Throat and cheeks scarlet with yellow bases to the feathers. A broad band of black on the breast, joining a narrow streak of the same colour from the base of the lower mandible. Rest of the lower surface yellow, tinged with scarlet on the breast and under tail coverts. Iris brown. Bill black. Legs bluish-brown.

Total length, 7.65 ; tail, 3.40 ; wing, 3.15.

Distribution.—From the Alexandria Division of the Cape Province, along the east coast through Natal, Zululand, and Transvaal to British East Africa.

Habits.—This shrike inhabits the dense thickets in pairs, and emits a cheery note resembling kong-kong-koit. The nest is loosely constructed of twigs lined with leaf stalks in a dense bush 4 or 5 ft. from the ground. Clutch, 2 to 3 ; eggs white with grey-brown streaks and splashes, mostly at the larger end ; size, 0.83 by 0.58.

Black and Crimson Shrike (*Lanarius atrococcineus*). (Vol. I., p. 267.)

Description.—Male: upper parts black, some of the feathers on the lower part of the back tipped with white. Wings black with a white bar. The whole of the under surface crimson. Iris brown. Bill and feet black.

Total length, 8.00 ; tail, 4.00 ; wing, 4.00.

Distribution.—Junction of Orange and Vaal Rivers, and north to Angola.

Habits.—These birds inhabit the bush-veld, and are shy, quick, and wary. They are seen singly or in pairs. The nest is cup shaped, and made of rough materials such as soft dead reeds without any lining. Clutch, 3. Eggs white, profusely spotted with brown.

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Long-tailed Shrike (*Urolestes melanoleucus*). (Vol. I., p. 273.)

Description.—Male: black, with the exception of the white lower back and patches on the wings, as shown in the illustration. Iris hazel. Bill and legs black.

Total length, 18.00; *tail*, 13.25; *wing*, 5.25.

Distribution.—From Orange and Tugela Rivers, north to Rhodesia, but not as far as the Zambesi.

Habits.—The long-tailed shrikes, when not nesting, associate in small parties, and are quite common in the bush-veld in some districts. The nest is a large, loose structure placed at the top of a tree or on a horizontal bough. The nest is open and made of thorny twigs or stalks of creeping plants, and lined with dry grass and rootlets. Clutch, 3 to 4. Eggs glossy cream or salmon-pink, spotted all over, mostly in a zone at the larger end, with zigzag markings of rufous-brown, grey, and sienna.

Length, 1.00 to 1.10 by 0.78 to 0.80.

Bakbakiri Shrike (*Lanarius gutturalis*). (Vol. I., p. 273.)

Description.—Male: olive-green above. Two centre tail feathers olive-green, the rest black tipped with yellow. Head grey. Lores and eyebrow yellow. Cheeks and throat bright yellow. Below this is a broad band of black which narrows and borders the yellow, and ends at the base of the bill. Abdomen yellow, tinged with grey. Iris hazel. Bill black. Legs leaden.

Total length, 8.5; *tail*, 3.85; *wing*, 4.00.

Distribution.—From Cape Province, north to Benguela and Mossamedes.

Habits.—These birds associate in pairs, and may be seen almost anywhere in the neighbourhood of towns, villages, and

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around farmhouses. The nest is cup shaped, and made of grass or roots lined with down, fine grass, or small fibres. It is invariably placed in the centre of a low bush. Clutch, 4 to 5; eggs verditer-blue, spotted mostly at the larger end with rusty-red; size, 1.00 by 0.78.

Lesser Puff-back Shrike (*Dryoscopus cubla*). (Vol. I., p. 277.)

Description.—Male: crown and upper part of the back black. Lower back white, most of the feathers being long, puffy, and tipped with grey. The bird is able to erect them at will so as to resemble a large white puff ball. Under surface of body greyish-white. Iris deep orange. Bill black. Legs grey.

Total length, 6.0 to 7.0; tail, 3.0 to 3.5; wing, 3.2 to 3.7.

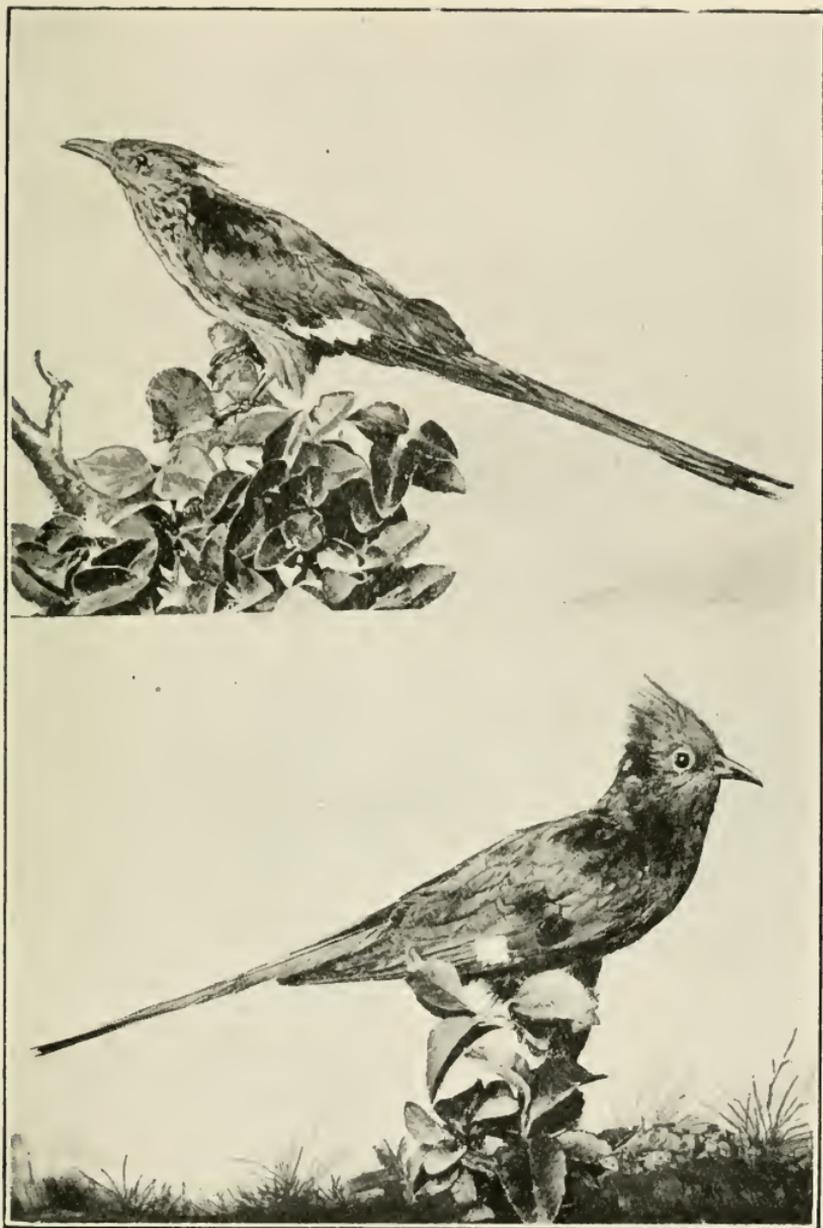
The female is duller and greyer than the male.

Distribution.—From Knysna, up the eastern side of South Africa to the Transvaal, Damaraland, Southern Benguela, to the Zambesi Valley.

Habits.—The puff-back shrike is so-called because of the ability of the male bird to erect the long, downy, white feathers on the rump. These birds associate in pairs and inhabit the woodlands. The nest is the usual cup-shaped structure peculiar to shrikes. It is made of grass bound on the outside with cobwebs, and has a neat finished appearance. Clutch, 3. Eggs white, with a ring of specks and spots of dark brown at the larger end.

Greater Puff-back Shrike (*Dryoscopus ferrugineus*). (Vol. I., p. 277.)

Description.—Male: head and neck black, shading to dark brown on the back. Lower back and rump orange-buff, the feathers being long, fluffy, and erectile. Tail black, the two outer feathers usually tipped with white. White bar across



1. Levaillant's Cuckoo (*Coccyzus cafer*).

2. Black-crested Cuckoo (*Coccyzus serratus*).

All species of cuckoos are purely insectivorous. Their chief diet consists of caterpillars.

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the wing. Under parts white, tinged on the breast flanks and under tail coverts with rufous-buff.

The female is paler.

Length, 8.50; tail, 3.80; wing, 4.00.

Distribution.—From Cape Province to the Limpopo.

Habits.—This shrike is common in the bush-veld of South Africa. Its favourite haunts are the dense thickets, through which it creeps in search of food. The male, when displaying before its mate, erects the downy feathers on its rump. The nest is made of fibres and roots. It is the usual open, cup-shaped structure, and is fixed in a bush or the fork of a tree. Clutch, 3. Eggs light blue, speckled with red-brown, chiefly at the larger end.

Grey Cuckoo Shrike (*Graucalus caesius*). (Vol. I., p. 284.)

Description.—Male: bluish-grey above and below, the colour being somewhat darker on the back. Black streak from the base of the bill to the eye. A whitish ring round the eye. Iris brown. Bill and legs black.

Total length, 10.50; tail, 5.00; wing, 5.50.

The female is lighter grey, and the black streak on the face is not present.

Distribution.—The woodlands of South Africa from Knysna in the Cape, up the east side of South Africa to Zululand.

Habits.—This bird is an inhabitant of the woods, and is usually seen in the lofty trees or dense thickets. Family parties of 3 to 5 are sometimes observed, although it is usually solitary, or in pairs.

Black Cuckoo Shrike (*Campophaga nigra*). (Vol. I., p. 284.)

Description.—Male: black above and below. Shoulders of wings yellow. The female is dark grey, the feathers tipped

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with yellow and narrowly streaked with dark slate. Tail tipped with yellow. Iris dark brown. Bill and legs black.

Total length, 8.50; tail, 4.15; wing, 4.15.

Distribution.—The wooded districts from Cape Province, and north to Mossamedes and Nyassaland.

Habits.—The black cuckoo shrike never leaves the precincts of its wooded home, where it may be observed singly, in pairs, or family parties of 3 or 4. The nest is placed in a fork high up in a lofty tree. It is small and cup shaped, and is built of fine twigs and moss bound with spiders' webs and covered with lichen. Clutch, 2; eggs smoky-green, spotted and streaked with brown; size, 0.90 by 0.68.

Southern Grey-headed Bush Shrike (*Lanarius starki*). (Vol. I., p. 284.)

Description.—Male: head and neck bluish-grey. Back pale yellowish-green. Wing coverts tipped with pale yellow. Tail olive-green tipped with pale yellow, except the two central feathers. Under parts bright yellow. Upper chest tawny-yellow. Iris yellow. Bill black. Legs ash-brown.

The female resembles the male.

Total length, 9.45; tail, 4.0; wing, 4.40.

Distribution.—The eastern side of Africa from the east corner of Cape Province through Natal, Zululand, Eastern Transvaal, to Zanzibar.

Habits.—The spook vogel (ghost bird), as this shrike is often termed, inhabits the dense bush in pairs. The nest is very much like that of the common fiscal shrike or butcher bird. It is placed in the midst of a thick bush, preferably a thorny one. Clutch, 3; eggs cream with brown and grey irregular spots forming a slight crown at the larger end; size, 1.16 by 0.66.

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Orange-breasted Bush Shrike (*Lanarius sulphureipectus*). (Vol. II., p. 3.)

Description.—Male: bluish-grey on the neck, toning down into olive-yellow on the lower back and rump. Sides of the rump brighter. Forehead and a broad superciliary streak bright yellow. Crown greenish-yellow. Upper tail coverts and tail olive-green. Tail feathers, with the exception of the two central ones, tipped with yellow. A black streak from the base of the bill to the back of the eye. Under parts bright yellow. Chest orange-red. Iris brown. Bill and legs black.

Total length, 7.00; tail, 3.50; wing, 3.50.

The orange-red on the breast of the female is not so pronounced as that in the male, otherwise it is similar in colour.

Distribution.—Eastern part of Cape Province through the wooded parts of Africa to Senegambia and Abyssinia.

Habits.—This handsome bird inhabits the forests and dense thickets in pairs. I have often seen it in the bush-veld. The nest is the usual open kind which all shrikes build. It is made of bents lined with finer ones, and placed in a tree. Clutch, 3; eggs white with a greenish tinge; a zone of spots and blotches at the larger end; size, .85 by .62.

Black-collared Barbet (*Lybius torquatus*). (Vol. II., p. 3.)

Description.—Forehead, sides of head, chin, and throat scarlet. Back portion of head, neck, upper portion of the beak, and a collar round the neck and upper breast black. Back and wing coverts brown with delicate yellow worm-like lines. Rump and upper tail coverts yellowish. Wing quills brown with sulphur-yellow on the outer webs of the feathers. Feathers of tail brown with yellowish edging. Lower surface sulphur-yellow, mottled and lined with ashy-black. Iris red-brown. Bill black. Legs dark brown.

Total length, 7.5; tail, 2.3; wing, 3.6.

The sexes are alike.

DESCRIPTION, DISTRIBUTION, HABITS

Distribution.—Eastern part of Cape Province, northwards through Natal and Transvaal to the Zambesi, and from there to Angola and Nyassaland.

Habits.—This barbet inhabits the trees on the margins of forests, wooded kloofs, and along the tree-clad banks of rivers. It often visits orchards and berry-bearing trees in gardens to feed on the fruit, which it usually swallows whole. It makes round holes in rotten trunks of trees and has its nest at the bottom of the hole. Clutch, 3 to 4; eggs pure white; size, 0.96 by 0.69.

Pied Babbler (*Crateropus bicolor*). (Vol. II., p. 8.)

Description.—Male: body above and below white. Wings dark brown. Tail black-brown with indistinct cross bars. Iris deep orange. Bill and legs black.

Total length, 9.50; *tail*, 4.50; *wing*, 4.50.

The female resembles the male.

Distribution.—From Orange and Tugela Rivers to Damara-land and Zanzibar.

Habits.—The pied babblers inhabit the dense woods and tangled scrub through which they creep. They are usually seen in small parties, except when breeding. They feed on the ground. When disturbed in a thicket they fly off in single file with loud cries of alarm. The nest is made of coarse grass lined with fine grass. It is cup shaped, rather deep and substantial. Clutch, 3. Eggs blue and unspotted. The ends of the eggs are smooth, but the middle part is covered with tiny tubercles, making it rough to the touch.

Tit Babbler (*Parisoma subcæruleum*). (Vol. II., p. 8.)

Description.—Male: upper parts grey. Wing coverts brown edged with grey. Primary coverts black with white edging. Tail black, the outer feathers tipped with white; the white increases progressively, and half the outer webs of the outside feathers are white. Dusky spot in front of the eye. Ear coverts streaked with white. Under surface whitish, tinged



Burchell's Coucal or Vlei Lourie (*Centropus burchelli*) and its cousins of the same genus wage incessant war on insects and their larvæ; and unlike many other species of birds, they take no payment in fruit or grain for their services.

DESCRIPTION, DISTRIBUTION, HABITS

with grey. Throat broadly streaked with black. Under tail coverts chestnut-red. Iris yellowish-white. Bill and legs black.

Total length, 5.70 ; *tail*, 2.80 ; *wing*, 2.75.

The female is duller, and the streaks on the throat are narrower.

Distribution.—Eastern Province of the Cape to the Limpopo, and from Great Namaqualand north into Angola.

Habits.—This little babbler inhabits the open country more or less covered with bush and scrub. It is common on the bushveld, and is seen in pairs. The nest is a small round structure of grass, fine twigs, and tendrils, lined with hair or fine roots. Clutch, 2.

Garden Warbler (*Sylvia simplex*). (Vol. II., p. 8.)

Description.—Male : ash-brown above. Ring round the eye and lores white. Below brownish-buff. Throat, middle of abdomen, edge of wing, and under tail coverts whitish. Iris brown. Bill dark brown above, pale below. Legs pale brown.

Total length, 5.60 ; *tail*, 2.50 ; *wing*, 3.10.

The female resembles the male.

Distribution.—Migrates from Europe through Africa to the Cape as far south as Port Elizabeth.

Habits.—The garden warbler appears in South Africa in summer from Europe and Asia Minor. It is usually seen in pairs and frequents bush country. It has not been known to breed in South Africa. The nest is usually found in low bushes and brambles. Clutch, 4 to 5. Eggs white, blotched with shades of greenish and dull brown.

Sombre Bulbul (*Andropadus importunus*). (Vol. II., p. 13.)

Description.—Olive-green above. Olive-grey below. Deeper olive on the breast and sides. Iris yellowish-white. Bill black. Feet dull brown.

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Total length, 8.40 ; tail, 3.75 ; wing, 3.60.

The female resembles the male.

Distribution.—The wooded districts from Cape Province to the Transvaal.

Habits.—These birds inhabit the dense scrub and thick bush in pairs. The nest is neat and cup shaped, and composed of moss and lichen and lined with fibres. It is placed in the midst of a thick bush, usually a thorny one. Clutch, 2. Eggs pale grey blotched with olive.

Cape Bulbul (*Pycnonotus capensis*). (Vol. II., p. 13.)

Description.—Male : above and below dark brown, darkest on the head and wings. Under tail coverts bright yellow. Head slightly crested. A bare white ring of skin encircles the eye. This skin is sometimes reddish with gorged blood. Iris black. Bill and legs black.

The female resembles the male.

Length, 8.50 ; tail, 4.00 ; wing, 4.00.

Distribution.—Cape Province only.

Habits.—The Cape bulbul is common in all the wooded districts. It and the other bulbuls are very destructive to fruit. It associates in small flocks of from 6 to 15 birds, except at the breeding season. The nest is in a thick bush or in the fork of a tree ; it is composed of small roots, lined with hair and feathers. Clutch, 3 to 4 ; eggs pale, spotted with bright pink and blotched with darker pink and pale purple ; size, .90 by .68.

Cape Penduline Tit (*Egithalus capensis*). (Vol. II., p. 18.)

Description.—Male : greyish-olive above, changing to yellowish-olive on the rump and upper tail coverts. Crown greyer than the back. A ring round the eye. The eyebrow and sides of face dirty white. Under parts yellowish. Iris yellowish-brown.

DESCRIPTION, DISTRIBUTION, HABITS

Total length, 3.60 ; tail, 1.60 ; wing, 2.00.

Female a little smaller and somewhat duller in colour.

Distribution.—Cape Province to Namaqualand and the Transvaal.

Habits.—These tiny birds live in pairs and family parties in the open country where there is plenty of scrub, small-bushes, mimosa, heath, and other cover. They are particularly common in the western side of Cape Province. The kapok vogel, as it is termed, builds a remarkable nest. It is excessively large for the size of the bird, and is made of sheeps' wool or wild cotton so closely woven as to resemble thick felt. It is impervious to rain. The entrance is near the top at the side, as shown in the illustration. There is a small pouch under the real entrance which the male bird sits in. Clutch, 6 to 12 ; eggs pure white ; size, 0.56 by 0.38.

Grey-backed Grass Warbler (*Cisticola subruficapilla*).

(Vol. II., p. 18.)

Description.—Male : ashy-brown on the back, the feathers streaked with dark brown. Crown rufous, also streaked with dark brown. Tail rufous-brown with a subterminal band. Ring round the eye and eyebrow. Under parts dull white. A few brown streaks on the sides of the breast. Iris brown. Bill brown. Legs fleshy.

Total length, 5.00 ; tail, 2.25 ; wing, 2.20.

The female is not so strongly tinged with rufous as the male.

Distribution.—From Cape Province through Africa to the Sahara.

Habits.—These warblers live in the grass-veld in pairs. The nest is built of dry grass and cobwebs, lined with cotton, and is domed in appearance. It is placed in a low, scrubby bush, preferably a thorny one. Clutch, 4 ; eggs white or pale blue, spotted and dotted mostly at the larger end with reddish-brown ; size, 0.58 by 0.45.

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Ground-scraper Thrush (*Turdus litsipsirupa*). (Vol. II., p. 23.)

Description.—Male: olive-brown on the back. Some of the feathers of the wing coverts tipped with white. Two black bars behind the eye, and two others from the base of the lower mandible flanking a creamy-white throat. Under parts creamy-white, profusely marked with dark brown pear-shaped spots. Wing coverts unspotted. Iris dark brown. Upper mandible and point of the lower one dark brown; the rest of the beak light yellow. Legs yellowish with a tinge of rose colour. Feet darker.

Total length, 8.25; tail, 3.00; wing, 5.00.

The female is similar to the male.

Distribution.—From the middle of the Cape Province, northwards to Angola and North Nyassaland.

Habits.—This thrush inhabits the bush-lands. It is usually seen in pairs or singly on the ground under the trees. The nest is round and open, and made of grass lined with feathers or down. Eggs shiny white spotted with purplish and dark blotches; size, 1.10 by 0.58.

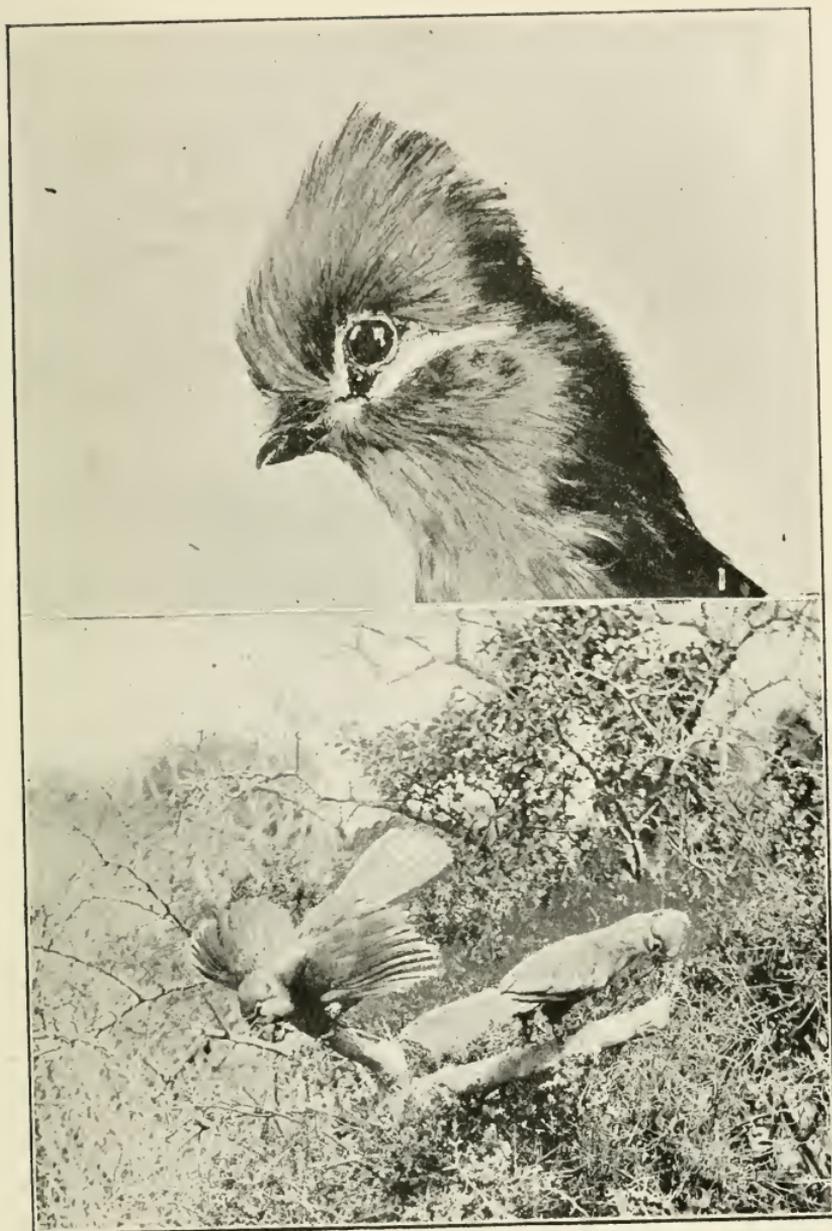
Natal Thrush (*Turdus guttatus*). (Vol. II., p. 23.)

Description.—Differing from the former, in the wing coverts being spotted with white. Upper part of bill brown; lower yellow. Legs pale flesh colour.

Length, wing, 4.55; tail, 3.60.

Distribution.—Port St Johns in Pondoland, and eastwards up the coast to Natal and north to British East Africa.

Habits.—The Natal thrush inhabits the dense coastal bush and seeks for its prey by scratching amongst the dead leaves in damp spots.



The Lourie or Plantain Eater (*Turacus corythaix*), whose home is in the South African forests

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Eastern Cape Grass Bird (*Sphenæacus intermedius*). (Vol. II., p. 23.)

Description.—Male: rufous on crown and ear coverts. Centre of crown streaked with black in the centre. Back whitish streaked with black, merging into chestnut on the lower back and upper tail coverts. Tail feathers rufous with black centres. Eyebrows white. Black streak on either side of the throat. Under parts reddish-buff; deepest at the sides. Iris red-brown. Upper part of bill dark brown; lower paler. Legs dark brown.

Total length, 8.7; wing, 2.7; tail, 4.3.

The female has a shorter tail than the male, and is slightly smaller.

Distribution.—Eastern parts of Cape Province.

Habits.—This bird frequents the patches of heath, low shrubs, and long grass on the veld and hillsides.

Cape Rock Thrush (*Monticola rupestris*). (Vol. II., p. 26.)

Description.—Male: head and neck slaty-blue. Back reddish-brown, the centre of each feather darker. Rump, upper tail coverts, and lower part of body chestnut-red. Two centre tail feathers brown with chestnut bases, the rest of the feathers chestnut, the outer ones edged with brown. Iris brown. Bill and legs black.

Total length, 9.10; tail, 3.25; wing, 4.55.

The female differs in the head and neck being coloured like the back instead of slate-blue, as in the male.

Distribution.—Cape Province, Orange Free State, Transvaal, Zululand, Natal.

Habits.—This thrush inhabits rocky localities and may be seen flying from rock to rock. It is widely distributed, being found on the rocks at the seashore, and on high krantzes and stony mountains. It nests in a crevice in the rocks or under a

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stone. The nest is cup shaped, and is composed of sticks and rootlets lined with hair or very fine rootlets. Clutch, 3; eggs pale blue, usually spotted sparingly with pale rust colour, the spots frequently forming a ring at the larger end; the eggs are sometimes unspotted; size, 1.10 by 0.75.

Cape Thrush (*Turdus olivaceus*). (Vol. II., p. 26.)

Description.—Male: dark slaty tinged with olive above. Throat whitish streaked with black and rufous. Dusky olive on the breast, shading into orange-rufous on the abdomen and sides. Iris light brown. Lower part of bill yellow; upper dusky.

Total length, 9.40; tail, 3.75; wing, 4.80.

The female resembles the male.

Distribution.—Cape Province, Natal, Zululand.

Habits.—The Cape or olivaceous thrush inhabits the bush-lands and seeks its food on the ground under the bushes and in the glades. The nest is cup shaped, and is placed in a fork in a low tree or thick bush. The nest is built of twigs and roots bound together with moss and mud, or cow dung; it is lined with fine grass or rootlets. Clutch, 3 to 5. Eggs pale greenish-blue, blotched and mottled mostly at the larger end with reddish-brown. The eggs vary in size; average size, 1.25 by 0.85.

Cape Robin Chat (*Cossypha caffra*). (Vol. II., p. 31.)

Description.—Olive-brown above, greyer on the sides of the neck and crown, merging into rufous on the rump and upper tail coverts. Tail bright orange-rufous, the outer edges of the feathers edged with brown near their ends; the two centre feathers are dark brown. Eyebrow white. Sides of face black. Throat, chest, thighs, and under the tail orange-rufous. Rest of under parts slaty-grey, fading into dull white in the centre of the abdomen. Iris brown. Bill and legs black.

The female resembles the male.

Length, 7.25; tail, 3.50; wing, 3.50.

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Distribution.—The whole of South Africa, with the exception of treeless desert-like districts. North to Central Africa.

Habits.—The Cape robin chat is a familiar bird in our gardens, hopping and flying about the bushes. It has a peculiar habit of jerking its tail and drooping its wings when it alights on a twig or on the ground. It is especially active during the early morning and at dusk, searching for insects. It is rather peculiar that in the Cape Province this bird seeks the neighbourhood of man, whereas in Natal I noticed it invariably kept in the seclusion of the woods and shrub. The nest is an open cup-shaped structure, and is built of roots, lichen, and moss. The nest is usually placed in a hedge or on a thick foliated shrub or low tree. Sometimes the nests are found in large trees, such as cypresses. Two or even more broods are reared during the season. Clutch, 3 to 5; eggs pale blue, mottled profusely with pale rufous; size, 90 by 60.

Cape Ground Robin (*Erythropygia coryphæus*). (Vol. II., p. 31.)

Description.—Head, sides of face, and neck grey-brown. Back rufous-brown. The four centre tail feathers brownish-black; the others are tipped with white. A dusky line on each side of the throat. Grey-brown on the breast, changing into fulvous-brown on the sides and thighs. Iris dark brown. Bill and legs black.

Length, 6.40; *tail*, 3.0; *wing*, 2.70.

The sexes are alike in colour.

Distribution.—Cape Province on its west and northern parts; the southern portion of Bechuanaland and Great Namaqualand.

Habits.—This robin frequents the drier parts scantily covered with low bushes, such as those on the sand hills. When alarmed it runs under, or flies into, one of these thick stunted bushes. It is a lively and homely little bird. The nest is built on the ground under masses of dead twigs or low thick bushes. The nest is a small, neat, round structure partly sunk into the ground.

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The nest itself is built of dead sticks and rootlets. It is 4 or 5 in. in thickness, and lined with down, hair, and wool. The surroundings of the nest are excellently camouflaged with sticks and twigs. If the nest be approached when there are eggs and young in it, the parent birds refuse to fly away, and will almost allow themselves to be caught with the hand. Clutch, 2 to 3; eggs greenish-blue, profusely mottled and spotted with reddish-brown; size, 0.82 by 0.60.

Noisy Robin Chat (*Cossypha bicolor*). (Vol. II., p. 31.)

Description.—Upper surface including the crown and wing coverts dark slaty-grey, changing to orange on the rump and upper tail coverts. Sides of face black. Cheeks, sides of neck, and under parts bright orange. Tail feathers orange-red margined with black, excepting the two centre feathers, which are entirely black. Iris brown. Bill black. Legs pale brown.

Length, 7.25; tail, 3.20; wing, 3.75.

The female is similar to the male.

Distribution.—Eastern side of South Africa from George District of the Cape Province to the Zambesi.

Habits.—The noisy robin chat frequents the dense bush and seldom shows itself. It is a noisy bird, as its name indicates, and often imitates the cries of other birds. Its principal cry resembles piet-myn-vrouw (piet-my-wife), by which name it is known to the Dutch-speaking section of people.

Paradise Fly - Catcher (*Terpsiphone perspicillata*). (Vol. II., p. 36.)

Description.—Male: entire head and crest steel-green. Back and rump, wing coverts and tail, chestnut. Under parts slaty-grey. Iris dark brown. Eyelids and bill cobalt-blue. Legs greyish-blue.

Length, to the end of the two long tail feathers, 13.0 to 15.0; wing, 3.50; tail, 3.5; tail to the end of the long feathers, 11.00.

The female does not possess the two long tail feathers of

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the male. Its head is slaty-grey, and its under parts are dull grey tinged on the chest and sides with brown.

Distribution.—All the wooded parts of South Africa from the Cape Province to the Zambesi, and north as far as the Congo.

Habits.—These graceful little birds frequent the shady woodlands. They associate in pairs, and make short darting flights at intervals to capture insects on the wing, usually returning to the same spot. When not interfered with they become quite tame, and live in the trees and shrubbery around houses and in orchards and plantations, rendering the owner sterling service. The nest is small, neat, and cup shaped. It is built on a stout twig or in a fork, and woven on with cobwebs and lichen. The nest itself is mostly composed of this material. Eggs, 3 in number; light cream coloured, and covered chiefly at the larger end with small light brown spots and a few dull purple blotches; size, 0.78 by 0.60.

South African Hoopoe (*Upupa africana*). (Vol. II., p. 36.)

Description.—Upper and lower parts brick-red. Head with a crest like a comb, tipped with black. White patches on the wings. Beak long and slightly curved. Iris dark brown. Bill dark horn. Legs greyish.

Length, 10.5; *tail*, 3.75; *wing*, 5.20.

The plumage of the female is duller than that of the male, the brick-red shading into drab.

Distribution.—The whole of South Africa, from the Cape to the Zambesi.

Habits.—The hoopoe may be met with in pairs and in small family parties almost anywhere in the neighbourhood of trees. They particularly favour the wooded banks of streams. When not persecuted they become quite tame, and wander about in search of insects around human dwellings. These birds are of great economic value. They migrate more or less from one part of the country to another in search of food. Half-starved

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and ownerless domestic cats destroy large numbers of hoopoes, and rats devour their eggs and young. They do not build a nest. Any sort of hole provides a place for laying the eggs and rearing the young. Crevices in stone walls, under the eaves of houses, holes in old tree trunks, cavities in termite hills, under piles of timber, are all situations in which the hoopoe elects to rear its brood. The eggs are 4 to 5 in number, pale blue in colour; size, 1.05 by 0.72. The blue ground of the eggs soon turns to a dirty white colour when exposed to light. The nest is usually foul with the excrement of the parent birds and nestlings. The breeding season is from October to January.

European Bee - Eater (*Merops apiaster*). (Vol. II., p. 40.)

Description.—Yellowish-white on the forehead. Light green streaks over the eyes. Crown and mantle dark chestnut, becoming lighter on the back and rump. Upper tail coverts green. Lesser wing coverts green, the rest chestnut. Wing quills tipped with black. Tail feathers black, the two centre ones thinner and an inch longer than the rest, and also tipped with black. Chin and throat bright yellow, a narrow transverse black band dividing the yellow of the throat from the greenish-blue of the breast and abdomen. Iris bright red. Bill black. Legs grey-brown.

The female is not quite so bright as the male, and the two centre feathers are not so narrow or so long.

Length, 9.4; *wing*, 5.70; *tail*, to the end of the two centre feathers, 4.80.

Distribution.—From the Cape to Southern Europe and Central Asia.

Habits.—The European bee-eater is migratory. It appears in South Africa during the summer months and breeds in deep holes which it excavates in perpendicular banks. Failing these, it tunnels into sloping banks and sometimes in the flat ground. These birds usually breed in small colonies. Eggs in clutch, 5; rounded and glossy white; size, 1.05 by 0.87.

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Carmine - throated Bee - Eater (*Merops nubicoides*). (Vol. II., p. 40.)

Description.—Crown light green, blending into crimson on the mantle and wing coverts. Rump and upper tail coverts cobalt-blue. Tail crimson, the two centre feathers longer than the others, the narrow part being black. From the base of the bill to the ear black. Under parts bright pink, becoming paler on the lower breast. Feathers under the tail cobalt; under the wings chestnut. Iris dark hazel. Bill black. Legs dull brown.

The female is similar to the male.

Length, 10.00; tail, 8.00; wing, 5.80.

Distribution.—Natal, Transvaal, Zambesi, and north to Central Africa.

Habits.—These handsome birds are usually found along the margins of rivers and reed beds, although I have met with them on rare occasions in Natal in the mimosa bush-veld far from water. They are migratory, and arrive in South Africa in October and November, and depart again in March. They breed during their stay in this country. Their nesting habits are similar to those of the European bee-eater.

Night-Jar. (Vol. II., p. 44.)

The night-jar is also known as the night owl and goat sucker, and by the Zulus as the “isavolo.”

There are several species of night-jars in South Africa. Their habits are more or less similar.

The night-jar is chiefly active at night. It may be seen at dusk hawking for insects, of which its food is entirely composed. It takes the insects mainly on the wing, but it may often be observed settling on roads and pathways to pick up beetles and other insects.

The night-jar should be held sacred, for it is one of man's most useful allies in ridding the air and ground of noxious insects which emerge by night. Of all the feathered friends of



Verreaux's Eagle Owl (*Bubo lacteus*).

During the silent watches of the night the Eagle Owl skims noiselessly over veld and hillside in search of rats, hares, and other vermin.

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man, it is one of the best, and to kill it or rob its nest is a cowardly and senseless act. When resting on a branch or on a fallen tree it sits lengthways along the wood and settles close down.

The nest is merely a depression on the ground in which two creamy-white eggs are laid. These eggs are marbled and veined with brownish-black and black-grey.

Night-jars occur in all parts of South Africa.

When seizing a large moth in the air the bird closes its mandibles with a snap and shears the insect's wings off.

The note is long drawn out and mournful—chur-chur-chur-chur-r-r. The night-jar sits so close on her eggs that she will almost allow herself to be trodden on before she rises and flies off. I have seen a flock of sheep swarm over the ground on which a night-jar was sitting on her eggs. The bird flapped her wings and made so effective a demonstration of indignation that the sheep sheered aside and left her and her eggs untouched.

Malachite Kingfisher (*Corythornis cyanostigma*). (Vol. II., p. 49.)

Description.—Male: upper parts ultramarine-blue shaded with violet. Head with a crest, the feathers of which are banded across with blue and black. Throat white. Ear coverts and under parts reddish or rufous-buff. Iris brown. Bill and legs coral red.

Length, 5.90; tail, 1.0; wing, 2.3.

The female resembles the male.

Distribution.—Africa, south of the Sahara to the Cape. It occurs in all the provinces of the Union of South Africa and in Rhodesia.

Habits.—This little living gem of a bird frequents the streams, ponds, and marshes. It is usually seen sitting on a twig or reed overhanging the water on the watch for prey. Should a small fish swim near, it instantly dives after it, disappearing under the water and emerging with a dart into the air with the fish in its mandibles. When fish are scarce it feeds

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on tadpoles, aquatic insects, and small crabs. When disturbed it flies swiftly over the water, often almost touching it. The nest is a rounded chamber at the end of a tunnel 2 or 3 ft. deep, made by the birds themselves in a bank. The hole runs slightly upwards to prevent seepage of water into the nest chamber. The eggs are 5 to 6 in number, glistening white and rounded; they are pinkish when fresh, owing to the yoke showing through the thin shell; size, 0.75 by 0.60. They breed in September and October.

Brown-hooded Kingfisher (*Halcyon albiventris*). (Vol. II., p. 49.)

Description.—Male: head ashy, narrowly streaked with dark brown. Whitish on the neck, the feathers of which are also streaked. Quills of wings blue with black tips. Mantle and wing coverts black. Primary coverts blue tipped with black. Back, rump, and tail cobalt-blue; brightest on the back and tail coverts. Chin and throat white. Lower breast fulvous. Iris brown. Bill red, tipped with black. Legs dark red.

Length, 8.40; *tail*, 2.60; *wing*, 4.0.

The mantle, wing coverts, and scapulars in the female are brown, the crown is darker and more profusely streaked than that of the male, and the bill is two-thirds black.

Distribution.—From Swellendam in the Cape Province, and eastwards to Natal, Zululand, and Transvaal.

Habits.—The kingfishers of the genus *Halcyon*, commonly known as bush kingfishers, differ in their habits from the other genera of kingfishers. The latter feed chiefly on small fishes, while the former subsist on insects, principally the ground frequenting kinds, such as grasshoppers, worms, beetles, and crickets. The brown-hooded kingfishers associate in pairs. They may be met with in nearly all districts where scattered bush prevails. They are partial to the trees along the margins of streams, ponds, and dams, owing probably to the greater

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abundance of insects in those localities. When not persecuted they make their home in plantations, orchards, and in the trees around the homestead, and render excellent service by preying on grasshoppers and other forms of destructive insect life. The nest is at the end of a hole, which the birds tunnel into a bank. The hole is often 3 to 4 ft. deep with a chamber at the end, where 4 white eggs are laid. The eggs, when fresh, have a pinkish tinge, owing to the yolk showing through the fragile shell. The nesting season is in October and November.

Giant Kingfisher (*Ceryle maxima*). (Vol II., p. 53.)

Description.—Male: head crested; blackish on the upper parts and tail, and covered with white spots. The spots on the tail are very regular. Throat white. Breast rufous. Abdomen white and spotted with black. Iris dark brown. Bill black. Legs blackish with olive tinge.

Length, 17.5; tail, 4.80; wing, 7.60.

The female differs from the male in the upper part of the breast, being white with a band of black spots across. The lower breast and abdomen are rufous.

Distribution.—The whole of Africa. In South Africa it is met with from the coasts of the Cape Province to the Zambesi.

Habits.—This kingfisher is a giant among its kind. It associates in pairs and small family parties, and is never found far from water. It frequents the seacoast and all the water courses, and pays periodic visits to ponds and dams. They feed on fish, crustacea, and a variety of aquatic forms of life. They obtain the fish by suddenly dashing down on them when they are swimming near the surface. A pond in one of the public parks in Port Elizabeth was cleared of gold fish by a pair of these kingfishers which visited it at daybreak and at dusk. The nest is at the end of a hole made by the birds in a perpendicular bank. The eggs are white, and 4 in number. They breed in August and September.

DESCRIPTION, DISTRIBUTION, HABITS

Pied Kingfisher (*Ceryle rudis*). (Vol. II., p. 53.)

Description.—Male: head crested; black and white above. Tail white at the base, followed by black, and tipped with white. A white streak from the base of the bill over the eye. White below with two bands of black on the breast. Black spots on the flanks. Iris dark brown. Bill and feet black.

The female differs from the male in having only one black band on the chest, and this band is usually divided in the middle.

Length, 11.50; *tail*, 5.55; *wing*, 3.00.

Distribution.—The whole of Africa and South-West Asia. In South Africa it occurs from the Cape coast to the Zambesi.

Habits.—The pied kingfisher may be met with along the coast, tidal and other rivers, and around the margins of lagoons, lakes, and ponds. Like the giant kingfisher, it poises itself in the air and drops upon its prey in the water when the latter is swimming near the surface. When it is unable to capture sufficient fish for its needs, it resorts to crabs, shrimps, and other aquatic life. A hole is tunnelled to a depth of 3 to 4 ft. in a sand bank. At the end of the horizontal hole there is a smooth, round chamber in which 5 eggs are laid; they are white, shiny, and oval in shape; size, 1.25 by 0.95. They breed in October and November.

Coly, or Mouse Bird (*Colius striatus*). (Vol. II., p. 57.)

Description.—Ashy-grey and speckled brown on the upper parts. Ashy brown below. Lower portion of tail feathers chestnut-buff. Bare skin round the eye black. Iris dark brown. Upper part of beak black; lower bluish-brown. Legs purple-brown.

Length, 13.0 to 14.0; *tail*, 8.0; *wing*, 3.70.

The female resembles the male.

Distribution.—Cape Province to Nyassaland.

Habits.—These mouse birds associate in small flocks of 5 or 6 to about a dozen individuals. They inhabit the

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bush-lands and crawl or creep through the bushes. When alarmed they fly out of their cover, usually in single file, and make direct for the nearest bush, into which they disappear. Mouse birds are a pest in gardens. When roosting they hang from a twig or branch in a bunch, clustering like bees. They do not hang with the head down after the manner of a bat, as commonly supposed. The nest is placed in the midst of a tree, usually a thick foliated one. It is cup shaped, and built of small twigs, stems of weeds, and strips of bark, and lined with green leaves. Eggs, 3 in number; chalky white and usually discoloured; size, 0.92 by 0.62. Eggs have been found from December to March.

Ground Hornbill (*Bucorase cafer*). Also known as
the Turkey Buzzard, Brom-Vogel, Intsingizi.
(Vol. II., p. 62.)

Description.—Male: plumage black, with the exception of the primaries, which are white. Beak and legs black. Bare skin on throat and round the eye vermilion-red. Iris pale green.

Length, 42.0; tail, 13.6; wing, 24.0.

Female differs from the male, in the bare skin of the throat and neck being blue with a rim of red. The casque is also narrower than in the male.

The plumage of the immature bird is mottled grey.

Distribution.—The eastern side of Cape Province, whole of Natal, and Zululand; lower part of the Transvaal, and north to Rhodesia and the Zambesi. It also occurs in Angola, Nyassaland, and East Africa.

Habits.—The ground hornbill inhabits the open veld in pairs or small parties of from 4 to 8 individuals. I have often met with it in the bush-veld in Natal.

The diet consists of the larger insects, lizards, snakes, frogs, tortoises, mice, rats, etc. Small prey is picked up with the



The Spotted Eagle Owl (*Bubo maculosus*) renders mankind the finest and most valuable services in his fight against those destructive and disease-carrying rodents, the rats and mice.

Because it occasionally kills vermin such as hares, men mercilessly murder it.

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tip of the mandibles, thrown into the air, caught, and swallowed.

Large snakes are attacked by the bird with wings outspread to serve as a shield, and the reptile is pecked to death. The hornbill then nips its prey from head to tail, and swallows it head first. The flesh is carefully picked out of tortoises, leaving the carapace intact.

The ground hornbill strides along and does not hop, and can run at a fairly fast pace. When hard pressed it rises on the wing, flies about a mile, alights, and runs to cover, or perches on a tree. They sleep in trees at night so as to be out of reach of night-prowling carnivorous animals. I have often encountered them seeking roasted insects on freshly burned veld and hill-sides.

The bird is easy to tame, and will wander about the homestead like a domestic fowl, returning nightly to roost. It has a voracious appetite, and spends most of its time in searching the neighbourhood for snakes, snails, caterpillars, beetles, and other pests. When kindly treated it shows its affection in a variety of ways. It loves to be caressed, and will squat down awkwardly by one's side and invite attention.

The cry of the hornbill is a loud, penetrating boom-boom, which carries a considerable distance. The male calls to the female, and she answers in a higher pitched note. When attacking a large snake they also give forth this characteristic boom, meanwhile dancing and jumping round their intended prey.

The nest is a structure of sticks on the top of a large tree trunk, or in a cavity in a decayed tree trunk. Failing such sites, they build a nest of sticks on the branches at the top of a tree. The eggs are white, but usually dirty and stained; size of eggs, 2.95 by 1.80.

In times of drought the natives consult the "rain doctor," who orders a ground hornbill to be killed. A stone is then attached to its neck and the body is cast into a pond, vlei, or stream. The belief is that the bird's flesh, having an offensive odour, will make the water so sick that rain will fall abundantly to flush out the evil smell.

DESCRIPTION, DISTRIBUTION, HABITS

Crowned Hornbill (*Lophoceros melanoleucus*). (Vol. II., p. 69.)

Description.—Back, wings, and tail dark brown; the feathers of the latter tipped with white; the outer ones slightly; the others broadly. Quills of wings narrowly edged with light buff. Throat, chest, and sides grey and black. Abdomen pure white. Iris yellow. Bill red with a yellow band at the base. Legs dark brown.

Length, 23.0; wing, 9.6; tail, 8.60.

The female is slightly smaller than the male, but otherwise resembles it.

Distribution.—Cape Province, and north to Central Africa.

Habits.—The crowned hornbills associate in small flocks and frequent the wooded districts. When the breeding season approaches they pair off, and, finding a sufficiently large hole high up in a tree trunk, the female enters and lays her eggs. The male from the outside and the female from the inside plaster up the entrance to the hole, leaving only a slit through which she passes her bill to be fed by the male bird. During her term of imprisonment, which is seven or eight weeks, the female moults, and on emerging from the nest hole she is in good condition and provided with new plumage. Clutch, 3 to 4. Eggs pure white and rather rough to the touch. They are laid in December or January. It is believed the female leaves the nest before the young are fully fledged, and seals up the entrance again, leaving the usual slit through which the young are fed. The cement used for sealing up the entrance is the excrement of the birds, which is full of the wing cases and legs of insects.

Trumpeter Hornbill (*Bycanistes buccinator*). (Vol. II., p. 69.)

Description.—Above and on the breast black with a dark greenish gloss. Head crested. Rump and upper tail coverts white. Abdomen white. Tail feathers, with the exception

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of the centre pair, tipped with white. Iris dark red. Bill and casque dull black. Naked skin round the eye pale pink. Feet black.

The female is smaller than the male.

Length, 27.00; tail, 9.50; wing, 11.50.

Distribution.—Eastern portion of Cape Province, and north to British East Africa.

Habits.—This large and grotesque-looking hornbill inhabits the forest districts, and associates in small flocks. They always return to the same spot to roost. Their nesting habits are the same as those of other hornbills.

Narina Trogon (*Hapaloderma narina*). (Vol. II., p. 73.)

Description.—Male: head, back, and chest metallic-green. Tail green with a blue tinge, the three outer pairs of feathers partly white. Under parts bright crimson. Sides of body grey. Iris hazel. Bill ashy. Legs dark flesh colour.

Length, 11.5; tail, 6.5; wing, 5.0.

The green portion of the plumage of the male is yellowish-brown in the female, and the under parts are not so brightly coloured.

Distribution.—Eastern portion of Cape Province to the Zambesi regions.

Habits.—The narina trogon inhabits the thickly wooded districts, and usually lives in solitude except at the breeding season. The skin of the narina is very thin, and the feathers come out easily. They nest in a hole in an old tree. Clutch, 4. Eggs white; the shell is fragile, and shows rosy-pink when the eggs are fresh.

Meyer's Parrot (*Pæocephalus Meyeri*). (Vol. II., p. 73.)

Description.—Brown above. Throat and breast brown. A yellow band across the crown; occasionally this band is absent. Edge of the wing and under wing coverts bright yellow. Upper

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tail coverts and lower part of the back cobalt-blue. Abdomen greenish-blue. Iris reddish-orange. Skin round the eye black. Bill and legs dark brown with a greenish tinge.

Length, 9.0 ; tail, 2.75 ; wing, 6.0.

The female resembles the male.

Distribution.—From Bechuanaland and the Transvaal, through the eastern part of Africa to Abyssinia.

Habits.—Meyer's parrot associates in small flocks or pairs. It is common in the upper parts of South Africa in the thorny bush and along the wooded banks of streams. It builds its nest in a hole in a tree. Meyer's parrot is often seen in aviaries.

Ground Woodpecker (*Geocolaptes olivaceus*). (Vol. II., p. 78.)

Description.—Male: olive-brown above with narrow white cross-bars, especially on the wings. Head ashy-grey. Rump light crimson. Tail olive above, golden-yellow below, with whitish bars; the feathers are pointed and tipped with red. Throat dull white bordered with grey, the feathers of which are tipped with crimson. Breast dull olive tinged with crimson, chiefly on the lower part. Abdomen olive with whitish bars. Iris white. Bill and legs black.

Length, 11.5 ; tail, 3.6 ; wing, 5.2.

The female has no red on the cheeks, but otherwise resembles the male.

Distribution.—Cape Province, Natal, Transvaal.

Habits.—The ground woodpecker, as its name implies, lives on the ground, and is usually met with on the slopes of bare, rock-strewn hills. It associates in small parties of 6 to 10 or a dozen individuals. They pair off on the advent of the breeding season. Their roosting places are crevices and holes amongst the rocks. They nest in holes in banks. The holes are tunnelled by the birds, and they vary in depth from about 2 ft. to several feet. In a depression at



The Grass Owl (*Strix capensis*) keeps rats, mice, and the larger insects in check out on the grass-lands, vleis, and margins of rivers, thus preventing them multiplying unduly and invading the cultivated lands.

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the end of the hole the eggs are laid, 4 to 5 in number, pure white, and unusually round in shape; size, 1.0 by 0.85.

Cardinal Woodpecker (*Dendropicus cardinalis*). (Vol. II., p. 83.)

Description.—Male: forehead umber-brown. Crown and nape crimson. Back deep olive-brown, the feathers tipped with white, presenting a barred appearance. Rump and upper tail coverts yellowish. The wings and tail dark, barred with white. The shafts of the feathers yellow. The two centre tail feathers tinted with golden-yellow. Under parts dull whitish, streaked on the breast and barred on the flanks with black. Iris dark reddish-brown. Legs ashy with olive tinge.

Length, 6.0; tail, 1.80; wing, 3.6.

In the female the back of the crown and occiput are black. The cheeks and sides of the neck are less spotted with black than in the male.

Distribution.—Common in all the wooded parts of South Africa, from Cape Province to the Zambesi. North of the Zambesi, it ranges as far as Nyassaland and Portuguese East Africa.

Habits.—The cardinal woodpeckers are usually seen singly or in pairs, busily tapping tree trunks and branches in search of the grubs of wood-boring beetles and searching the crevices in the bark for adult beetles. It is common along the wooded banks of rivers and on the mimosa-covered veld, hillsides, and valleys. The nest is at the bottom of a hole in a decayed tree trunk. Clutch, 5 to 7; eggs white.

South African Wryneck (*Iynx ruficollis*). (Vol. II., p. 83.)

Description.—Above brown, speckled with darker. An irregular black streak from the crown to the shoulders. Wing coverts with a number of black spots with pale edges. Tail barred irregularly with black. Throat and upper breast

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chestnut-brown. Breast streaked and the abdomen barred with black. Tail not stiff as in woodpeckers. Iris red-brown. Bill and legs greenish.

Length, 7.0 ; tail, 2.70 ; wing, 3.40.

The female resembles the male.

Distribution.—Eastern part of Cape Province, Natal, and Transvaal. Northwards through the wooded parts of Africa to the Congo and Upper Nile.

Habits.—The wryneck is met with singly and in pairs in the woodlands, preferring the more open parts and not the dense, tangled forest. It feeds entirely on insects which it obtains on the trunks and branches of trees. Although it creeps over the bark it does not use its tail to assist it, as is the case with the woodpeckers. It differs also in not tapping the trees or digging out the grubs which prey upon the wood. Its tongue is long and retractile, and is provided with a gummy secretion at the tip. With this it collects small insect prey. The woodpeckers possess a similar tongue. They nest in a hole in a rotten tree trunk.

Sparrman's Honey Guide (*Indicator sparrmani*).

(Vol. II., p. 88.)

Description.—Male: dark brown above. Rump and tail coverts with white streaks. Golden-yellow patch on the shoulder. Centre pair of tail feathers brown; others edged with white. Outer pair white, tipped with brown. Throat black. Slaty-white below, shading to white on the abdomen. Flanks streaked with dark brown lines. Iris yellowish-brown. Bill horn, with a tinge of pink. Legs leaden.

Length, 7.25 ; tail, 3.30 ; wing, 4.40.

The female differs from the male in being smaller, and it also lacks the black throat patch.

Distribution.—The whole of Africa from the Cape to Abyssinia and Senegambia.

DESCRIPTION, DISTRIBUTION, HABITS

Habits.—The honey guide is usually encountered on the bush-veld and in forests. It feeds on honey, wax, the larvæ, and adult wild bees. The skin of the honey guide is thick and strong and impervious to the stings of bees. Wild bees usually have their hives in holes in tree trunks, in cavities in rocks, and in the ground out of reach of the honey guide. Not to be baffled, this active and intelligent little sparrow-like bird deliberately attracts the attention of anyone who may be in its vicinity. Many a time I have been led to bees' nests by the honey guide. Uttering its harsh cry of churr-churr, it flew from branch to branch, and if I showed any inclination to lag or turn aside it grew excited, fluttered, and called within a few yards of me, alarmed lest I should fail to follow it. When it reached its goal it hovered over the site of the bees' nest, and when it saw me approaching it flew into an adjacent tree and awaited developments, knowing that in taking the comb, enough would be scattered around to provide a feast for it. The Pygmy bushmen and the Hottentots of bygone times made great use of this remarkable peculiarity of the honey guide. Kafirs were not slow to copy.

The honey guide also co-operates with the honey ratel, a badger-like animal, and leads it to bees' nests in the same way as it does men. This may be doubted, but it is, nevertheless, a fact. In digging out a bee's nest and feasting on the honey and young bees, the ratel is very wasteful, and leaves a plentiful supply for the patiently waiting bird. Honey guides lay their eggs in other birds' nests after the manner of cuckoos. Eggs of Sparrman's honey guide have been found in the nests of swallows and wood hoopoes. They are oval in shape and creamy-white in colour.

Didric Cuckoo (*Chrysococcyx cupreus*). (Vol. II., p. 93.)

Description.—Male: glittering green above with blue and copper reflections. A white streak over the eye and across the middle of the crown. Under surface white, barred on the abdomen with green, principally at the sides. The two centre tail feathers green, the others with white tips. Iris and eyelids

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red. Upper portion of bill dark horn; lower, dark at the tip and lighter at the base. Legs black with a bluish shade.

Length, 7.5; tail, 3.20; wing, 4.40.

The female differs from the male. Its back is more coppery in colour. There is no white mark on the crown, or, if present, it is indistinct. The under parts are more profusely barred, and the colour is of a copper shade.

Distribution.—From Cape Province, north through Africa to Abyssinia and the Gambia River.

Habits.—The didric or golden cuckoos migrate from the north into South Africa during the summer season, and leave again in the autumn. They may be met with in the bush-veld, forests, wooded kloofs, and plantations. The male may be heard at all times of the day calling to attract the female. Like other species of cuckoos, the didric deposits its eggs in the nests of a number of species of other birds. The egg is usually laid on the ground, and the cuckoo takes it in her mouth and carries it to the nest of her host. I have grounds for believing that in many instances an egg of the host is taken from the nest and eaten by the cuckoo. The eggs vary from white, spotted, or pale unspotted blue. A female cuckoo produces several eggs, but not more than one is deposited in any individual nest. The eggs are usually laid in December.

Emerald Cuckoo (*Chrysococcyx smaragdineus*). (Vol. II., p. 93.)

Description.—Male: glittering emerald-green above and on the throat and chest, the feathers having the appearance of scales. Abdomen and thighs delicate canary-yellow. Under tail coverts white, barred with emerald green. Iris dark brown. Bill dark at the base; greenish at the tip. Legs slaty.

Length, 8.12; tail, 3.80; wing, 4.4.

Female dark ashy on the head. Back emerald-green barred with rufous. Lower parts white, narrowly barred with green; the distance between the bars is greatest towards the tail.

Distribution.—Cape and north to Abyssinia and Gambia.

DESCRIPTION, DISTRIBUTION, HABITS

Habits.—The emerald cuckoo is migratory, arriving in South Africa in the early summer and departing in autumn. It is by no means so common or so widespread as the didric. I have found it chiefly in the wooded fertile districts, and invariably in mimosa trees. It occurs in the Knysna Forest, and is not uncommon in Natal, Zululand, the Zambesi Valley, and Rhodesia. The stomachs of twenty cock birds which I examined in Natal contained caterpillars, many of which were of the hairy species; also a few winged termites. The male birds are easily located by their frequent calls and the conspicuous way they show themselves in their eagerness to attract the hen bird, which is invariably silent and keeps out of sight amongst the foliage of the trees. It is exceedingly difficult to get a glimpse of the female. For five years I observed these birds each summer season, and only on two occasions was I successful in getting a view of the female, one of which I shot for scientific purposes.

Black and Grey Cuckoo (*Coccyzus hypopinnarius*). (Vol. II., p. 98.)

Description.—Male: upper parts black with greenish gloss. White band across the wings. Tail feathers tipped with white. The under parts are of greyish-slate throughout, the chest and sides of neck being slightly suffused with black. Iris black. Legs, bill, and feet black.

Length, 13.75; tail, 7.2; wing, 6.0.

The female resembles the male.

Distribution.—Most of Southern Africa. In South Africa it occurs on the coasts of Cape Province right up to Portuguese East Africa.

Habits.—This cuckoo frequents the thick bush, and usually only appears after the heavy spring rains, when it can be recognised by its loud whistling note. It feeds chiefly on caterpillars and such-like insects. Like other cuckoos, it also deposits its eggs in the nests of other birds. The most favoured host is the sombre bulbul (*Andropadus importunus*). Nests of this bulbul



The Barn Owl (*Strix flammea*) or Dood-Vogel preys on rats and mice around the homestead and out on the cultivated lands; and many farmers, prompted by baseless superstition, kill this invaluable friend and ally.

DESCRIPTION, DISTRIBUTION, HABITS

have been found with as many as 4 and 5 large cuckoo eggs, together with 2 of its own. The parent cuckoos very often watch the foster parents to see that they are doing their duty. The eggs are white in colour.

Great Spotted Cuckoo (*Coccytes glandarius*). (Vol. II., p. 98.)

Description.—Male: head crested with grey feathers, shafted with black. Upper surface, including wings and tail, is a slaty-brown. Outer wing feathers and tail tipped with white. Feathers round the eye grey. Lower surface white, except the throat and upper part of breast, which are pale yellow ochre in colour. This extends up the sides of the neck, forming a half collar. Iris hazel brown. Bill brown, yellow at base. Legs and feet bluish-brown.

Length, 14.75 ; *wing*, 7.74 ; *tail*, 8.25.

The female becomes like the male in time, taking longer to assume male plumage. The young bird has a black crown.

Distribution.—This cuckoo is a migratory bird. It spends the northern summer and breeds on the coasts of the Mediterranean and in Western Asia. During the southern summer it scatters over Africa, south of the Sahara. It occurs all over South Africa, with exception of the Western Province of the Cape. It is nowhere common. It arrives between September and October and leaves about March.

Habits.—These cuckoos are usually found going about singly or in pairs. They are extremely cunning, hiding in thick trees when approached. The males are very often seen chasing one another about during the early summer. Their food consists of insects, such as caterpillars, locusts, and beetles. Being a typical cuckoo, it does not build a nest of its own, but lays its eggs in the nest of other unfortunate birds. The hosts particularly favoured are the starlings and crows. I have found the egg of this cuckoo in both the above nests. The eggs are of a pale dull blue ground colour, covered with small blackish-brown spots. They measure 1.2 by 0.96. It is

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concluded that, like the European bee-eater, this cuckoo breeds in both hemispheres.

Levaillant's Cuckoo (*Coccytes cafer*). (Vol. II., p. 103.)

Description.—Male: above black, most of the feathers having a green and violet gloss. White band on wing, and tail feathers tipped with white. Most of under surface white, throat and chest being strongly streaked with black. Sides of body and thighs with a few black streaks. Iris hazel. Bill black. Legs and feet dark ash-grey.

Length, 14.75 ; wing, 7.0 ; tail, 8.75.

Female resembles the male in plumage, but is smaller in size.

Distribution.—Africa, south of Sahara. In South Africa it is rarely met with south of the Orange River, being exceedingly rare in the Cape Province, although fairly common in Natal.

Habits.—This cuckoo is nowhere plentiful. It appears about November, the late spring, and is usually seen in pairs. However, being very shy and retiring, not much has been observed of its habits. It usually frequents the thick bush bordering rivers and streams. Its diet consists chiefly of insects, such as worms, ants, locusts, and hairy caterpillars, of which latter it is specially fond. Nothing is known of its breeding habits in South Africa.

Black-crested Cuckoo (*Coccytes serratus*). (Vol. II., p. 103.)

Description.—Male: black, glossed with green throughout, both above and below, with only a white band on the wings. Iris black. Bill black. Legs black.

Female resembles the male both in plumage and size.

Distribution.—Like *coccytes glandarius*, this cuckoo is also migratory, appearing between September and October, and departing again before April.

Habits.—It is most often seen in pairs hunting among the trees for insects such as beetles, locusts, caterpillars, flies, etc.

DESCRIPTION, DISTRIBUTION, HABITS

The gizzards of some are completely lined with hair from the hairy caterpillars, which form its staple diet. The eggs are laid in the nests of various birds, *pycnonotus capensis* being usually the host. The eggs have also been found in nests of *tarsiger silens* (silent bush robin) and mouse bird. The eggs are white in colour and measure 1.05 by 0.85.

Burchell's Coucal (*Centropus burchelli*). (Vol. II., p. 108.)

Description.—Top and sides of head and back of neck blue-black. Middle of back and wings rufous-brown. Rump and upper tail coverts mottled with dark green and dull white. Tail feathers uniform dark green tipped and barred with white. Below buffy-white throughout. The shafts of the feathers shiny throughout. Iris red. Bill black. Legs and feet lead black.

Length, 16.5 ; *wing*, 6.4 ; *tail*, 9.85.
The female resembles the male.

Distribution.—It is spread throughout South Africa, where it is resident. Very common in Cape Colony, Natal, Transvaal, and further north.

Habits.—The vlei lourie or Burchell's coucal is found chiefly in the thick bush bordering rivers and vleis. It is a very shy bird and is seldom seen, and then usually in pairs. It spends most of its time creeping about the undergrowth searching for insects. It is heard calling, usually in the morning and evening. Its note is loud and melancholy, being somewhat like ku-ku or tu-tu repeated rapidly many times, beginning with a high note and ending in a low key. This bird builds a nest of dry grass and leaves low down in some thick mass of bush or creepers. It is a domed structure with a side entrance, which usually faces the least windy quarter. The inside is very often lined with mud. The young are ungainly, extraordinary looking creatures, with large heads and distended abdomens. The eggs vary from 4 to 5 in number. They are large rounded eggs, pure white in colour.

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Knysna Plantain Eater, or Lourie (*Turacus corythaix*).

(Vol. II., p. 113.)

Description.—Male: head, neck, throat, and chest grass-green. The long feathers on the head form a rounded crest, which is tipped with white. White eyebrow with black spot in front and below the eye. The back is greenish-blue verging into steely-blue, and green on the wings and tail. Under parts of wings crimson, the outer secondaries edged and tipped with dusky-black. Abdomen and tail coverts slaty. Iris brown. Bare skin round eye red. Bill orange-red. Legs black.

Length, 18.0 ; *wing*, 7.0 ; *tail*, 8.25.

Female resembles the male.

Distribution.—This lourie inhabits the thickly forested districts from Knysna eastwards to Natal.

Habits.—The lourie is confined to thickly wooded districts, where it frequents the high trees, only descending during wet weather. It feeds principally on forest fruits, such as wild figs, etc. They are usually seen about in pairs. Their flight is very graceful as they glide from tree to tree. Their cry is only heard at sunrise and sundown. It is a loud croaking note, which can be easily distinguished. During the heat of the day, however, they are usually silent. On the wing feathers there is a red pigment known as turacin. This turacin is soluble to a certain extent in water; thus during wet weather these birds often get most of this crimson colouring washed out, leaving the feathers a dirty white in colour. During rainy weather the feathers often get so wet that the bird is unable to fly, and can then be caught with the hand. When the plumage dries, the colour becomes, in a few days, as bright as ever. The nest resembles that of a pigeon. It is a horizontal platform of sticks, placed in the centre of some thick bush about 10 to 15 ft. above the ground. It is about 1 ft. in diameter. The eggs are about 5 in number and are pure white, being very much the same size as those of the ordinary pigeon.

DESCRIPTION, DISTRIBUTION, HABITS

The Cuckoo. (Vol. II., p. 93.)

There are several species of cuckoos in South Africa. Their food is entirely of an insectivorous nature, caterpillars constituting the bulk of their diet. Cuckoos do not build nests or rear their young. They are, in this respect, parasitical on a variety of species of other birds. When the nest is of a suitable kind, the cuckoo enters it and lays an egg therein and departs. If the nest is of a nature which does not permit the entry of the cuckoo, it lays an egg on the ground and, taking it up in its mandibles, it flies to the selected nest and deposits the egg therein. Sometimes the cuckoo removes one of the host's eggs to make room for its own, as in the instance recorded in the illustration on p. 59, Vol. I. Soon after birth the young cuckoo ejects the other nestlings by heaving them over the edge of the nest. This is made possible by a special adaptation of the back and suitable strength of limbs, etc., provided by Nature for the purpose. In many cases the nature of the nest does not permit of the young cuckoo ejecting its foster brothers and sisters. In these instances they are trampled to death by the big, strong cuckoo baby, which now monopolises all the food brought by its foster parents and, growing rapidly, soon fills the entire nest.

This victimisation of other birds should not be allowed to weigh against the cuckoo, as in the great majority of instances the victims are bird pests, such as the bulbul and mouse bird, or else they are of comparatively small economic value; whereas the cuckoo is of far-reaching value to man owing to the nature of its diet and its voracious appetite.

Haagner mentions that the great spotted cuckoo (*Coccyzus glandarius*) often lays two eggs in one nest, and that the young cuckoos sometimes leave the young of the foster parents unmolested. Occasionally as many as three cuckoos of different species each lay an egg in one nest. Whether in these instances the strongest cuckoo nestling ejects the other two is not recorded.

Verreaux's Eagle Owl (*Bubo lacteus*). (Vol. II., p. 121.)

Description.—Above dark grey, finely mottled with white, the masking on crown forming a transverse band. Wings

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and some of coverts edged with white. The quills are dark brown with a paler cross band. Tail feathers banded in same fashion. Bristles of the lores black with white bases. Facial disc white, set off on either side by a black band. Below mixed brown and white, darkest on breast, and getting lighter on thighs and under tail coverts. Iris hazel (dark). Bill pale ash-horn. Cere greyish-blue. Upper eyelid pink. Claws dusky-black.

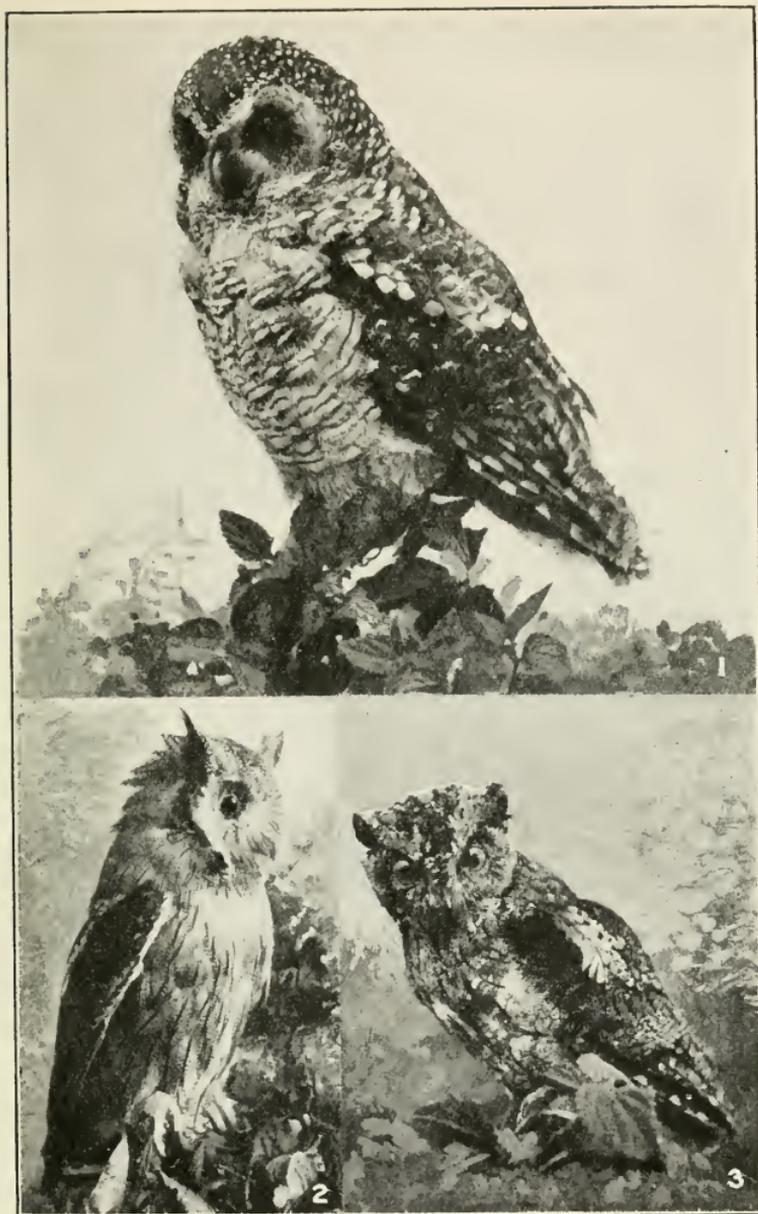
Length, 28.0 ; *wing*, 17.25 ; *tail*, 9.5.

Distribution.—Spread over the greater portion of Africa, south of Abyssinia. Distributed throughout South Africa, though nowhere common. It is found mostly in the western and dryer districts.

Habits.—This owl is usually seen in pairs. During the day it retires to the deepest shade of the high trees in thickly wooded kloofs ; there it dozes in peace. At night it comes forth in search of food, and preys on small mammals, such as hares and rats, and is not above eating insects. It is destructive to poultry keepers, as it carries off their fowls when the latter are allowed to roost in trees. It emits a curious hollow, uncanny hoot. This has earned for it the name of “death bird” by the natives. The nest is usually built in a high tree. It is a large flat structure, composed of sticks, lined with finer twigs, neatly put together. The eggs are invariably 2 in number, and are pure white, rounded at both ends ; they measure 2.35 by 2.0.

Spotted Eagle Owl (*Bubo maculosus*). (Vol. II., p. 127.)

Description.—Above mottled dark brown, fulvous, and white, being darkest on the head. Quills dark brown with pale fulvous cross bands ; tail feathers the same, except two centre ones, which are tipped with white. Lores, chin, and patch on throat white. Ear coverts greyish, barred with black, and with a transverse line of black behind, forming boundary of facial disc. Lower surface, thighs, and legs transversely barred



1. Woodford's Owl (*Syrnium woodfordi*) frequents the woodlands, and preys on rats, mice, and the larger insects.
2. The White-faced Owl (*Asio leucotis*) is strictly nocturnal, and renders invaluable services to man.
3. The Cape Scops Owl (*Scops capensis*) is a pygmy among owls, but it is, nevertheless, an inveterate enemy of mice and insects which it captures by night.

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with brown and white. Feathers on toes white. Iris bright yellow. Bill, cere, and claws black.

Length, 20.0 ; wing, 12.7 ; tail, 7.5.

Female resembles male.

Distribution.—Distributed throughout Southern Africa up to the Congo. In South Africa it is by far the commonest owl, being found in nearly all the districts.

Habits.—This owl occurs all over the country, and is not confined to any particular district, being found as plentifully in forests as on open plains, and in wild as well as cultivated areas. Their diet consists mainly of rats and mice. Their cry is a “hoo-hoo,” which is very clearly marked. When wounded or disturbed they make a curious snapping noise by opening and shutting their beaks. When they appear during the day they are mobbed by the smaller birds, the drongos and bulbuls being the leaders in these attacks. They do not build a nest, but just lay their eggs in a slight depression on the ground. The eggs, usually 2 in number, are smooth, rounded, and white, and are laid usually between October and November. They measure roughly 2.0 by 1.65.

Grass Owl (*Strix capensis*). (Vol. II., p. 132.)

Description.—Female: above very dark brown, with a few white spots here and there at tips of feathers. Coverts along radial edge of wings buff. Central tail feathers black, outer ones with increasing amounts of white. The facial disc is pure white. Facial ruff is brown above; buffy-white with brown tips at sides and below. Lower surface white, slightly buff on breast, and covered with numerous spots of brown. Toes bare. Iris black. Bill white, yellowish at base. Legs and toes dirty yellow.

Length, 15.5 ; wing, 12.25 ; tail, 4.55.

Distribution.—The grass owl is found chiefly in the eastern and southern half of South Africa, and extends north to Nyassaland.



PLATE VIII.—Barred Owl (*Clauvidium capense*).

The Owl is one of Nature's guardians of the health, wealth and happiness of the human race

DESCRIPTION, DISTRIBUTION, HABITS

Habits.—This owl is comparatively rare, but is found chiefly in the south-eastern parts of the Cape and Natal. It is invariably found in the reeds and thick grass near rivers and in vleis. During the day it sleeps on the ground, sheltered by the surrounding grass. It lays 3 to 4 white eggs at the side of a tuft of grass in a slight depression on the ground. The eggs are laid between November and December.

Barn Owl (*Strix flammea*). (Vol. II., p. 138.)

Description.—Above, general colour pearly-grey. All the feathers are yellowish-buff at their basal halves. Wing quills banded buff and brown. Tail buff, with three brown transverse bands and a paler brown tip. The outside edge of the outer feather white. Facial disc white, except for a brown spot in front of the eye. The surrounding ruff is buff above and white below, with black tipped feathers outside the white ones. Below white, the breast being slightly buff and the whole spotted with brown. Bristles on toes. Iris dark brown. Bill yellow. Feet and toes yellow.

Length, 16.25 ; *wing*, 11.70 ; *tail*, 4.80.

Nestlings are covered with white down. Feathers on first appearance are orange in colour.

Distribution.—Found all over the world, except on Pacific Isles and New Zealand. It is quite plentiful throughout South Africa, except perhaps the coast lands of Natal.

Habits.—These owls, like most others, are usually found in pairs. During the day they doze. As their name implies, they frequent disused barns and outhouses, also mining shafts and drives. Their prey consists chiefly of rats and mice which they hunt at night. They are thus of great use to farmers. The bones and fur of their prey are ejected in the form of pellets, which are always found in great abundance below their nesting places. Their cry is not a hoot like most other owls, but is a somewhat weird shriek. Both the adults and young also make a peculiar snoring noise. It makes no nest, but lays its eggs on the bare boards of a loft, in holes in walls, in hollow trees,

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or even on the ground. The eggs are laid at intervals of a few days or weeks. Thus nestlings and eggs are often found in the same nest. The eggs are 2 to 5 in number, and are pure white ovals, not shiny; size, 1.7 by 1.25.

Woodford's Owl (*Syrnium woodfordi*). (Vol. II., p. 145.)

Description.—Male: above dark brown, nearly black in parts, with small white triangular spots. Outer webs of outer scapulars and greater wing coverts are barred with white and brown. Quills dark brown, barred with paler brown. Tail dark brown with five transverse bands. Face grey with a black ring round the eye. Below white with brown bars. Browner on breast, merging to white on abdomen. Toes bare. Iris brown. Bill yellow. Toes yellow.

Length, 14.5; *wing*, 9.3; *tail*, 5.4.

Female resembles the male both in size and plumage.

Distribution.—This owl is distributed fairly evenly over South Africa. It ranges as far north as British East Africa. It is nowhere common, but is found more plentifully at Knysna and in Natal than anywhere else in South Africa.

Habits.—Woodford's owl is only found in and about thick forests and bush. On clear nights the cheerful hooting of this bird is often heard in the bush along the coasts. Its diet consists chiefly of mice and the larger insects. The nest is usually in an old tree stump or some such-like place. No actual nest is built, but just a few sticks are laid in a scooped-out cavity. The eggs are white. They are laid between September and October. Eggs measure 1.75 by 1.4.

White-faced Owl (*Asio leucotis*). (Vol. II., p. 145.)

Description.—Male: above grey, mottled and spotted with darker. Top of head blackish. Row of white spots along the outer scapulars. Tail grey, banded with darker. Face white with a grey patch below the eye, bounded behind by a black margin. Feathers of ear tufts black on outer

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webs. Below grey, similar to the back, becoming whiter on lower abdomen ; all with narrow streaks of black. The toes are feathered. Iris orange-yellow. Bill bluish-horn. Toes grey.

Length, 12.25 ; wing, 7.75 ; tail, 3.80.

Distribution.—Found throughout Africa south of the Sahara. Fairly plentiful in Natal, Transvaal, Rhodesia, and South-West Africa. Rare in the Cape. It is partial to eucalyptus plantations.

Habits.—Nearly always seen about in pairs. Its food consists chiefly of grasshoppers and other large insects. It also preys on rats and mice. This owl often adopts the nests of other birds in which to lay its eggs. Sometimes it builds its own nest, which is usually a slight structure of sticks placed high up in a tree fork. The nest is usually so flimsy that the eggs can be seen from below. The eggs are smooth and white, and rounded oval in shape. The usual clutch is from 2 to 3, and they measure 1.6 by 1.3. It seems to breed at all times of the year, the eggs having been found from June to March.

Cape Scops Owl (*Scops capensis*). (Vol. II., p. 145.)

Description.—Female: above dark grey, mottled and streaked with black. Spotted on scapulars and especially on wing coverts with white. Quills grey-black, spotted with white on the outer web only. Tail mottled with pale rufous and black. Lores and face iron-grey. Below same as back but lighter in colour, merging to white on abdomen, with black streaks and mottlings. Iris yellow. Bill and toes bluish-horn.

Length, 7.0 ; wing, 5.0 ; tail, 2.10.

Male similar to female in plumage, but larger in size.

Distribution.—Widely distributed from Abyssinia, southwards to the Cape. It is nowhere common.

Habits.—This owl is rarely met with, presumably because of its small size and strictly nocturnal habits. It has a peculiar

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melancholy, monotonous cry, which is often heard after sunset. Its diet consists of mice and insects, such as beetles, large moths, etc. Nothing comparatively is known of the nesting habits of this bird. Nests have been found in tree stumps and hollow trunks at Hankey, Eastern Cape Province.

Martial Eagle (*Eutolmætus bellicosus*). (Vol. II., p. 151.)

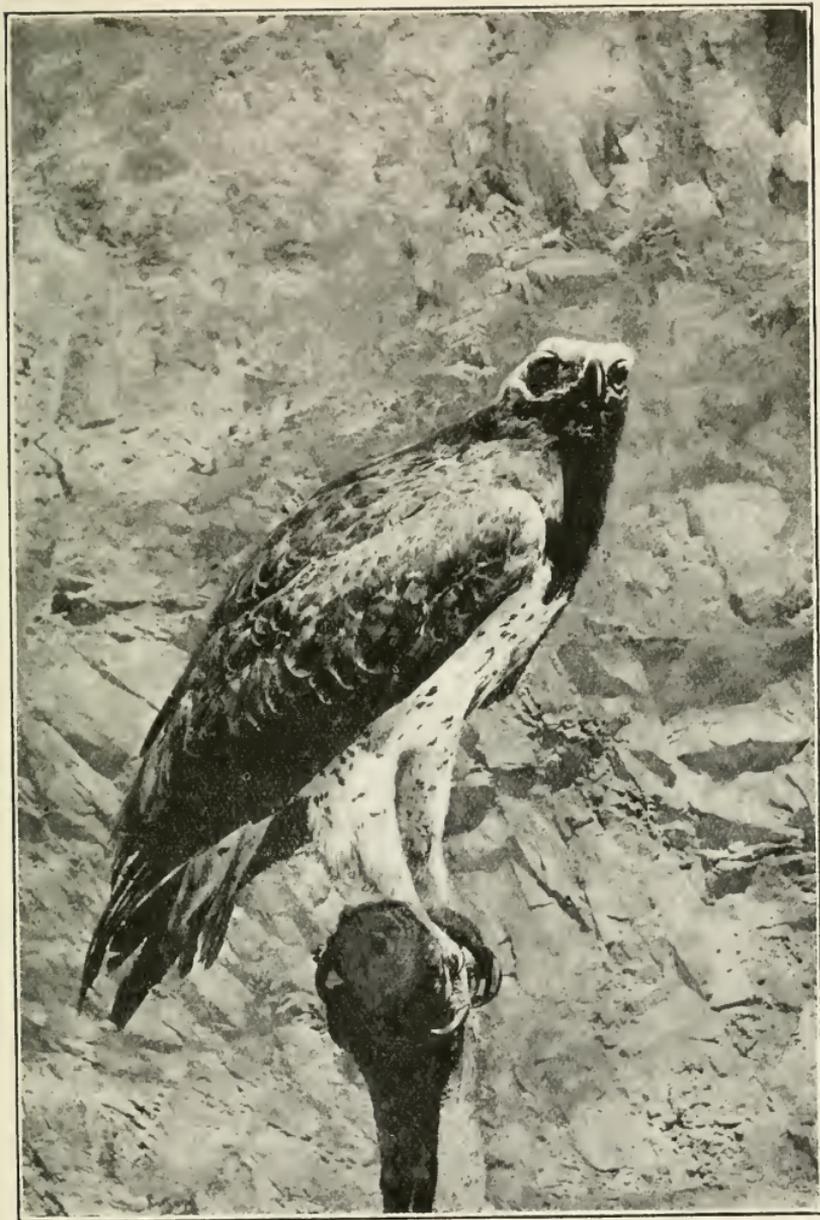
Description.—Female: above dark sepia-brown, some of the feathers edged with paler. Slight crest on head. Tail similar in colour to back, with four or five ashy-grey cross bars. Chest, neck, and flanks similar to back. Rest of under parts white, spotted with brown. Under wing coverts dark brown, mottled and tipped with white. Under tail ashy-grey with seven dark bars. Iris yellow. Bill black. Feet yellowish-white.

Length, 33.0; *wing*, 25.0; *tail*, 12.0.

Young male: paler above. Crown and nape mottled white and brown. Tail tipped and barred with white. Pure white below, except for patches of brown on sides of chest and humerus. Iris brown. Nestlings covered with white down.

Distribution.—Widely distributed from Senegal and Abyssinia, southwards to the Cape. Found throughout South Africa, except Rhodesia.

Habits.—This eagle is one of the most destructive of birds. From the air it sweeps down on its prey with tremendous force, driving its talons into its victims, and then carrying it off to its nest or eerie. It preys chiefly on the smaller mammals, such as hares and small buck. It is especially fond of young goats and lambs, and thus proves very destructive to the stock farmer. It usually builds its nest in a huge tree on the mountain slope. The nest is a large structure of sticks, some 4 to 5 ft. in diameter. It is lined very often with green leaves and twigs. The clutch usually consists of 2 eggs, but sometimes only 1 is laid. It is a chalky-white ground colour spotted and blotched all over with reddish-brown, and measures 3.3 by 2.55. This eagle breeds chiefly from June to July. The ground below the nest is always strewn with the bones and skulls of the prey.



The Martial Eagle (*Eutolmætus bellicosus*). From his place of observation he quietly launches his body into the air, and descends like a stone upon his prey, striking it with his formidable talons with crippling violence.

He preys on young goats, lambs, small antelopes, jackal pups, hares, other mammals, and the larger birds.

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Little Sparrow Hawk (*Accipiter minullus*). (Vol. II.,
p. 157.)

Description.—Male: above, dark slaty-black. Feathers of neck and scapulars with white bases concealed. Wing quills barred with darker brown on minor webs. Upper tail coverts white. Tail feathers dark brown, slightly tipped with white. The outer pair have alternate bands of brown and white. Chin and throat white, slightly spotted with brown. Ear coverts brown. Rest of under surface white with transverse bars of brown; thickest on breast. Flanks and sides of breast rufous. Under wing coverts pale fulvous, spotted with brown. Iris orange. Bill black. Legs orange. Cere yellow. Claws black.

Length, 9.5; wing, 5.5; tail, 4.20.

Female resembles the male in plumage, but is considerably larger in size.

Distribution.—Generally distributed throughout South Africa, especially in the thickly wooded districts of the eastern parts of the Cape, and in Natal and Transvaal.

Habits.—This little hawk is a great bush lover. It hunts for its prey among the trees, in and out of which it flies with great speed and skill. It is a swift flyer and swoops down obliquely on to its prey, which consists chiefly of small birds. Its nest is built usually of dry sticks, and placed in a mimosa. It lays from 3 to 4 eggs, which are chalky-white in colour, blotched and spotted with dull greyish-purple and brown. The breeding time seems to be between September and October.

Black-shouldered Kite (*Elanus caruleus*). (Vol. II.,
p. 157.)

Description.—Male: above slaty-grey, pale on the crown and getting darker on the back. Scapulars, lesser and median coverts black. Other parts of wing are like back, paling towards outermost feathers. Bristles of cere and spot in front of and behind the eye black. Forehead, sides of face, and whole

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of under parts white, with blue-grey on the breast. Iris cherry-red to orange. Bill black. Cere dull yellow. Legs yellow. Claws black.

Length, 12.0 ; wing, 10.1 ; tail, 4.75.

The female is not so strongly marked with black as the male, and is slightly larger. The young bird is ashy-brown above. Below white, marked with brown stripes. Iris brown.

Distribution.—Found throughout Africa and coasts of Mediterranean. In South Africa it is everywhere fairly common, except in the Western Province of the Cape.

Habits.—This hawk is usually seen about in pairs. It is a bold and fearless bird, and is fond of occupying such conspicuous perches as telegraph poles and the tops of dry trees. It is very noisy, emitting a harsh cry when on the wing. It feeds chiefly on large insects, rats, and mice. This kite usually builds its nest in an isolated tree, the idea seemingly being that the bird on the nest may have ample warning of the approach of an enemy. The nest is built of twigs, the hollow in which the eggs are laid being lined with dry grass. The eggs, from 4 to 5 in number, are laid between September and October. They are of a dirty greenish-white ground colour, blotched more or less with deep purplish-brown. They vary somewhat in size, measuring 1.8 to 1.5 by 1.35 to 1.20.

Jackal Buzzard (*Buteo jakal*). (Vol. II., p. 169.)

Description.—Feathers dull black above with white bases. The white does not show unless plumage is lifted. Tail rufous with subterminal spots of black. Throat and sides of breast black. Large patch of rufous on the breast. Rest of under parts mixed black and rufous. The immature bird does not show so much rufous as the fully-matured specimens. Iris dirty yellow approaching to grey-brown. Beak dull brown with yellow base. Tip black. Legs yellow. Claws black.

Length, 21.5 ; tail, 7.5 ; wing, 15.5.

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The female is larger than the male, but is similar in plumage. Length, 23.0.

Distribution.—Cape to the Zambesi. Common in all the provinces of the Union. Scarcer in Rhodesia.

Habits.—The jackal buzzard is seen singly or in pairs perched on high ledges of rock or the top of a tree, on the watch for prey which consists of almost any creatures it is able to overpower, such as small mammals, birds, reptiles, and batrachia.

It often becomes a serious pest because of its fondness for poultry. A pair of these birds inhabited a rocky krantz near Port Elizabeth. The people living in the vicinity complained of the loss of fowls, and the mystery was explained by the discovery of a nest with two large fledglings on a ledge of rock. Scattered around were the remains of scores of fowls.

The bird derives its name from its shrill cry, which somewhat resembles that of a black-backed jackal (*Canis mesomelas*).

Though rather heavy on the wing, the jackal buzzard often ascends to great heights. The bird may often be seen beating over the veld keenly on the watch for prey, on which it swoops with great velocity, or on which it drops like a stone.

The nest is a mass of sticks lined with leaves and grass. It is usually placed in a tough shrub jutting out from the side of a krantz or on a ledge of rock. The eggs are 2 in number, dull white, blotched with yellowish-brown, and rough to the touch. They measure 2.40 by 1.85. The eggs are usually laid in September.

Secretary Bird (*Serpentarius secretarius*). (Vol. II., p. 175.)

Description.—Male: above ashy-grey. A strongly marked row of black eyelashes to eye. Number of outstanding black feathers of unequal length at back of head; these are erectile at will. Wing feathers and primary coverts black. Lower back black, barred thinly with white. Tail feathers silver-grey. Upper coverts white. Two middle feathers are very elongated;

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subterminal portion black and terminal white. Below paler than back, the throat and lower cheeks with white shaft marks. Sides of abdomen black. Centre of abdomen and under tail coverts white. Iris hazel. Upper mandible bluish-white. Lower mandible dirty yellow with white tip. Cere greenish-yellow. Naked skin round eye orange. Legs and toes flesh coloured. Claws black.

Length, 56.0 ; *wing*, 27.0 ; *tail*, 24.0.

The female is slightly larger and darker than the male.

The nestlings are covered with white down. The young bird is duller in plumage than the adult. Iris grey.

Distribution.—The secretary bird is found over most of the drier parts of Africa, from Gambia in the west and Thebes in the east. It does not occur, however, in the forest regions. In South Africa it is fairly abundant in the higher and drier parts. More plentiful in the north-western parts of the Cape and Eastern Province.

Habits.—Secretary birds are invariably seen about in pairs. They spend most of the day stalking in a dignified manner over the veld in search of food, which consists of locusts, large caterpillars, snails, small tortoises, and snakes. They also eat nestling birds and animals when the chance offers. When disturbed they seldom fly, but make off at a swift run, and will only rise if very hard pressed. The secretary bird is one of the few birds which attack and eat snakes. It attacks the snakes with its wings spread out as a shield, and stamps the snake with its powerful feet. It has also been known to fly high up in the air with a snake and then let it drop in order to kill it. Each pair of birds has its own fixed area of hunting ground, and will drive off intruders. During the breeding season the males become very pugnacious. The nest, which is a very bulky structure, is built of sticks and sods, and lined with feathers and dry grass. It is usually placed in the middle of some thick bush or tree. The nest is added to each year until it assumes huge proportions. The eggs, 2 to 3 in number, are laid usually in August. They are bluish-white in colour, sometimes smeared with brown, and are somewhat pointed at one

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end, measuring 3.05 by 2.25. The young bird hatches out after six weeks' incubation, which is undertaken solely by the female. The young have to remain in the nest several months until they have assumed adult plumage, and their legs become strong enough to support them.

Secretary birds are kept by many farmers in their poultry yards. It is found these birds keep the fowls in order and protect them from harm. If not well fed, however, they often kill and eat small chickens.

Kolbe's Vulture (*Gyps kolbii*). (Vol. II., p. 186.)

Description.—Head and neck sparsely covered with dirty white hair. At the base of the back of neck is a ruff of dirty white feathers. The back is a pale ashy-fulvous. Nearly all the feathers have dark brown bases, giving a mottled appearance to the rump. Pale soft stripe on lower back and rump. Tail feathers and primary quills black. Crop patch dark brown in colour. Under surface, including under wing and tail coverts, white with creamy tinge. Iris red-yellow to hazel. Bill horn colour. Cere livid. Legs, feet, and naked skin of neck and head livid blue.

Length, 47.0 ; *wing*, 28.0 ; *tail*, 12.0.

Young: ruff composed of brown-edged feathers. On back and wings mottling is more marked than in adults. Crop patch pale brown. Under feathers all edged with brown.

Distribution.—This is the commonest of South African vultures. Formerly very abundant at the Cape, but at present, owing to the laying of poisoned meat for jackals, etc., rather uncommon.

Habits.—This vulture, commonly known as the assvogel, is to a great extent a gregarious bird, as it dwells in company with other individuals on some krantz which overlooks the surrounding country. There it spends the nights, sallying forth at daybreak to take up its position high up in the air, where it can command a view of all the surrounding country. When a dead animal such as an ox or antelope is sighted by one ass-



1. The Little Sparrow Hawk (*Accipiter nanulus*) preys largely on small birds. In grain-growing lands, where seed-eating birds are a pest, this hawk is very useful. Elsewhere it is a pest, owing to the large numbers of insectivorous birds it kills.
2. The Black-shouldered Kite, or Witte Sperwel (*Elanus caeruleus*), helps the farmer by eating rats, mice, and the larger insects.

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vogel, it immediately descends. Its action is observed by the others, who thereupon make for the same point, so that in a few minutes a large number will have gathered round the carcass. They eat both fresh and decaying carcasses. Very often they gorge themselves to such an extent that they are unable to fly, but have to rest until the process of digestion relieves them. When feeding they make a great deal of noise, and fight over the food. They nest usually in communities, on the face of some steep krantz. Here each builds its nest, resembling a plate in shape. It is about 2 ft. across, and consists of sticks and grass. They only lay one egg, of a dirty bluish-white colour, sometimes slightly speckled with brown. The egg soon gets very dirty and stained by the bird itself. It measures about 3.5 by 2.75.

Cormorant, or Trek Duiker (*Phalacrocorax capensis*). (Vol. II., p. 191.)

Description.—Above black. General colour throughout black, slightly glossed with purple. Sides of back and wings greenish-bronze, tipped with black. Neck and chest paler than the rest of the body, being a dark sepia-brown in colour. There are fourteen feathers in the tail. Iris green. Bill slate-black. Skin round the eye and on the throat yellow. Legs black.

Length, approximately 25.0 ; wing, 10.75 ; tail, 4.5.
Young bird paler in colour.

Distribution.—Found along coasts of Africa as far north as the Congo on the west, and Durban on the east. It is most plentiful on the coast between Table Bay and Walfish Bay.

Habits.—These duikers are found chiefly along the shores of the Western Cape Province. They never come inland, but are always to be found along the coast. Sometimes they fly to their fishing grounds in large flocks, but usually in groups of 5 to 10 individuals. They very seldom fly high, but just skim over the surface of the water. Their food consists of fish and other small marine animals. When hunting for fish they show great facility in their swimming and diving,

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and are responsible for the destruction of huge quantities of edible fish. They often assemble in large numbers and drive the shoals of young fish into the shallows. The nesting season is between December and June. They nest chiefly on the small islands off the western coast of the Colony and South-West Africa. They also nest on a small island named St Croix, in Algoa Bay. The nest is built on the ground and composed of the stalks of the plants growing on the islands, supplemented with sticks and different odds and ends which they may pick up. They lay from 3 to 5 eggs. These are oval in shape, and are really of a pale blue colour, but are always covered with a chalky-white layer of lime. They measure approximately 2.15 by 1.35.

These birds are large contributors to the guano deposits. The guano is collected from the nest sites after the breeding season is over and the birds have departed.

Malagash, or Cape Gannet (*Sula capensis*). (Vol. II., p. 195.)

Description.—General colour above white. On crown, sides of neck, and nape, light straw colour. Primary coverts and tail feathers brownish-black. Tail consists of twelve feathers. Iris dirty white. Eyelids light blue. Skin round eye and on the throat black. Bill pale dirty blue. Legs black. Line of scales blue. Claws horny-white.

Length, 35.0 ; *wing*, 18.75 ; *tail*, 8.0.

The young bird is a dark smoky-brown all over, flecked here and there with white. The bird assumes the white plumage of the adult very slowly. The breast changes first and lastly the back, in the second year.

Distribution.—The malagash is found on the coasts of Africa, from French Congo on west to Zanzibar on east. Abundant on coasts of the Cape, particularly the western coast.

Habits.—This bird is never met with far out at sea or far inland, but frequents the seacoast. It is a powerful flier, and is a good swimmer. They can often be seen in huge

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flocks when there are shoals of fish about. They descend perpendicularly from great heights on to their prey. Their food consists entirely of fish, of which they destroy enormous numbers. Their cry is harsh and raucous. This they emit both when flying and when on their nest. About October they congregate in large numbers on the breeding islands round the coasts. Bird Island, near Port Elizabeth, forms one of these breeding islands. Here they nest in countless numbers side by side, almost touching one another. The nest consists of a small depression in the sand, which is soon surrounded by a ridge of dry excrement. One egg only is laid. When newly laid it is pure white in colour, due to a chalky layer which hides the underlying pale blue of the egg. They measure approximately 3.12 by 2.0, and are oval in shape. The bird sits very close, covering the egg with its feet and breast. It is a wonderful sight to see this huge mass of birds all squabbling or signalling to their mates.

The young when hatched are covered with white down. When able to fly they depart from the island, not returning until they are adult. These birds, together with the duiker, are the chief contributors to the guano deposits. This guano is collected from the nesting sites after the birds have departed, and forms a very valuable asset to the country.

Hammerkop, or Paddevanger (*Scopus umbretta*). (Vol. II., p. 205.)

Description.—Sepia-brown above, with here and there a slight purplish gloss. Crest on nape of neck about 3 in. long. Tail similar to back and also glossy but paler, with a broad, darker subterminal band and six or seven narrow transverse bands above. Below brown, paler than back. Under tail coverts barred. Iris dark brown. Bill and legs black.

Length, 22.25 ; *wing*, 12.75 ; *tail*, 6.70.

Female resembles male.

The nestlings are covered with white down ; rather greyish on the back.

DESCRIPTION, DISTRIBUTION, HABITS

Distribution.—Throughout Africa, south of Abyssinia and Senegal. In South Africa this bird is everywhere fairly common, being found in abundance from the Cape to the Zambesi.

Habits.—The hammerkop is usually seen solitary, or in pairs. It is never found far from water, whether of rivers or lakes, among the shallows of which it hunts for its food, which consists mainly of insects, small fish, and frogs. It is very often seen standing in the shallows with its head between its shoulders, meditative and motionless. They have a harsh metallic cry, and are seen chiefly at dusk. When two or three individuals meet, they often go through the most strange antics, such as dancing and bowing to one another; these are all the more ludicrous, being performed by so serious looking a bird. They become attached to certain localities, where they remain for many years at a time. The nest is usually built on a krantz, or sometimes in a tree, but always near water. It is a huge structure of sticks, twigs, and grass, more or less cemented together with mud. The nest is somewhat dome shaped. The entrance, always on the most inaccessible side of the nest, is by a narrow passage into a rounded central chamber, whose walls are plastered with mud. Here the eggs are laid. They are usually 4 in number, and are chalky-white in colour. They measure on the average 1.80 by 1.40. The nest is, in most cases, so strongly built that one can stand on the roof without fear of damaging it. The outside of the nest is very often decorated with old tins, bones, and any other objects which take the bird's fancy.

Snake Bird, or Darter (*Plotus rufus*). (Vol. II., p. 205.)

Description.—Crown, back of neck, and upper part of back dark brown, finely mottled with dark rufous and black. Lower back, wing, and tail black. Scapulars, lesser and median wing coverts have median white stripe. Greater coverts bronze-brown on the outer web. Below throat and neck rufous. Narrow white band bordering throat and forehead. The skin round the eye and about 4 in. along the side of neck white. Above a broader black band. Lower neck and rest of under

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parts black. The tail consists of twelve feathers. Iris golden-yellow. Bill yellow at tip; greenish-silver at base. Bare skin of throat cream. Leg brown.

Length, 31.5; wing, 13.5; tail, 9.0.

Female paler in plumage than male. Skin of throat black.

Distribution.—Occurs more or less throughout Africa. Fairly common in South Africa and Cape.

Habits.—This bird is not usually found on the high veld, but along the banks of rivers. It is generally solitary, sitting on a stump or branch overhanging the water. From this perch it makes excursions into the water in search of its food, which consists mainly of fish. It dives and swims with great skill. When sufficiently near its prey it throws its head suddenly forward and transfixes a fish with its sharp bill. When swimming the body is almost submerged, only the long, slender neck being exposed; this, waving back and forth as the bird moves, looks very much like a snake, and has suggested the name snake bird. These birds are resident. They always build their nest in trees overhanging water. The nest is a rough bundle of sticks, scantily lined with water weed and green reeds, and placed in the fork of the tree. Usually from 7 to 10 pairs build close together. The nests are covered with white droppings, typical of the cormorant. The eggs, from 3 to 5 in number, are white in colour with an underlying bluish tint, and have a smooth, shiny surface, and are elongated in shape. They measure about 2.2 by 1.4. They breed during September and October.

Cattle Egret (*Bubulcus ibis*). (Vol. II., p. 210.)

Description. — Male during breeding season: white throughout, with the exception of the elongated ornamental plumes, which cover the foreneck, head, and nape, and which spring from the middle of the back, all of which are a beautiful pink. Iris yellow. Skin round eye yellow (chrome). Bill yellowish-pink. Legs yellowish-brown (dull).

Length, 21.0; wing, 10.0; tail, 3.75.



Black-shouldered Kite (female), with nest and eggs.
This useful killer of field mice and rats builds a nest of sticks in the midst of the upper branches of a tree.

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The female resembles the male, except that the dorsal feathers are less developed. The ornamental plumes are absent in the non-breeding plumage. There is, however, a light pink on the head and foreneck. The young birds resemble the adults in non-breeding plumage.

Distribution.—This egret is found along the northern coast of the Mediterranean, from Spain to the Caspian Sea, where it breeds. It is found throughout Africa. In South Africa it is everywhere fairly common, with the exception of the Western Province of the Cape, where it is rarely seen.

Habits.—The cattle egret is nearly always found in company with herds of cattle or antelope. They pick the ticks off the animals and also obtain large numbers of insects, such as beetles and grasshoppers, which are disturbed by the movements of the beasts. Thus it can be seen of what great value this bird is to the stock farmer. The egret is usually found in flocks varying from 5 to 40 or 50 individuals. At night it retires to roost, chiefly in trees overhanging water, the same roosting places being used for some time. The cattle egret breeds in large colonies, generally in company with different species of herons. They nest in trees overhanging the water of rivers, large ponds, or vleis. The nests are light, fragile structures of sticks. The eggs are from 3 to 5 in number, are a pale greenish-blue in colour, and measure 1.8 by 1.3. They are laid between November and December.

Great White Heron (*Herodias alba*). (Vol. II., p. 215.)

Description.—Adult in breeding plumage is pure white with a slightly crested head. From the back a number of decomposed plumes extend to beyond the tail. These are known in trade as ospreys. The iris is yellow. Beak yellow at the base, and becoming black towards the tip. Bare skin at base of the beak yellowish-green. Feet and legs black. In the non-breeding season the decomposed plumes are absent, and the beak is all yellow. In Asia and Europe the bill is quite black in the breeding season, and yellow at other times.

Length of body, 38 in. ; tail, 6.2 ; wing, 14.0.

DESCRIPTION, DISTRIBUTION, HABITS

Distribution.—Throughout Africa, Madagascar, Southern Europe, and Asia.

Habits.—The great white egret frequents marshes, ponds, and pools in search of aquatic life, such as frogs, snails, and small fish. Owing to the high price obtained for its beautiful decomposed nuptial plumes, it has been relentlessly persecuted, and is now comparatively scarce in South Africa. It is a migrant, and comes down from the north in spring and summer seasons, disappearing again in the late autumn. It has not been known to breed in South Africa. It nests in societies, and builds a nest of sticks among the high branches of a tree. At other times the nest is built in reed beds. The eggs are pale blue, and usually 4 in number.

Little Egret (*Herodias garzetta*). (Vol. II., p. 215.)

Description.—The adult in breeding plumage is pure white with a pair of narrow plumes about 6 in. long growing from the nape of the neck. A bunch of shorter plumes and decomposed feathers at the base of the neck in front, decomposed plumes from the lower part of the back falling over the tail. Iris yellow. Skin at base of bill whitish, with a reddish-yellow tinge. Legs black. Feet greenish-yellow with darker joints.

Length, 27.0; *tail*, 4.0; *wing*, 12.0.

The birds in non-breeding plumage lack the ornamental plumes.

Distribution.—South, Central, and Northern Africa, Madagascar, Southern Europe, and Asia. They are migratory.

Habits.—These egrets associate in small flocks and frequent marshes, ponds, vleis, mouths of rivers and lagoons, and feed on aquatic life, such as fish, frogs, and crustacea. I have seen them out on the open veld feeding on grasshoppers and locusts; also in association with the cattle egret. They breed in South Africa, associating in heronries, and also in company of two species of herons. A clutch of eggs consists of 3 to 4. Colour, pale blue.

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Grey Heron (*Ardea cinerea*). (Vol. II., p. 221.)

Description.—Male: the crown, face, neck, and long feathers at base of neck white. A black patch from behind the eye separates the crown from the face; this patch ends in a black crest on the nape. Down the lower part of the neck is a double row of black patches. Above pearly-white on the wing coverts. On each side of the breast is a patch of purplish-black, which extends to the vent. Primary coverts dark slate. Edge of wing white. Tail pearly-slate. Centre of breast, abdomen, thighs, and under tail coverts white. Under wing coverts and sides of body pearly-slate. Iris yellow. Skin round eye yellowish. Bill yellow with greenish tinge. Feet and legs greenish-yellow.

Length, 40.5; *wing*, 18.0; *tail*, 6.5; *middle toe*, 4.0.

The female is almost similar to the male. In the young bird the general colour is darker than in the adult, but the markings are paler and hardly defined.

Distribution.—The grey heron occurs in the southern parts of Europe and most of Africa. In South Africa it is everywhere common, and seems to be resident.

Habits.—This heron is usually found singly, but sometimes in pairs. It spends most of its time standing in the shallows of a river, marsh, or pond, watching for an opportunity of securing its prey. If disturbed it rises leisurely and makes its way to a more secluded place. When flying, its neck is drawn back into an “S” shape, and its legs trail straight out behind. Its cry is a harsh “kronk.” It is chiefly seen in the early morning hunting for its food, which consists for the most part of fishes, although it will also eat lizards, frogs, and sometimes small snakes. In times of drought it frequents the veld and feeds on the larger insects and snails. The nest, placed usually among the reeds, is built of reeds and rushes. A number of pairs usually nest close together. The eggs, 3 or 4 in number, are pale blue in colour, and equally rounded at each end, measuring approximately 2.25 by 1.95.

DESCRIPTION, DISTRIBUTION, HABITS

Wood Ibis (*Pseudotantalus ibis*). (Vol. II., p. 227.)

Description.—Above white with a rosy tinge, the wing coverts having a strong subterminal bar of crimson lake. The crown of head, sides of face, and throat are bare and red in colour. Neck and under parts white. Primaries and their coverts, secondaries, and tail black. Axillaries and under tail coverts white, tinged with pink. Under tail coverts strongly marked with rich crimson subterminal band. Iris brown. Bill golden-yellow. Bare parts of face red with border of yellow. Feet brick-red. Toes black.

Length, 46.0 ; wing, 21.0 ; tail, 7.0.

The young bird has the back, wings, and neck brown, and the bare parts of its face are yellow.

Distribution.—This ibis is found throughout tropical Africa, from Gambia and Soudan, southwards. It is rare south of the Zambesi, but is found occasionally throughout the country.

Habits.—The wood ibis is usually seen in small parties along the banks of rivers and streams, searching for food in shallow water. It spends most of its time wading about in the shallows, with its bill and sometimes its whole head submerged, probing for its food, which consists chiefly of disease-carrying snails, aquatic insects, small fishes, and batrachia. Its flight is laboured and slow. The head and legs are stretched out similar to the stork when flying.

Flamingo (*Phœnicopterus roseus*). (Vol. II., p. 233.)

Description.—Male: above, general colour white, tinged with rose, especially on the tail. Below also white, tinged with rose similar to the back. Primaries, outer secondaries, and coverts black. Rest of wing and axillaries bright crimson. Iris pale straw. Bill flesh pink, the terminal third being black. Skin on throat and round the eyes flesh pink. Legs livid pink. Claws black.

Length, 55.0 ; wing, 18.5 ; tail, 6.0.

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The female is similar to the male in plumage, but is slightly smaller in size. The young female is brown all over.

The young bird is white without the rosy tinge. Most of the feathers are streaked with brown. The other markings are paler than in the adult. The nestling is pale brown in colour. The back is covered with bristle-like down, which is a mixture of brown, white, and black.

Distribution.—This flamingo extends over a very wide range. It is found throughout Southern Europe, through Asia to India, and throughout Africa. It is very common in South Africa in certain localities, chiefly along the coasts, and inland where lakes occur.

Habits.—This flamingo is always found in large flocks, frequenting mud flats, the shallows of fresh and sea water lakes, and even the actual seashore itself. They feed both by day and night, although during the midday heat they usually retire to some secluded spot and rest. When feeding they wade among the shallows in a long line with their heads down, searching for their food, which consists of small mollusca and crustacea, water weed, and sea grass. The upper mandible is used for digging up the mud, while the thick tongue and lamellæ along the lower mandible serve to squeeze the mud and slime, filtering out and retaining only the nourishing part. They are good swimmers, but generally prefer to wade. When flying they stretch their necks straight out in front and their legs behind. It is only during flight that the beautiful crimson and black on the wings is seen. Nothing is known for certain about their nesting habits in Africa. In Spain the nests are placed in or near shallow water. They are built of mud and vegetable matter into the shape of a low inverted cup. The eggs, 2 in number, are white, without any gloss, and they are rounded at each end, and measure 3.7 by 2.30.

South African Shelduck, or Berg Eend (*Casarca cana*).

(Vol. II., p. 238.)

Description.—Head and neck dark ashy-grey. Scapulars, mantle, and outer web of inner secondaries rufous-chestnut.



Jackal Buzzard (*Buteo jakal*), with nest and eggs.
This bird of prey builds its nest high up in the branches of a large tree and on ledges of rock in the sides of dongas and kranztes.

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Centre of back, tail coverts, tail primaries, and primary coverts black. The back is vermiculated with rufous. Outer secondaries on the outer web metallic-green. On the inner web ashy-black; whitish towards the bases. Wing coverts, edge of wing, axillaries, and under wing coverts pure white. Lower parts rufous-chestnut throughout, being paler, however, on the breast and under tail coverts. Iris pale yellow. Bill and legs black.

Length, 26.0; *wing*, 15.0; *tail*, 5.0.

The female is considerably smaller than the male. The plumage is similar, except that the female has the front of its face white.

Distribution.—This shelduck has a very restricted range. It is found chiefly in Cape Colony, Orange Free State, and Transvaal, and seems to be absent from all other localities.

Habits.—The South African shelduck is usually found in pairs, and sometimes in small flocks of a dozen or so. It spends most of the day feeding and resting on the dams and vleis of the Upper Karoo. It is very easily domesticated, and will breed freely with other species. The nest of this bird is usually found in some hole or cavity, a favourite place being the dis-used burrows of ant-bears and porcupines. The eggs vary from 8 to 10 in number. They are creamy-white in colour, and measure approximately 2.3 by 1.85.

Egyptian Goose, or Berg Gans (*Alopochen aegyptiacus*).

(Vol. II., p. 238.)

Description.—Male: crown, lower cheeks, and throat dirty white, becoming darker on the nape. Strip round base of bill, patch round the eye, ring round middle of neck, and patch in middle of breast, chestnut. Lower neck, sides of body, flanks, and thighs grey, mottled with transverse stripes of black. Centre of abdomen white, verging to pale chestnut on under tail coverts. Upper tail coverts, tail, centre of back, primaries, and outer secondaries black, the last with metallic-green and purple gloss. Inner secondaries dark rufous. Wing

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coverts white, the greater series with a narrow subterminal black band. Iris orange to crimson. Bill light pink; darker at tip, margins, and base. Legs pink.

Length, 28.0; *wing*, 16.0; *tail*, 5.25.

Sexes are similar in plumage, the female, however, being smaller than the male. Male weighs between 5 and 6 lbs., while the female weighs about 4 lbs.

Distribution.—This goose is found throughout Africa, south of the Sahara. In the north-east it extends through Egypt into Palestine. In South Africa it is very common, being found both inland and along the coasts.

Habits.—The berg gans is generally found singly or in pairs. It is a very shy and retiring bird, feeding out on the grass-lands before sunrise and after sunset. At night it roosts among the thick reeds and rushes. When on the wing it emits a sharp cry, which is best described as a barking quack. It invariably builds its nest near water. The nest is usually placed among the thick rushes, or sometimes in a hollow tree trunk, and even on broad ledges overhanging the water. The eggs vary from 5 to 8 in number, and are white in colour. They are smooth and somewhat shiny, measuring approximately 2.65 by 1.85.

In Europe this bird is usually known as the Egyptian goose. In Egypt it has been known from very remote times, and is figured on many of the monuments of ancient Egypt. It is very easily domesticated, and is often seen on ornamental waters both in South Africa and Europe.

Cape Shoveller Duck (*Spatula capensis*). (Vol. II., p. 243.)

Description.—Male: crown of head dark brown speckled with fulvous. Sides of head and neck pale fulvous, spotted with black. Mantle, upper scapulars, back, and breast dark brown, with V-shaped bars of fulvous. Lower back, primaries and their coverts, tail, and upper tail coverts black, the outer tail feathers having paler edges. Median and lesser coverts to edge

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of wing pale blue. Tips of a few outer secondary coverts white, forming a white patch above the speculum, which is metallic-green. Inner secondaries are a bluish-green. Below fulvous with dark spots and bars of brown, getting darker on the under tail coverts. Iris lemon-yellow. Bill deep reddish-brown to black. Legs yellow.

Length, 20.5 ; *wing*, 10.15 ; *tail*, 3.5.

The female is similar to the European shoveller (*Spatula clypeata*).

Distribution.—The shoveller occurs only in South Africa and Angola. It has not been found in Rhodesia, and is rare in the Transvaal and South-West Africa.

Habits.—This bird is nowhere common, and thus very little is known of its habits. Its eggs are a delicate cream tinged with green, and measure 2.16 by 1.5.

Red-eyed Dove (*Turtur semitorquatus*). (Vol. II., p. 248.)

Description.—Male: forehead and crown slate-grey, shading to pale pink on the cheeks and nape, followed by a distinct half-collar of black on the nape. Rest of upper surface pale brown, the greater wing coverts and rump having a more bluish tinge and the wing quills a darker brown. Below greyish-pink, becoming nearly white on the chin and bluish-grey on the flanks, under wing coverts, abdomen, and under tail coverts. Basal two-thirds of tail black; rest bluish-white. Iris orange-red. Bare skin round eye red. Bill purplish-black. Feet reddish-purple.

Length, 13.5 ; *wing*, 7.2 ; *tail*, 5.0.

Distribution.—This dove occurs in the thickly wooded parts of Africa, south of Abyssinia and Senegal. In South Africa it is fairly common along the eastern coast of the Cape and Natal. Inland it is rare, being entirely absent from the Transvaal.

DESCRIPTION, DISTRIBUTION, HABITS

Habits.—These doves are generally found in pairs, although they are sometimes seen in large flocks. They feed on berries and seeds of all kinds, and prove a great nuisance during the planting season, as they devour the scattered grain. They make a loud, pleasant cooing, which can be heard throughout the summer months. During summer they grow very plump, and are then sought after. Their nest is a very light, fragile platform of sticks, usually placed in a tree or high bush. The eggs, 2 in number and pure white in colour, are laid between August and October. They are rounded ovals, and measure about 1.2 by 0.95.

Cape Quail (*Coturnix africana*). (Vol. II, p. 248.)

Description.—Male in breeding plumage: above, general colour reddish-brown, varying to black on rump and scapulars. Many of the feathers have V-shaped cross bars of yellow, and some with longitudinal shafts of white, which form a distinct white line along the centre of the head and neck. Primaries, primary coverts, and secondaries blackish-brown, mottled with buff. Loes and stripe over the eyes buffy-white. Cheeks and sides of throat rufous. Black patch from the chin and widening out on the throat. Chest pale rufous with white shaft marks, passing to white on the abdomen and under tail coverts. Sides of chest and flanks rich rufous with white and black shafts. Iris light brown. Bill almost black. Legs pale pink-yellow.

Length, 7.0; *wing*, 3.85; *tail*, 1.60.

The female has a pure white throat. Sides of head, neck, and breast are also white, profusely spotted with black, tinged with chestnut.

Non-breeding plumage of male differs from the breeding plumage in having no black patch on the throat.

Distribution.—The Cape quail is found throughout South Africa. It migrates to Nyassaland, other parts of Southern Africa, Madagascar, Madeira, Azores.

Habits.—The quail or kwartel is an irregular migrant,

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shifting its locality according to the feeding. They are generally found in flocks, and feed principally on grass seeds and small insects. They dispose of great numbers of young locusts and locust eggs. Their cry, which is a sharp "whitt-whitt, whitt-whitt," is heard generally after midday. They are exceedingly quick on the wing, though only flying a short distance when disturbed. Their nest is usually placed in a depression on the ground under the shelter of a bush or even among the standing crops. The depression is lined with soft grass, and in it are laid from 8 to 10 eggs, which are a yellowish-brown, spotted usually, but sometimes blotched, with dark brown. The eggs measure on the average 1.15 by 0.90, and are laid between September and October. The quail is of great economic value.

Red-necked Pheasant (*Pternistes nudicollis*). (Vol. II., p. 253.)

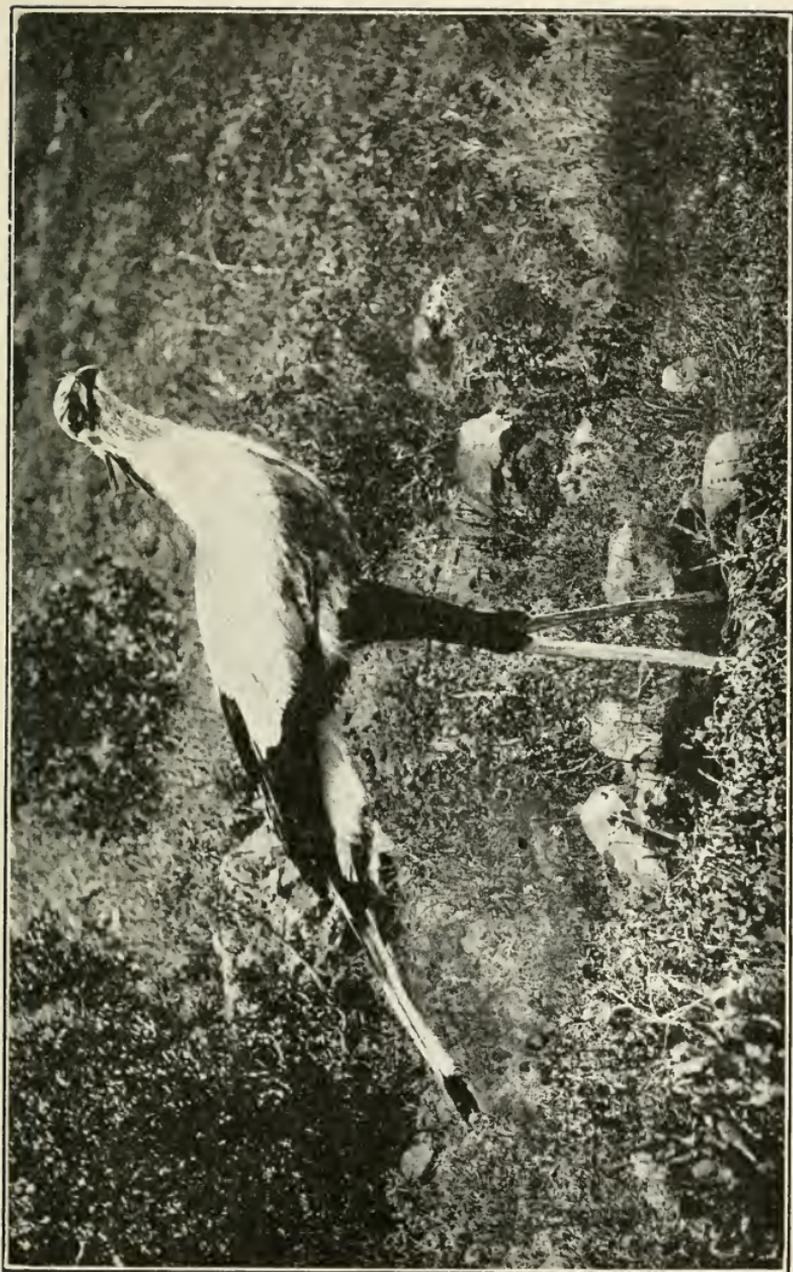
Description.—Male: above, general colour brown, there being white edgings to the feathers on the nape, those of the mantle, wings, and rest of upper surface having strongly marked brown centres. Sides of face and line over eye and forehead black. Wing quills brown. Upper breast ashy with black centres to the feathers. Lower breast and flanks black and white, the black being along the shafts and edges, the white in two narrow bands on each web. Abdomen and under tail coverts brown, with dark shaft marks similar to the back. Iris brown. Bare skin round the eye and on the throat crimson. Bill and legs orange-red. Pair of strong tarsal spurs.

Length, 15.0; *wing*, 8.25; *tail*, 3.45.

The female is smaller in size and has no spurs. The feathers on the sides of the neck and on the nape are edged with white.

Distribution.—This pheasant occurs chiefly in Cape Province, in the thickly wooded coastal districts, from Swellendam eastwards to Natal.

Habits.—The red-necked pheasant is generally found in



The noble Secretary Bird (*Serpentarius secretarius*) stalks majestically over the veld in search of rats, mice, snakes, locusts, caterpillars, and other vermin which retard human progress.

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coveys of from 6 to 10 individuals. These coveys only break up at the commencement of the breeding season. It is seldom found away from forest or thick bush. When flushed it usually takes refuge in a thick tree, where it can conceal itself very effectually. It emits a loud cackling note, which is heard chiefly at sunrise and sunset. The nest is usually placed in the long grass at the foot of some tree or bush. The eggs vary from 6 to 10 in number, and are a reddish-buff finely spotted with dark reddish-brown. They measure about 1.55 by 1.15. The breeding season seems to extend between September and December.

One of these birds kept in captivity at the Port Elizabeth Museum laid 26 eggs, at the rate of 1 egg every second day.

Cape Redwing Partridge (*Francolinus levaillanti*). (Vol. II., p. 253.)

Description.—Male: crown of the head dusky-brown, bounded on each side by a stripe of black and white feathers, which extend down on both sides and join in the middle of the nape and run on to the mantle, separating the rufous patches. Space in front of eye and above it, ear coverts, and considerable patch on either side of neck rusty-brown; below this is a narrow line of black and white feathers running from the lores, below the eye, through the ear coverts, and down the neck to the upper breast, there forming a patch of white feathers edged and tipped with black. Centre portion of chin and throat white; portion surrounding it pale rusty. Upper surface, general colour brown and black, with transverse bars of pale rufous and longitudinal shaft stripes of lighter colour. Primaries, their coverts, and secondaries chestnut, mottled with brown at the tips. Under surface pale buff, the feathers of the breast being edged with chestnut. The feathers on the flanks and under tail coverts are barred with dark brown. Iris hazel. Bill dusky-yellow at base. Legs dull yellow. Spurs small.

Length, 13.00; *tail*, 6.55; *wing*, 3.00.

DESCRIPTION, DISTRIBUTION, HABITS

The female resembles the male both in size and plumage, but is usually without spurs.

Distribution.—This partridge does not live north of the Limpopo. In the Cape it occurs chiefly in the southern districts, and is seldom found in the western and north-western parts of the colony.

Habits.—The redwing is generally found in small coveys of from 6 to 10 individuals, feeding among the long grass in secluded valleys. It is a somewhat locally distributed bird, being extremely plentiful in some districts, while entirely absent from others. It lies very close when danger threatens, and is very hard to flush. Its flight is swift and strong. Its call note is rather loud and harsh, and is heard chiefly in the early morning and in the evening. The nest is built in a depression among the long grass, usually near water. It is very well hidden and difficult to find, as the bird sits tight and does not disclose its position. The eggs vary from 6 to 8 in number, and are a dark tawny ground colour, finely spotted with dark brown. The breeding season extends over a considerable period, namely from July to December.

Black Crake (*Limnocorax niger*). (Vol. II., p. 258.)

Description.—General colour above and below black, with slight slaty tinge on the scapulars, wings, and lower surface. Iris and naked skin round eye red. Bill varies from yellowish-green to dark green. Legs bright red.

Length, 7.75 ; *wing*, 3.8 ; *tail*, 1.5.

The female resembles the male both in size and plumage.

The young bird is chocolate in colour. The nestling is covered with black down.

Distribution.—The black crake is found throughout Africa, south of the Gambia and the White Nile. In South Africa it is fairly evenly distributed.

Habits.—This crake is a very shy, skulking bird, and is thus

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seldom seen. It is found principally in the beds of reeds and rushes which border rivers and vleis. The nest is always built among the thick reeds. It is usually composed of dry rushes. The eggs vary from 4 to 5 in number, and are bright cream in colour, spotted minutely with brown, more thickly at the obtuse end. They are pointed at both ends and measure 1.3 by 0.9. The nesting season is between September and November.

Lesser Moor Hen (*Gallinula angulata*). (Vol. II., p. 258.)

Description.—Male: crown of head almost black. Neck slaty, becoming slaty-grey on the breast. Centre of the back washed with olive-brown. Band of the wing, bastard wing, and first primary edged with white. Tail black. Flanks streaked with white. Median under tail coverts black; lateral white. Iris crimson. Frontal shields and culmen bright red. Rest of bill yellow. Feet and toes grass-green; often flesh coloured tinged with green.

Length, 9.25; *wing*, 5.4; *tail*, 2.25.

The female is lighter in colour, and has a pearly-white chin.

The young bird is much lighter in colour than the adult. Iris yellow. Bill greenish-yellow.

Distribution.—This moor hen is found through Africa south of Senegal and British East Africa. In South Africa it occurs chiefly north of the Orange River.

Habits.—The lesser moor hen is very abundant in the northern parts of South-West Africa. There it is found breeding in large numbers. The nest is built among the thick rushes, and is composed chiefly of water grass. A foundation for the nest is formed by bending over the surrounding stems. The hollow in which the eggs are laid is comparatively deep. The eggs, usually 4 in number, are pale brown, spotted and blotched with dark rufous brown, chiefly at obtuse end. They measure 1.71 by 1.21.

DESCRIPTION, DISTRIBUTION, HABITS

Red-knobbed Coot (*Fulica cristata*). (Vol. II., p. 263.)

Description.—Dark bluish-black, becoming darker on the under tail coverts, head, and neck. Ashy on the abdomen. Eyes red. Beak light blue. Two fleshy knobs on the forehead crimson, sometimes shading to brownish-red. Legs blackish-green.

Length, averages 16.0 ; tail, 2.0 ; wing, 8.0.

Female resembles the male in size and colour.

The immature bird is not so dark as the adult. Some of the feathers are edged with white on the head and neck.

Distribution.—This coot is found all over South Africa where there is surface water such as rivers, ponds, and marshes. Beyond our limits it extends up the west side of Africa to the Mediterranean, and crosses to Spain and to Madagascar.

Habits.—The red-knobbed coot is thoroughly aquatic and inhabits rivers, lakes, ponds, and marshes. Its diet consists of water plants, their seeds, and a variety of insects, including fresh water snails, which are the hosts of the liver fluke in sheep and bilharzia in man. The coot is an excellent flier, swimmer, and diver. The nest is a structure of rushes, reeds, etc., woven together. The nest is sometimes placed in a dense mass of reeds or rushes at the side of the water, or on little hillocks in the water. It is, however, usually found floating in the shallow water in the reed brakes or masses of rushes. The eggs vary from 5 to 7 in a clutch. They are of a dirty yellowish-white colour, spotted and blotched with blackish-brown. Size, 2.23 to 2.05 by 1.50 to 1.45.

The chicks take to the water and follow the mother immediately after birth in the same way as ducklings.

Black Stork (*Ciconia nigra*). (Vol. II., p. 268.)

Description.—Male: above, general colour dusky-brown verging to black, glossed with metallic-green and copper, the former being predominant round the neck and on the mantle, the latter on the sides of the face and upper throat. Below,

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from the chest downwards, white. Under wing coverts dusky-brown. Iris brown. Bill coral-red. Naked skin round the orbit and of the pouch also coral-red. Legs and feet same colour.

Length, 46.0 ; *wing*, 22.5 ; *tail*, 9.75.

The female has less gloss to its feathers, and the naked orbital skin is lead colour. The young bird is browner in colour than the adult, and has next to no gloss.

Distribution.—The black stork is found over a very wide range, occurring as far east as Northern China. In winter, however, it migrates to the southern parts of India and Africa. It is everywhere a somewhat rare bird, but is found throughout South Africa, with the exception of South-West Africa.

Habits.—This stork is usually found solitary or in small parties. It is frequently seen at the mouths of tidal rivers, where it finds plenty of food, such as small fishes, crabs, and the larger aquatic insects. It is a very wary bird, being far less familiar than its cousin the white stork. It may often be met with on the inland rivers, marshes, and ponds. The black stork is a migratory bird, only spending the southern summer in South Africa. It does not breed here.

White Stork (*Ciconia alba*). (Vol. II., p. 268.)

Description.—Male : above white. Wings, primary coverts, primaries, secondaries, and scapulars black with greenish-purple gloss. Below white. Iris brown. Bill dark red. Pouch, anterior part black, posterior red. Skin around eye black. Legs and feet deep pink. Claws black.

Length, 46.0 ; *wing*, 24.0 ; *tail*, 10.0.

Female resembles the male.

The young bird has browner wings and not so much gloss.

Distribution.—The white stork is found throughout temperate Europe. It migrates to India and Africa during the northern winter, and is then found in most parts of South Africa, although more plentiful north of the Orange River.



Young Secretary birds temporarily removed from the nest to be photographed. The eggs take six weeks to incubate, and the young remain in the nest several months until their plumage is fully developed.

NATURAL HISTORY OF SOUTH AFRICA

Habits.—These birds arrive in South Africa between October and November in huge flocks; they then disperse all over the country. They feed chiefly on locusts, and thus their movements are very irregular, being regulated to a great extent by the movements of respective locust swarms. They feed principally during the day, and roost in high trees at night. When locusts are not to be had the diet consists of mice and insects of various sorts. These storks have not been known to breed in South Africa. In Germany and Holland, however, they are familiar birds. The nests are usually built of sticks, and placed on the roofs of the houses and on chimneys; these nests are added to each year. They lay from 3 to 5 eggs. These are pure white in colour, and measure approximately 2.8 by 2.1.

Both in Germany and Holland this stork forms the subject of many of the popular fables and songs of the peasants.

Crowned Crane, or Mahem (*Balærica regulorum*). (Vol. II., p. 273.)

Description.—Above, general colour slaty, being pale on the neck and becoming darker on the back near the tail, which is black. On the crown of the head is a velvety cushion of closely set black feathers; behind this cushion is a bunch of stiff, straw-coloured bristles, tipped with black, and about 4 in. in length. Lores and sides of face bare, and white in colour, bordered by a line of velvety black plumes. Upper throat covered sparsely with black downy patches. Lower throat bare with an elongate flattened wattle. Wings and wing coverts white for the most part. Tips of some of the longer secondary coverts straw-yellow. The primaries are black in colour. The secondaries are maroon-red, except the first two, which are black. Feathers of lower neck elongated and pointed. Below slaty. Under wing coverts are white, the quills being black below. Iris light ash colour. Legs and feet black. Bare side of face white, with triangular band of vermilion above. Throat vermilion.

Length, about 39.0; *wing*, 22.5; *tail*, 10.0.

DESCRIPTION, DISTRIBUTION, HABITS

Distribution.—The crowned crane occurs chiefly in the eastern parts of the Cape and in Natal, where it is common; and northwards in the Transvaal and Rhodesia.

Habits.—The crowned crane, or “mahem,” as it is called by the Dutch, is generally found in small parties of from 10 to 30 individuals during the winter, and in pairs during the summer. It is never found far from marshy ground, where it spends its time in searching for its food, which consists chiefly of water snails, frogs, large insects, and small reptiles. When seeking for its food it marches about with a most stately gait, and, like the blue crane, is also very fond of dancing and performing weird antics with its head bowed and wings outstretched. It has a very melodious call, the last part of which has earned for it the name mahem. The crowned crane, when reared in captivity, becomes very much attached to its owner, and may safely be trusted with its liberty. It is very useful in the garden for keeping the insect pests in check. The nest is usually built among the long, thick grass in some swamp. It is conical in structure, and is composed of rushes and reeds pulled and worked together. The eggs are 2 in number, and measure approximately 3.44 by 2.3. When newly laid they are bluish-white in colour, but become greenish and finally brown, owing to the dampness of the nest. The breeding season in the Cape is between December and February.

Giant Bustard, or Gom Paauw (*Otis kori*). (Vol. II., p. 278.)

Description.—Crown of head black, the feathers being elongate, forming a conspicuous crest, down the centre of which is a paler line. Sides of head, eyebrows, ear coverts, neck, and upper breast white, with narrow transverse bands of black. The feathers on the neck are long and loose. The back and wings are a dark brown with pale sandy vermiculations. Median and greater coverts are white mottled with black and grey, there being a broad black subterminal bar before the white tip. Quills dark brown. Outer secondaries tipped with white. The

NATURAL HISTORY OF SOUTH AFRICA

tail feathers with brown bases and four narrow brown transverse bands. Below, a transverse band, more or less complete, of dark brown across the breast. Rest of lower surface white. Iris lemon-yellow. Bill light horn colour. Feet light yellow.

Length, 57.0 ; ^{wing} 31.0 ; tail, 13.5.

The female resembles the male in plumage, but is considerably smaller.

Distribution.—This bustard, although nowhere very common, is fairly evenly distributed throughout South Africa.

Habits.—The gom paauw is the largest of all the South African bustards, and is now becoming rather rare owing to its destruction by man. It is usually found singly or in pairs, and sometimes even in small parties of from 3 to 4 individuals out on the open plains. Its food consists of the gum exuded by the mimosa, locusts, and other large insects. Its flight is rapid for so large a bird. When running it also exhibits great speed, using its wings to balance itself like an ostrich. The gom paauw, like the rest of the bustard family, does not build any nest. The eggs, 2 in number, are just laid in a slight hollow on the bare ground. They are equally rounded at both ends, and pale olive-brown in colour, mottled and sometimes blotched with purplish and yellowish-brown. They measure from 3.4 to 3.5 by 2.4.

Barrow's Knorhaan (*Otis barrowii*). (Vol. II., p. 283.)

Description.—Male: crown slaty-blue, bounded by a more or less conspicuous line of black. The feathers are erectile, forming a crest. The chin, sides of face, eyebrows, and ear coverts are white. Below the chin is a transverse black band across the throat. Back of neck is tawny-rufous. The back and wings are spotted with black and sandy-rufous, giving a suggestion of transverse bars. The wing coverts are tawny without any freckling. Primary coverts and wing quills black. The tail is tawny at its base. The tip is black except for the centre feathers, which are freckled pale rufous and black with two transverse bands. All over the back is a slight

DESCRIPTION, DISTRIBUTION, HABITS

pink iridescence. The foreneck and chest are slaty-blue with a patch of tawny on either side. Rest of lower surface is white. Iris light brown. Bill yellowish. Legs and feet yellowish-white.

Length, 21.0; wing, 11.5; tail, 5.0.

The male and female are alike in plumage.

Distribution.—This knorhaan extends from the central part of the Cape to the Transvaal. It is common in the northern parts of Natal.

Habits.—Barrow's knorhaan is usually found in small parties. It is a very wild bird, and is most difficult to approach. It has a very harsh cry which it emits chiefly during flight. Its food consists for the most part of insects, such as grasshoppers, locusts, beetles, and termites. Like other bustards it builds no nest, but lays its eggs, which are 2 in number, in open country under the shelter of a tuft of grass. The eggs vary so much in colour and markings that no definite description of the colour can be stated.

Blacksmith Plover (*Hoplopterus armatus*). (Vol. II., p. 288.)

Description.—Male: crown and forehead white, a large patch forming a collar at the base of the neck. Under wing coverts, upper and under tail coverts, sides of body, and abdomen white. Sides of face, back part of the crown, ear coverts, chin, throat, breast, mantle, and parapteral plumes black. The upper scapulars, wing coverts, and inner secondaries lavender-grey. Primary coverts and wing quills black. Tail feathers white at base and black on tip. Outer tail feathers have less black. Basal half of tail white, and terminal half black. The outer feathers have less black and a white tip. Iris carmine. Bill black. Feet and legs black. A short carpal spur.

Length, 12.0; wing, 8.3; tail, 3.5.

Distribution.—This plover is very uncommon south of the Orange River. Further north, however, in the Orange Free



Kolbe's Vulture, or Aasvogel (*Gyps kolbii*). Vultures feed on carrion and prevent the spread of infectious diseases among animals. Driven by hunger, they sometimes kill young lambs. In consequence of this, farmers have nearly exterminated them with poison. One of the direct results is the decimation of cattle by lamziekte. It would seem a wiser policy to shepherd the flocks in the lambing season.

The vulture flies 100 miles an hour.

DESCRIPTION, DISTRIBUTION, HABITS

State, Transvaal, and further north it is very common and is resident.

Habits.—The blacksmith plover is usually found in small flocks of from 8 to 12 individuals. It is never found far from water, but frequents the borders of swamps and mud flats, where it obtains its food, which consists chiefly of worms, insects, and various kinds of mollusca. The cry is a metallic “click click,” which resembles the ring of a blacksmith’s hammer, from which its name has been derived. It is a very noisy bird, disturbing and frightening other birds in the vicinity at night as well as during the day. The nest is merely a slight hollow in bare ground, lined with a thin layer of grass, roots, and dead wood. The eggs vary from 2 to 4 in number, and are sand-buff in colour, thickly spotted with different sized black spots. They are pyriform in shape, and measure on the average 1.55 by 1.1.

Grey Plover (*Squatarola helvetica*). (Vol. II., p. 288.)

Description.—Male in breeding plumage: the whole of the crown and neck above is white. The centre of the crown is slightly mottled with black. The sides of the face and neck are black. The back and wings are mottled black and white. Below it is black throughout. In non-breeding plumage the black and white plumage is replaced by ashy-brown or grey and white.

Length, 11.5; *tail*, 2.75; *wing*, 7.4.

The young bird can be recognised by its black axillaries.

Distribution.—The grey plover is found all over the world at one time of the year or another. It breeds far north in the Tundras. In South Africa it is found on or near the seacoast during the summer months.

Habits.—This plover is generally found singly and sometimes in pairs along the banks of tidal rivers or on the mud flats left by the receding tide. There it may be seen running about in search of its food, which consists principally of worms, small

NATURAL HISTORY OF SOUTH AFRICA

crustacea, and insects. It is a wary and suspicious bird, and extremely difficult to approach.

Solitary Snipe, or Double Snipe (*Gallinago major*). (Vol. II., p. 292.)

Description.—Male: above, mottled black and sandy-buff. The crown is black, with a median and two side streaks above the eye of buff. The wing coverts are tipped with white. The primary coverts, bastard wing, and wing quills black, the first two having white tips. Sixteen tail feathers, the centre ones being rufous, tipped with black and then white, the outer ones becoming whiter. Below the chin and centre of the abdomen are white. The sides of the face and neck, the fore-neck, and breast are sandy-buff streaked with brown. Flanks and under tail coverts sandy-buff barred with brown. Axillaries and under wing coverts barred alternate black and white. Iris umber (dark). Bill pale yellow, dusky at the tip. Tarsus and feet light greenish-yellow.

Length, 11.0; *wing*, 5.3; *tail*, 2.0.

The breeding plumage is brighter than the winter plumage.

Distribution.—This snipe nests in the northern hemisphere during the summer and then migrates south during the northern winter. In South Africa it is fairly evenly distributed, although nowhere abundant.

Habits.—The solitary snipe is invariably found singly, although sometimes in pairs. It is usually seen on marshy ground or the mud banks of tidal rivers hunting for its food, which consists chiefly of soft-bodied insects. This snipe is a migrant, arriving about September, and only spending the summer in South Africa. It is often confused with the Ethiopian snipe, which is resident.

Painted Snipe (*Rostratula capensis*). (Vol. II., p. 292.)

Description.—Crown and mantle dark ash-grey, vermiculated with dark grey. There is a median line of buff along the crown,

DESCRIPTION, DISTRIBUTION, HABITS

bordered by black. The wing coverts are bronze-yellow, having incomplete black-edged spots of pale yellow. The scapulars and minor secondaries are ashy, mottled with transverse spots of bronze-green, and bordered by a white longitudinal line of buff-yellow. Inner primaries and secondaries barred and spotted with black and white. The rump, upper tail coverts, and tail ashy, finely barred with black and spotted with buff. There is a white circle with a dark band below round the eye and back over the ear coverts. The chin is whitish, becoming ashy-brown on the sides of the face and neck. Rest of the lower surface white except for a mottled black patch on either side of the lower breast. Iris dark brown. Bill purplish-brown. Legs and feet dull slaty-blue.

Length, 9.75 ; *wing*, 4.8 ; *tail*, 1.4.

The female differs from the male, being on the whole more richly coloured and larger in size.

Distribution.—The painted snipe occurs over a pretty wide range, being found in India, China, and Japan. In South Africa it is widely distributed, although nowhere very abundant.

Habits.—The painted snipe, unlike the solitary snipe, is a resident. It is an extremely shy and skulking bird, and is usually found hiding among the reeds and thick vegetation bordering tidal rivers, swamps, and vleis. It is only seen towards dusk, when it comes out on to the mud flats in search of insects. It is not a very strong flyer, its flights being somewhat heavy, and usually of short duration. With the painted snipe the relation of the sexes is to a large extent reversed. The female bird is larger and more brightly plumaged than the male; also it is supposed that the male takes charge of the incubation of the eggs. This snipe builds no nest, but lays its eggs, which vary from 3 to 4 in number, on the bare ground, or preferably among stones and gravel, always near water. The eggs are yellowish olive-buff in colour with dark, clear, defined spots and blotches of dark brown. They measure on the average 1.4 by 1.0, and are laid about January.

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Crowned Lapwing, or Kiewitje (*Stephanibyx coronatus*).

(Vol. II., p. 298.)

Description.—Male: the centre of the crown is black, surrounded by a white ring; round this again is a black ring which runs from the forehead round above the eye and meets on the nape. The back and the wings are pale olive-brown. The greater wing coverts have a broad white stripe which, together with some of the minor secondaries, forms a white band. Primary coverts white. The upper tail coverts and the tail are white. The tail has a broad band of black near the end. Below, white for the most part. Sides of face, neck, and breast olive-brown. There is a narrow transverse band of black across the breast, which divides the olive-brown from the white. Iris yellow. Bill bright red, the tip, however, being horn colour. Feet coral red. Toes red, tinged with purple on upper surface.

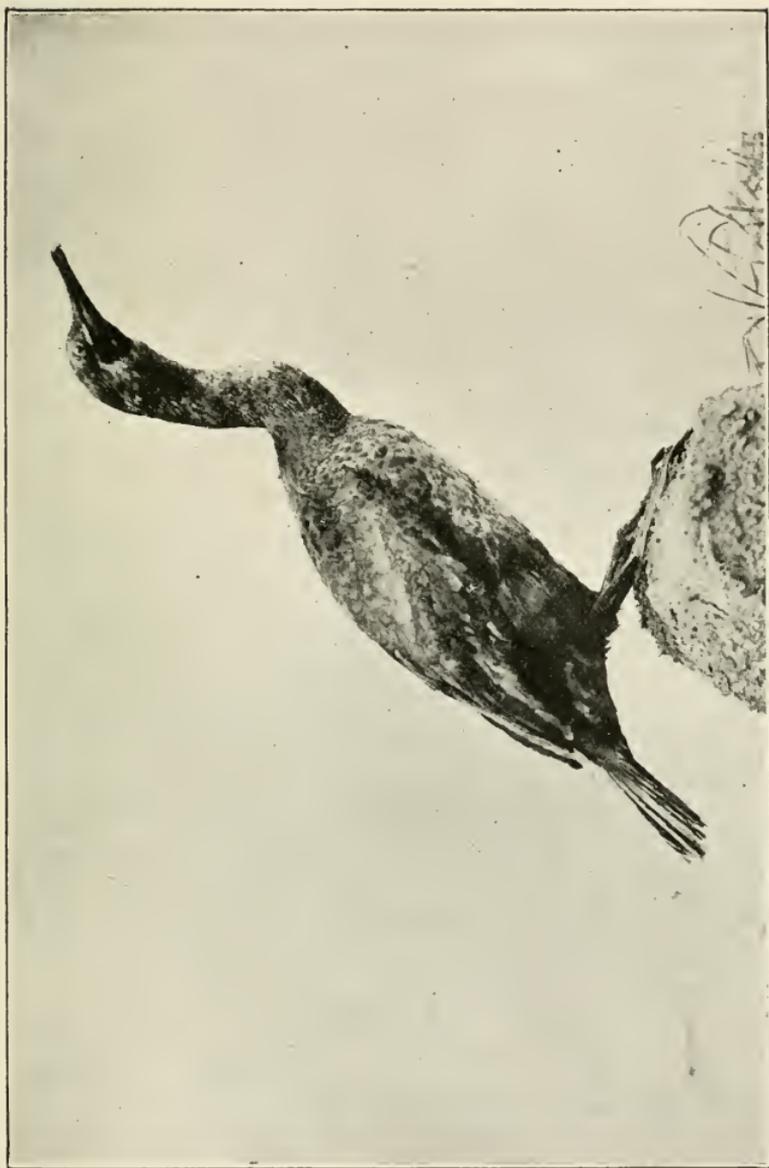
Length, 12.0; *wing*, 7.7; *tail*, 3.5.

The female resembles the male both in size and plumage.

The young bird is duskier in plumage than the adult.

Distribution.—The crowned lapwing is fairly abundant throughout South Africa, especially on the high veld.

Habits.—The crowned lapwing, or kiewitje, is usually found in small flocks up to about 20 individuals. It frequents the open veld, where it spends the day in searching for insects, such as grasshoppers, small snails, and beetles, which form its staple diet. It is especially fond of freshly burnt grass-land, because insects are to be found there with greater ease. It has a loud plaintive call, which it is constantly emitting both by day and night. It is a very active bird, flying and running extremely well. The nest is usually just a slight hollow in the ground, sometimes lined with a thin layer of dead grass roots. The eggs are 3 in number. These are rather pyriform in shape, and of a yellowish-brown ground colour, blotched all over with black-brown and indistinct purple. They measure about 1.6 by 1.15, and are laid between August and October.



Cormorant, or Trek Duiker (*Phalacrocorax capensis*), is abundant around the South African coast and adjacent islands and rocks. It is a gluttonous bird, and its diet consists exclusively of fish, which it destroys in vast numbers. It hunts in large flocks at times, and often completely exterminates the shoals of young fish that seek shelter in the tidal rivers.

NATURAL HISTORY OF SOUTH AFRICA

Curlew (*Numenius arquatus*). (Vol. II., p. 298.)

Description.—Male (non-breeding plumage): above, general colour pale brown with dark brown centres to the feathers, giving a striped appearance to the plumage. The wing coverts are dark brown edged with white. The primaries are blackish, the outer ones with white shafts, the inner web notched and barred with white. Inner primaries and secondaries notched with white. Rump and upper tail coverts white, there being a few streaks of brown on the latter. Tail white, with about nine transverse bars of brown. Below white, the sides of the face, neck, and breast having narrow shaft marks of brown. Iris brown. Bill brown, shading to black at the tip. Legs and feet lead-grey.

Length, 23.5 ; *wing*, 11.0 ; *tail*, 4.25.

The female is larger than the male.

Distribution.—The curlew is found throughout Northern Europe and Asia. It migrates to South Africa and India during the northern winter. In South Africa it occurs chiefly along the coasts, being rarer inland.

Habits.—The curlew is generally found in small flocks along the seashore and banks of tidal rivers. Here it searches for its food, which consists for the most part of marine insects, crustacea, and worms. It is extremely shy and wary, and will seldom allow sportsmen to approach within gunshot range. The curlew does not nest in South Africa, but in England it is found nesting on the moors among the heather. It lays 4 eggs. These are pear shaped, and olive-green blotched with brown in colour.

Avocet (*Recurvirostra avocetta*), or **Bonte Elsje**,
Sprinken Vogel. (Vol. II., p. 303.)

Description.—Black and white, as in the illustration. Iris reddish. Beak black. Legs black with a leaden hue.

Length, 18.0 ; *tail*, 3.25 ; *wing*, 8.25.

The sexes are alike in colour and markings.

DESCRIPTION, DISTRIBUTION, HABITS

Distribution.—The coasts and tidal rivers of South Africa. It is occasionally seen inland on the shores of streams and ponds. The avocet also occurs throughout Africa, Madagascar, Central and Southern Europe, and Asia in suitable localities.

Habits.—This bird associates in small flocks, and is wary and timid. It frequents the muddy edges of lagoons, the mouths of tidal rivers, etc., and feeds on small crustacea and worms which it finds in the mud by sweeping its peculiar upturned bill with a sideway scooping movement. It nests in hummocks in marshy ground. Eggs, 4 in number, pale buff, often greenish, spotted and scrolled with black or dark brown; shadow spots purplish. Pyriform and pointed in shape. Size, 2.0 by 1.45.

Greenshank (*Totanus glottis*). (Vol. II., p. 303.)

Description.—Ashy-brown, blackish and white as in the illustration. In the breeding season the back has a ruddy-brown tinge, and the breast is spotted with black. Iris dark brown. Beak black, and greenish-brown at the base. Legs and feet grey-green.

Length, 13.5; *tail*, 3.1; *wing*, 7.3.

Distribution.—The seacoast, and edges of rivers, ponds, and marshes all over South Africa. The greenshank is migratory, and travels from Europe and Asia to Australia and through Africa.

Habits.—The greenshank, on the approach of winter, migrates from Europe and Asia to the southern hemisphere. It appears in South Africa in the warm season when food is plentiful, and vanishes on the approach of winter. They associate in flocks and frequent the margins of rivers, lagoons, marshes, and seacoasts, and may be seen wading in the shallow water in search of tiny fish, crustacea, worms, etc. There is no record of the greenshank breeding in South Africa.

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Jackass Penguin (*Spheniscus demersus*). (Vol. II., p. 309.)

Description.—Black and white, as in the illustration. Iris hazel. Bill black with a bar of grey across the mandibles. Base of bill pink, occasionally with a blue tinge. Legs mottled black and grey.

Length, averages 24 in.

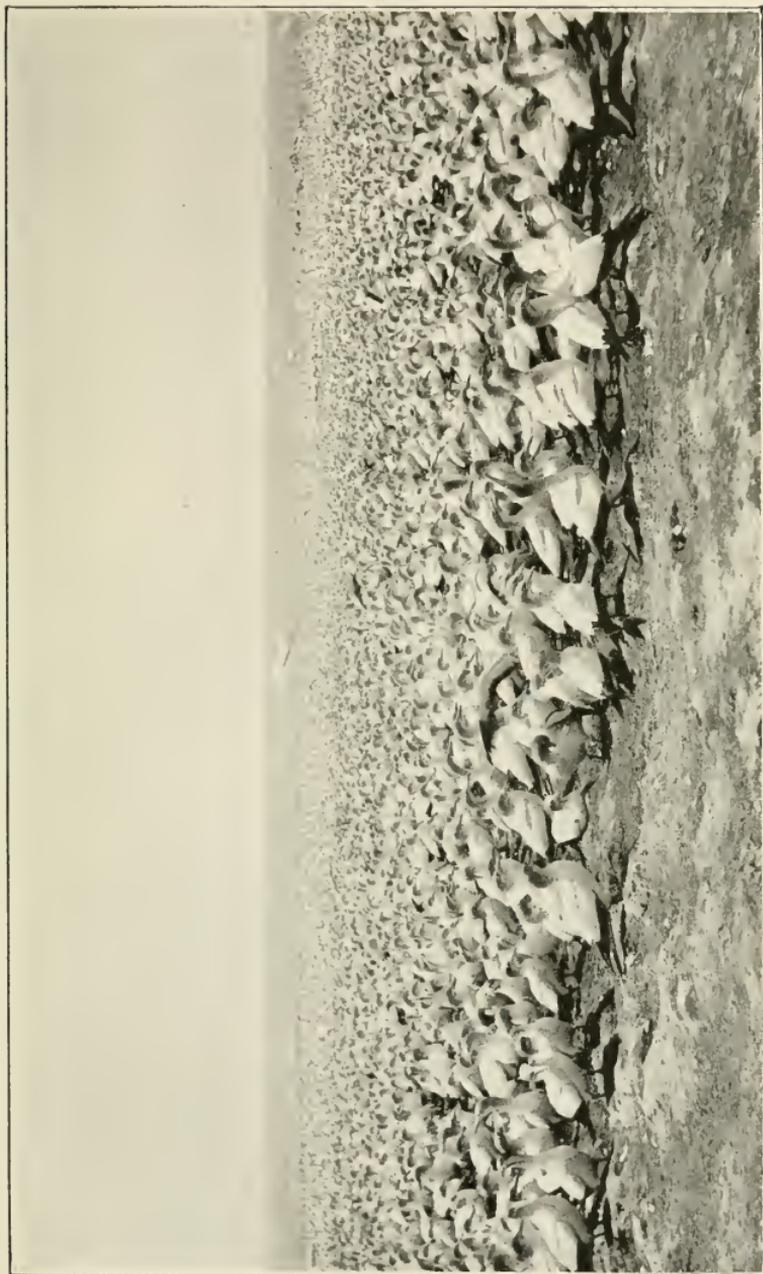
Sexes are outwardly alike. The young bird is dark brownish above and white below.

Distribution.—The coasts of South Africa and adjacent islands, mostly on the western side and east to Algoa Bay.

Habits.—The jackass penguin lives entirely on fishes which it captures by diving. It is an expert swimmer, both above and below water. When nesting they dig a hole in a sandbank or in any firm sand with their feet. The hole is usually from 1 to 1½ ft. deep, and about 6 in. in diameter. At the end of this burrow a few fragments of seaweeds, etc., are arranged to form a rough nest. Two eggs is the average, although only one is occasionally noticed; they are chalky white with a tinge of blue; size, 2.65 by 2.0. The penguins resort to the islands to lay their eggs in April, May, and June, although a few remain and breed at other times of the year. The eggs are collected by the Government and sold for human consumption. If collected before the penguins become broody, they go on laying until about August, when they are allowed to sit. When the ground is rocky the penguins make their nests in crevices, under overhanging ledges, and sometimes on the open bare ground. Large numbers of penguins inhabit Bird Island, near Port Elizabeth. The name “jackass” has been given to the bird because of its loud braying call, which is supposed to resemble that of a donkey.

Rock - Hopper Penguin (*Catarrhactes chrysocome*). (Vol. II., p. 309.)

Description.—Above, general colour slaty, including sides of face, chin, throat, and wings. The feathers on the crown are somewhat elongate, forming a slight crest. On each side of



A breeding colony of Malagashes, or Cape Gannets (*Sula capensis*), on Bird Island, off Algoa Bay, in October. The Malagash feeds exclusively on fish: but it is of economic value for the guano it provides during the breeding period. It, however, destroys great quantities of good food fish.

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the crest are lines of pale yellow plume-like feathers running from behind the nostrils to above the eye. Below, including a patch under the wing, pure white. The tail consists of sixteen feathers. Iris dull rose-pink. Bill dull pink. Feet reddish.

Length, 25.0 ; flipper, 6.3 ; tail, 3.7.

Distribution.—Its home is on the various islands in the Great Southern Ocean. Verreaux mentions having seen a dead specimen near Cape Point in 1828, and Layard captured one in Table Bay in 1868. No specimens of these are in existence for identification. The specimen in the Port Elizabeth Museum was obtained alive in Algoa Bay in February 1914.

Habits.—Like other species of penguins, it feeds on fish which it captures by diving.

Southern Ostrich (*Struthio australis*). (Vol. II., p. 313.)

The male ostrich is black with white tail and wing plumes, and the average height is 7 ft.

The female is about 6 ft. high, and dull drab or pale brown in colour, with the exception of the tail and wing plumes, which are white tinged with rufous. The eye is large and hazel in colour.

Distribution.—The southern ostrich formerly roamed in a wild condition throughout the drier and open parts of South Africa from the Cape to the Zambesi. Further north it is replaced by other species of ostriches. A few wild ostriches are still to be found in Bechuanaland, Kalahari, and in the west Protectorate.

Habits.—The ostrich wanders great distances, feeding as it goes on leaves and other suitable vegetable matter, supplemented by insects, small reptiles, the nestlings of ground birds, mice, etc. The ostrich is now bred in South Africa on an extensive scale for its feathers. The hen bird lays from 15 to 20 eggs, one being deposited every second day. The hen sits on the eggs during daylight hours, and the cock at night. When covering the eggs the bird rests its tail and its long neck on the ground so as to appear as inconspicuous as possible.

SYSTEMATIC LIST OF THE BIRDS OF SOUTH AFRICA

Order I.—PASSERES, OR PERCHING BIRDS

(*This order comprises more than half of the living birds*)

Family I.—Corvidæ

Genus I.—Corvultur

1. **White-necked Raven.**

Ring-hals.

(*Corvultur albicollis.*)

Genus II.—Corvus

1. **Pied Crow.**

Bonte Kraai.

(*Corvus scapulatus.*)

2. **Black Crow.**

Koren-land Kraai.

(*Corvus capensis.*)

Family II.—Sturnidæ

SUBFAMILY I.—BUPHAGINÆ

Genus I.—Buphaga

1. **Yellow-billed Oxpecker.**

Tick Bird ; Rhinoceros Bird ; Rhinaster Vogel ;

Umblanda (Matabili).

(*Buphaga africana.*)

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2. **Red-billed Oxpecker.**

Tick Bird ; Camel Bird.

(*Buphaga erythrorhyncha.*)

SUBFAMILY II.—STURNINÆ

Genus I.—Dilophus

1. **Wattled Starling.**

Locust Bird.

(*Dilophus carunculatus.*)

Genus II.—Amydrus

1. **Red-winged Starling.**

Red-winged Spreeuw ; Rooivlerk.

(*Amydrus morio.*)

2. **Pale-winged Starling.**

(*Amydrus caffer.*)

Genus III.—Spreo

1. **Pied Starling.**

White-rumped Starling ; Witgat Spreeuw.

(*Spreo bicolor.*)

Genus IV.—Lamprotornis

1. **Meve's Glossy Starling.**

(*Lamprotornis mevesi.*)

2 **Purple Long-tailed Starling.**

Melombeangansa (Mossamedes).

(*Lamprotornis purpureus.*)

Genus V.—Lamprocolius

1. **Burchell's Glossy Starling.**

(*Lamprocolius australis.*)

LIST OF BIRDS OF SOUTH AFRICA

2. **Sharp-tailed Glossy Starling.**
(*Lamprocolius acuticaudus.*)
3. **Red-shouldered Glossy Starling.**
(*Lamprocolius phænicopterus.*)
4. **Lesser Red-shouldered Glossy Starling.**
(*Lamprocolius phænicopterus bispecularis.*)
5. **Green-winged Glossy Starling.**
(*Lamprocolius chloropterus.*)
6. **Peter's Glossy Starling.**
Iqueeze (Matabili).
(*Lamprocolius sycobius.*)
7. **Black-bellied Glossy Starling.**
(*Lamprocolius melanogaster.*)

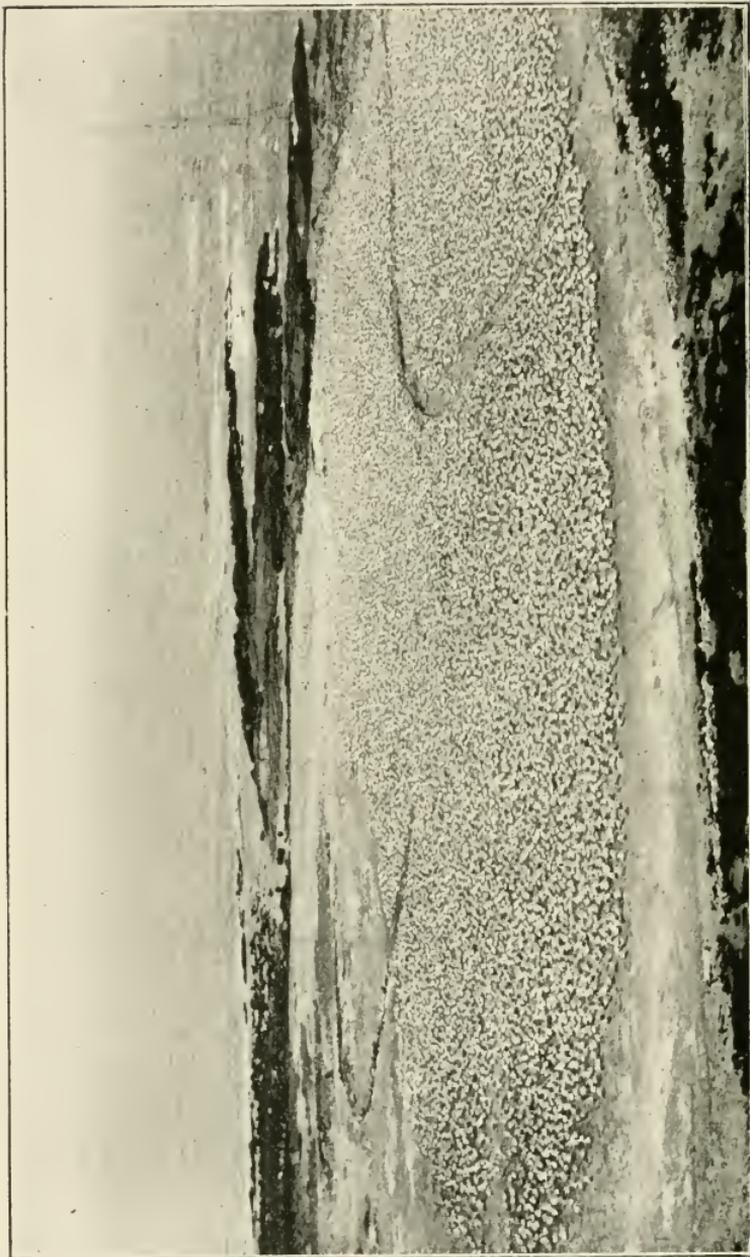
Genus VI.—Pholidauges

1. **Verreaux's Glossy Starling.**
(*Pholidauges verreauxi.*)

Family III.—Oriolidæ

Genus I.—Oriolus

1. **Golden Oriole.**
(*Oriolus galbula.*)
2. **Andersson's Oriole.**
(*Oriolus notatus.*)
3. **Black-headed Oriole.**
Uhlaza (Zulus).
(*Oriolus larvatus.*)
4. **Lesser Black-headed Oriole.**
(*Oriolus larvatus rolleti.*)



Colony of Malagashes, or Cape Gannets, on Bird Island, near Algoa Bay. There are over 100,000 birds in this colony

Photo taken from the top of the lighthouse.

LIST OF BIRDS OF SOUTH AFRICA

Family IV.—Ploceidæ

SUBFAMILY I.—PLOCEINÆ

Genus I.—Hyphantornis

1. **Black-headed Weaver Bird.**
(*Hyphantornis nigriceps.*)
2. **Cabanis's Weaver Bird.**
(*Hyphantornis cabanisi.*)
3. **Masked Weaver Bird.**
(*Hyphantornis velatus.*)
4. **Spotted-backed Weaver Bird.**
(*Hyphantornis spilonotus.*)
5. **Shelley's Weaver Bird.**
(*Hyphantornis shelleyi.*)
6. **Yellow Weaver Bird.**
(*Hyphantornis subaureus.*)
7. **Jameson's Weaver Bird.**
(*Hyphantornis jamesoni.*)
8. **Yellow-winged Weaver.**
(*Hyphantornis castaneigula.*)

Genus II.—Sitagra

1. **Smith's Weaver Bird.**
Bottle-nest Weaver.
(*Sitagra ocellaria.*)
2. **Northern Smith's Weaver Bird.**
(*Sitagra ocellaria crocatus.*)
3. **Yellow-winged Weaver Bird.**
(*Sitagra xanthoptera.*)
4. **Cape Weaver Bird.**
(*Sitagra capensis.*)

NATURAL HISTORY OF SOUTH AFRICA

5. **Eastern Cape Weaver Bird.**

(*Sitagra capensis caffra.*)

6. **Damara Weaver.**

(*Sitagra trothæ.*)

Genus III.—Sycobrotus

1. **Black-backed Weaver Bird.**

Hinge Bird.

(*Sycobrotus bicolor.*)

2. **Spot-headed Weaver Bird.**

(*Sycobrotus stictifrons.*)

Genus IV.—Anaplectes

1. **Red-headed Weaver Bird.**

(*Anaplectes rubriceps.*)

2. **Gurney's Weaver Bird.**

(*Anaplectes gurneyi.*)

3. **Sharpe's Weaver Bird.**

(*Anaplectes angolensis.*)

Genus V.—Textor

1. **Buffalo Weaver Bird.**

(*Textor niger.*)

Genus VI.—Amblyospiza

1. **Thick-billed Weaver Bird.**

(*Amblyospiza albifrons.*)

Genus VII.—Ploceipasser

1. **White-browed Weaver Bird.**

(*Ploceipasser mahali.*)

LIST OF BIRDS OF SOUTH AFRICA

2. **Red-backed Weaver Bird.**
(*Ploceipasser rufoscapulatus.*)
3. **Stripe-chested Weaver Bird.**
(*Ploceipasser pectoralis.*)

Genus VIII.—Sporopipes

1. **Scaly-feathered Weaver Bird.**
(*Sporopipes squamifrons.*)
2. **Damara Scaly-feathered Weaver.**
(*Sporopipes squamifrons damarensis.*)

SUBFAMILY II.—ESTRELDINÆ

Genus I.—Pytelia

1. **Southern Red-faced Weaver Finch.**
(*Pytelia melba.*)
2. **Hartlaub's Red-faced Weaver Finch.**
(*Pytelia nitidula.*)
3. **Red-faced Finch.**
(*Pytelia afra.*)

Genus II.—Lagonosticta

1. **South African Ruddy Waxbill.**
(*Lagonosticta rubricata.*)
2. **Jameson's Ruddy Waxbill.**
(*Lagonosticta jamesoni.*)
3. **Little Ruddy Waxbill.**
(*Lagonosticta brunniceps.*)
4. **Peter's Ruddy Waxbill.**
(*Lagonosticta niveoguttata.*)

NATURAL HISTORY OF SOUTH AFRICA

5. **Verreaux's Ruddy Waxbill.**

(*Lagonosticta margaritata.*)

6. **Hartlaub's Ruddy Waxbill.**

(*Lagonosticta nitidula.*)

Genus III.—Estrelida

1. **Common Waxbill.**

Roodebec ; Rooibeekie ; St Helena Waxbill.

(*Estrelida astrilda.*)

2. **Mozambique Waxbill.**

(*Estrelida astrilda cavendishi.*)

3. **Damara Waxbill.**

(*Estrelida astrilda damarensis.*)

4. **Black-faced Waxbill.**

(*Estrelida erythronota.*)

5. **South African Grey Waxbill.**

(*Estrelida incana.*)

6. **Blue-breasted Waxbill.**

Cordon Bleu.

(*Estrelida angolensis.*)

7. **Damara Blue-breasted Waxbill.**

(*Estrelida angolensis damarensis.*)

8. **Grenadine Waxbill.**

(*Estrelida grenatina.*)

9. **Orange-breasted Waxbill.**

Zebra Waxbill.

(*Estrelida subflava.*)

10. **Dufresne's Waxbill.**

(*Estrelida dufresnii.*)



1. Hammerkop, or Paddevanger (*Scopus umbretta*), haunts the marshes, ponds, and margins of rivers, and preys on aquatic life, including snails and frogs. When these are scarce it searches the veld for grasshoppers and locusts.
2. The Darter, or Snake Bird (*Plotus rufus*), of the South African rivers, lives on fish, which it transfixes with its sharp, long bill.

NATURAL HISTORY OF SOUTH AFRICA

Genus IV.—Ortygospiza

1. **Bar-breasted Weaver Finch.**
(*Ortygospiza polyzona.*)

Genus V.—Spermestes

1. **Pied Weaver Finch.**
(*Spermestes fringilloides.*)
2. **Hooded Weaver Finch.**
(*Spermestes scutatus.*)
3. **Rufous-backed Weaver Finch.**
(*Spermestes nigriceps.*)

Genus VI.—Phileterus

1. **Social Weaver Bird.**
(*Phileterus socius.*)

Genus VII.—Amadina

1. **Red-headed Weaver Finch.**
(*Amadina erythrocephala.*)
2. **Cut-throat Weaver Finch.**
(*Amadina fasciata.*)

SUBFAMILY III.—VIDUINÆ

Genus I.—Quelea

1. **Red-billed Weaver Finch.**
(*Quelea quelea.*)
2. **Russ' Weaver Finch.**
(*Quelea quelea russi.*)

LIST OF BIRDS OF SOUTH AFRICA

3. **Red-headed Weaver Finch.**

(*Quelea erythrops.*)

4. **Cardinal Weaver.**

(*Quelea cardinalis.*)

Genus II.—Pyrenestes

1. **Grant's Weaver Finch.**

(*Pyrenestes granti.*)

Genus III.—Pyromelana

1. **Red Bishop Bird.**

Grenadier ; Weaver, or Bishop Bird ; Red Kafir Fink.

(*Pyromelana oryx.*)

2. **Taha Bishop Bird.**

(*Pyromelana taha.*)

3. **Black and Yellow Bishop Bird.**

Yellow Kafir Fink.

(*Pyromelana capensis.*)

4. **Robert's Bishop Bird.**

(*Pyromelana capensis macrorhynchus.*)

5. **Smaller Black and Yellow Bishop Bird.**

(*Pyromelana capensis minor.*)

6. **Black-thighed Bishop Bird.**

(*Pyromelana capensis xanthomelena.*)

7. **Red-crowned Bishop Bird.**

(*Pyromelana flammiceps.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus IV.—Urobrachya

1. **Red-shouldered Widow Bird.**

Flop ; Entaka (Zulu).

(*Urobrachya axillaris.*)

2. **Bocage's Widow Bird.**

(*Urobrachya brocagii.*)

Genus V.—Coliopasser

1. **White-winged Widow Bird.**

(*Coliopasser albonotatus.*)

2. **Great-tailed Widow Bird.**

Kafir Fink ; Isa-Kabuli (Zulus).

(*Coliopasser procne.*)

3. **Red-collared Widow Bird.**

(*Coliopasser ardens.*)

4. **Yellow-backed Widow Bird.**

(*Coliopasser macroura.*)

Genus VI.—Vidua

1. **Pin-tailed Widow Bird.**

Koning Roodebec ; Dominican Widow Bird ;
Common Widow Bird.

(*Vidua principalis.*)

2. **Shaft-tailed Widow Bird.**

(*Vidua regia.*)

3. **Paradise Widow Bird.**

(*Vidua paradisea.*)

Genus VII.—Hypochera

1. **Black Widow Finch.**

(*Hypochera funerea.*)

LIST OF BIRDS OF SOUTH AFRICA

2. **Purple Widow Finch.**
(*Hypochera funerea nigerrima.*)
3. **Steel-coloured Widow Finch.**
(*Hypochera funerea amauroptera.*)

Family V.—Fringillidæ

SUBFAMILY I.—FRINGILLINÆ

Genus I.—*Petronia*

1. **South African Rock Sparrow.**
(*Petronia petronella.*)

Genus II.—*Passer*

1. **Cape Sparrow.**
Mossie.
(*Passer arcuatus.*)
2. **Damara Sparrow.**
(*Passer arcuatus damarensis.*)
3. **Greater South African Sparrow.**
(*Passer motitensis.*)
4. **Southern Grey-headed Sparrow.**
(*Passer diffusus.*)

Genus III.—*Poliospiza*

1. **Streaky-headed Seed-Eater.**
Streep-Kop Seisje.
(*Poliospiza gularis.*)
2. **Rhodesian Streaky-headed Seed-Eater.**
(*Poliospiza mennelli.*)
3. **Lesser Streaky-headed Seed-Eater.**
(*Poliospiza reichardi.*)



Cattle Egret (*Bubulcus ibis*) is so called because it associates with cattle for the purpose of feeding on the disease-carrying ticks clinging to them; and also to pick up the gorged female ticks when they fall to the ground preparatory to laying from 2,000 to 18,000 eggs. Failing ticks, these eminently useful birds subsist on locusts, grasshoppers, and other pests.

In the Report of the Egyptian Zoological Service, 1920, there is the following:—"Cattle Egret have saved to Egypt crops to the value of three million pounds sterling, which would otherwise have been destroyed by insect pests."

LIST OF BIRDS OF SOUTH AFRICA

Genus IV.—Serinus

1. **Cape Canary.**
Canarie.
(*Serinus canicollis.*)
2. **Large Yellow Seed-Eater.**
Geel Saysie.
(*Serinus sulphuratus.*)
3. **Yellow-bellied Seed-Eater.**
St Helena Seed-Eater ; Kleine Seisje.
(*Serinus flaviventris.*)
4. **Von der Decken's Seed-Eater.**
(*Serinus imberbis.*)
5. **Rendall's Seed-Eater.**
(*Serinus rendalli.*)
6. **Eastern Yellow Seed-Eater.**
(*Serinus icterus.*)
7. **White-throated Seed-Eater.**
Dik-Bek Seisje and Berg Seisje (Thick-beak Seed-Eater and Mountain Seed-Eater).
(*Serinus albigularis.*)
8. **Damara Yellow-rumped Seed-Eater.**
(*Serinus crocopygius.*)
9. **White-winged Seed-Eater.**
(*Serinus leucopterus.*)
10. **Sundevall's Seed-Eater.**
(*Serinus scotops.*)
11. **Black-throated Seed-Eater.**
(*Serinus angolensis.*)
12. **Sharp's Seed-Eater.**
(*Serinus sharpei.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus V.—Alario

1. **Mountain Canary.**
Berg Canarie ; Namaqua Canarie.
(*Alario alario*.)
2. **White-browed Mountain Canary.**
(*Alario alario leucolama*.)

Genus VI.—Heliospiza

1. **Brown Seed-Eater.**
(*Heliospiza noomei*.)

Genus VII.—Chrysomitris

1. **South African Siskin.**
Pietje Canarie ; Brown Canary.
(*Chrysomitris totta*.)

SUBFAMILY II.—EMBERIZINÆ

Genus I.—Emberiza

1. **Golden-breasted Bunting.**
Streep-Kopje (Stripe-head).
(*Emberiza flaviventris*.)
2. **Shelley's Bunting.**
(*Emberiza major orientalis*.)

Genus II.—Fringillaria

1. **Cape Bunting.**
Streep-Kopje and Streep-Kop Mossie (Stripe-head
and Stripe-headed Sparrow).
(*Fringillaria capensis*.)
2. **Lesser Cape Bunting.**
(*Fringillaria capensis media*.)



PLATE IX.—Cuckoo Falcon (*Baza verreauxi*).
The Cuckoo Falcon polices the forests.

LIST OF BIRDS OF SOUTH AFRICA

3. **Rock Bunting.**
(*Fringillaria tahapisi.*)
4. **Lark Bunting.**
(*Fringillaria impetuani.*)
5. **Natal Bunting.**
(*Fringillaria reidi.*)

Family VI.—Alaudidæ

Genus I.—*Pyrrhulauda*

1. **Dark-naped Lark.**
(*Pyrrhulauda australis.*)
2. **Grey-backed Lark.**
(*Pyrrhulauda verticalis.*)
3. **Smith's Lark.**
(*Pyrrhulauda smithi.*)

Genus II.—*Ammomanes*

1. **Gray's Lark.**
(*Ammomanes grayi.*)
2. **Red-backed Lark.**
(*Ammomanes erythrochlamys.*)
3. **Ferruginous Lark.**
(*Ammomanes ferruginea.*)

Genus III.—*Calendula*

1. **Thick-billed Lark.**
Dubbelde Leeuwick.
(*Calendula crassirostris.*)

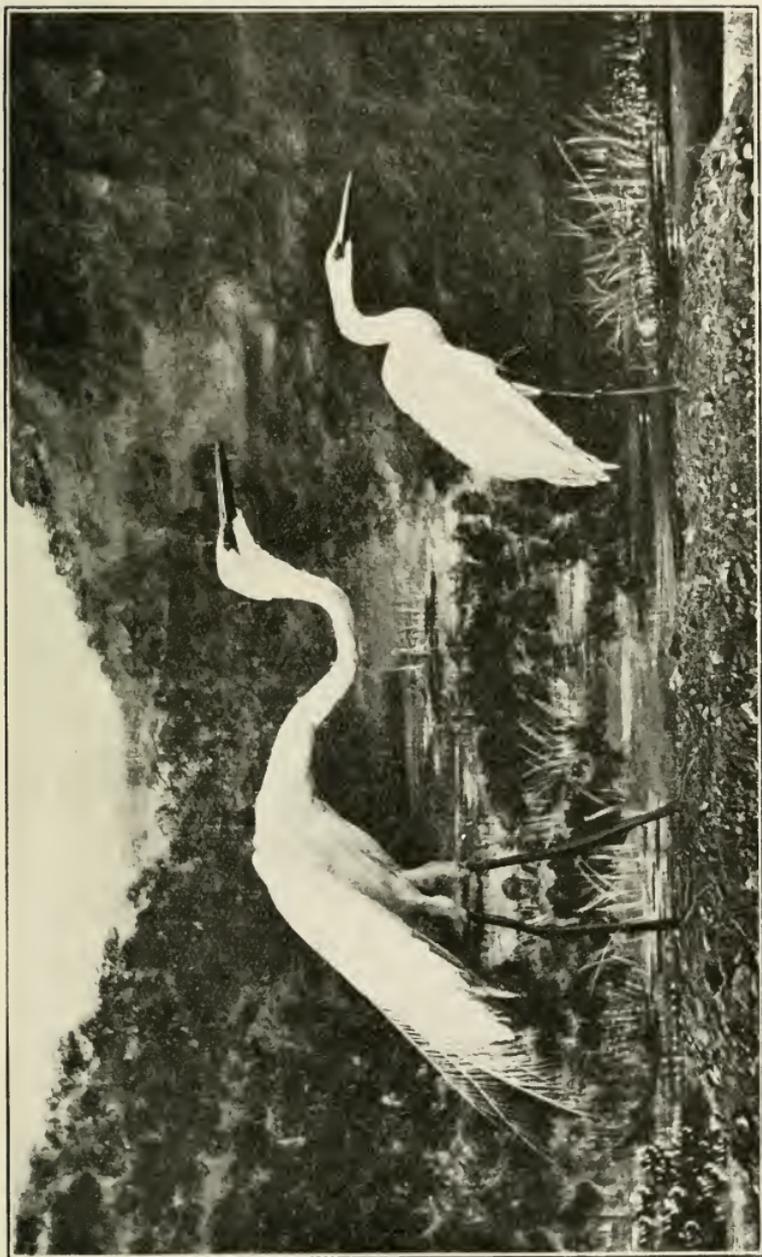
NATURAL HISTORY OF SOUTH AFRICA

Genus IV.—Galerita

1. **Heuglin's Crested Lark.**
(*Galerita modesta.*)

Genus V.—Mirafra

1. **Dusky Lark.**
(*Mirafra nigricans.*)
2. **Sabota Lark.**
(*Mirafra sabota.*)
3. **Dark-lined Lark.**
(*Mirafra nævia.*)
4. **Fawn-coloured Lark.**
(*Mirafra africanoides.*)
5. **Damara Lark.**
(*Mirafra damarensis.*)
6. **Rufous-naped Lark.**
(*Mirafra africana.*)
7. **Finch-like Lark.**
(*Mirafra fringillaris.*)
8. **Latakoo Lark.**
(*Mirafra cheniana.*)
9. **Fischer's Lark.**
Quatji (Matabili).
(*Mirafra fischeri.*)
10. **Bar-tailed Lark.**
Clapart Leeuwerk.
(*Mirafra apiata.*)
11. **Adendorff's Lark.**
(*Mirafra apiata adendorffi.*)
12. **Rufous-headed Lark.**
(*Mirafra rufipilea.*)



1. Great White Heron (*Herodias alba*).

2. Little Egret (*Herodias garzetta*).

These beautiful white Egrets were murdered in hundreds of thousands for their lovely nuptial plumes.

NATURAL HISTORY OF SOUTH AFRICA

Genus VI.—*Spizocorys*

1. **Pink-billed Lark.**
(*Spizocorys conirostris.*)

Genus VII.—*Tephrocorys*

1. **Red-capped Lark.**
Inkelde Leeuwerk.
(*Tephrocorys cinerea.*)
2. **Damara Red-capped Lark.**
(*Tephrocorys spleniata.*)
3. **Andersson's Lark.**
(*Tephrocorys anderssoni.*)
4. **Stark's Lark.**
(*Tephrocorys starki.*)
5. **Sclater's Lark.**
(*Tephrocorys sclateri.*)

Genus VIII.—*Otocorys*

1. **South African Horned Lark.**
(*Otocorys berlepschi.*)

Genus IX.—*Heterocorys*

1. **Short-clawed Lark.**
(*Heterocorys breviunguis.*)

Genus X.—*Alaemon*

1. **Grey-collared Lark.**
(*Alaemon semitorquata.*)
2. **Karoo Lark.**
(*Alaemon nivosa.*)

LIST OF BIRDS OF SOUTH AFRICA

Genus XI.—Certhilauda

1. **Cape Long-billed Lark.**
(*Certhilauda capensis.*)
2. **Rufous Long-billed Lark.**
(*Certhilauda rufula.*)
3. **Namaqua Long-billed Lark.**
(*Certhilauda rufula arenaria.*)
4. **Erikson's Long-billed Lark.**
(*Certhilauda rufula erikssoni.*)

Genus XII.—Heteronyx

1. **Rudd's Lark.**
(*Heteronyx ruddi.*)

Genus XIII.—Botha

1. **Botha's Lark.**
(*Botha difficilis.*)

Family VII.—Motacillidæ

Genus I.—Macronyx

1. **Orange-throated Long-Claw.**
Kalkoentje (Little Turkey); Cape Lark; Cut-throat Lark.
(*Macronyx capensis.*)
2. **Yellow-throated Long-Claw.**
Cut-throat Lark; Kalkoentje (Little Turkey).
(*Macronyx croceus.*)
3. **Pink-throated Long-Claw.**
(*Macronyx ameliæ.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus II.—Anthus

1. **Small Yellow-tufted Pipit.**
(*Anthus chloris.*)
2. **Stripe-bellied Pipit.**
(*Anthus lineiventris.*)
3. **Large Yellow-tufted Pipit.**
(*Anthus crenatus.*)
4. **Tree Pipit.**
(*Anthus trivialis.*)
5. **Short-tailed Pipit.**
(*Anthus brachyurus.*)
6. **Nicholson's Pipit.**
(*Anthus nicholsoni.*)
7. **Cinnamon-backed Pipit.**
Enkelde Leeuwerk.
(*Anthus pyrrhonotus.*)
8. **Lesser Tawny Pipit.**
(*Anthus rufulus.*)
9. **Bocage's Pipit.**
(*Anthus bocagii.*)
10. **Larger Short-tailed Pipit.**
(*Anthus caffer.*)

Genus III.—Tmetothylacus

1. **Golden Pipit.**
(*Tmetothylacus tenellus.*)

Genus IV.—Motacilla

1. **African Pied Wagtail.**
(*Motacilla vidua.*)

LIST OF BIRDS OF SOUTH AFRICA

2. **Grey-backed Wagtail.**
(*Motacilla longicauda.*)
3. **Cape Wagtail.**
Quick Stertje ; Kweek Staartje.
(*Motacilla capensis.*)
4. **Ray's Yellow Wagtail.**
(*Motacilla campestris.*)
5. **Blue-headed Wagtail.**
(*Motacilla flava.*)
6. **Grey-headed Wagtail.**
(*Motacilla flavaborealis.*)
7. **Black-headed Wagtail.**
(*Motacilla melanocephala.*)
8. **Vaillant's Wagtail.**
(*Motacilla vaillanti.*)

Family VIII.—Certhiidae

Genus I.—Salpornis

1. **African Spotted Creeper.**
Mangwidso (Mashonas).
(*Salpornis spilonotus salvadorii.*)

Family IX.—Promeropidae

Genus I.—Promerops

1. **Cape Long-tailed Sugar Bird.**
Zuiker Vogel.
(*Promerops cafer.*)
2. **Natal Long-tailed Sugar Bird.**
(*Promerops gurneyi.*)

NATURAL HISTORY OF SOUTH AFRICA

Family X.—Nectariniidæ

Genus I.—Nectarinia

1. **Malachite Sun Bird.**
(*Nectarinia famosa.*)
2. **Melsetter Sun Bird.**
(*Nectarinia arturi.*)

Genus II.—Cinnyris

1. **Southern Bifasciated Sun Bird.**
(*Cinnyris mariquensis.*)
2. **Little Bifasciated Sun Bird.**
(*Cinnyris mariquensis microrhynchus.*)
3. **South African White-breasted Sun Bird**
(*Cinnyris leucogaster.*)
4. **Neergaard's Sun Bird.**
(*Cinnyris neergaardi.*)
5. **Great Double-collared Sun Bird.**
(*Cinnyris afer.*)
6. **Shelley's Sun Bird.**
(*Cinnyris shelleyi.*)
7. **Northern Double-collared Sun Bird.**
(*Cinnyris ludovicensis.*)
8. **Reichenow's Sun Bird.**
(*Cinnyris subalaris.*)
9. **Lesser Double-collared Sun Bird.**
(*Cinnyris chalybeus.*)
10. **Scarlet-chested Sun Bird.**
(*Cinnyris gutturalis.*)
11. **Western Scarlet-breasted Sun Bird.**
(*Cinnyris gutturalis saturatior.*)



The Heron (*Ardea cinerea*). Frequents marshes, vleis, ponds, and rivers, and feeds on aquatic forms of life. In times of drought, and during winter when food is scarce, the herons hunt for mice, grasshoppers, snails, locusts, and caterpillars out on the veld.

NATURAL HISTORY OF SOUTH AFRICA

12. **Black Sun Bird.**
(*Cinnyris amethystinus.*)
13. **Copper Sun Bird.**
(*Cinnyris cupreus.*)
14. **Bradshaw's Sun Bird.**
(*Cinnyris amethystinus bradshawi.*)
15. **Kirk's Sun Bird.**
(*Cinnyris kirki.*)
16. **White-vented Sun Bird.**
(*Cinnyris fuscus.*)
17. **Mouse-coloured Sun Bird.**
(*Cinnyris verreauxi.*)
18. **Fisher's Mouse-coloured Sun Bird.**
(*Cinnyris verreauxi fischeri.*)
19. **Olive-coloured Sun Bird.**
(*Cinnyris olivaceus.*)
20. **Pondo Sun Bird.**
(*Cinnyris olivaceus daviesi.*)
21. **Little Olive Sun Bird.**
(*Cinnyris olivacina.*)
22. **Nyassa Yellow-bellied Sun Bird.**
(*Cinnyris venustus nyassæ.*)

Genus III.—Anthobaphes

1. **Orange-breasted Sun Bird.**
(*Anthobaphes violacea.*)

Genus IV.—Anthothreptes

1. **Collared Sun Bird.**
(*Anthothreptes collaris.*)

LIST OF BIRDS OF SOUTH AFRICA

2. **Zambesi Collared Sun Bird.**
(*Anthothreptes collaris hypodilus.*)
3. **Blue-throated Sun Bird.**
(*Anthothreptes reichenorvi.*)
4. **Plum-coloured Sun Bird.**
(*Anthothreptes longuemarei nyassæ.*)

Family XI.—Zosteropidæ

Genus I.—*Zosterops*

1. **Andersson's White Eye.**
(*Zosterops anderssoni.*)
2. **Green White Eye.**
(*Zosterops virens.*)
3. **Pale White Eye.**
(*Zosterops pallida.*)
4. **Cape White Eye.**
Witte-Oogie ; Glas-Oogie ; and Kaars-Oogie
(*Zosterops capensis.*)
5. **Namaqua White Eye.**
(*Zosterops deserticula.*)
6. **Pale White Eye.**
(*Zosterops atmorei.*)

Family XII.—Paridæ

Genus I.—*Parus*

1. **Grey Tit.**
Slangwyte.
(*Parus afer.*)

NATURAL HISTORY OF SOUTH AFRICA

2. **Damara Grey Tit.**
(*Parus afer damarensis.*)
3. **Fawn-bellied Tit.**
(*Parus pallidiventris.*)
4. **Pale-bellied Tit.**
(*Parus pallidiventris rooumæ.*)
5. **Black Tit.**
(*Parus niger.*)
6. **Zambesi Black Tit.**
(*Parus niger xanthostomus.*)
7. **Red-bellied Tit.**
(*Parus rufiventris.*)

Genus II.—*Ægithalus*

1. **Cape Penduline Tit.**
Cappoc Vogel (Cotton Bird).
(*Ægithalus capensis.*)
2. **Andersson's Penduline Tit.**
N'Kilo (Matabili).
(*Ægithalus caroli.*)
3. **Boror Penduline Tit.**
(*Ægithalus robertsi.*)

Family XIII.—Laniidæ

SUBFAMILY I.—LANIINÆ

Genus I.—*Urolestes*

1. **Long-tailed Shrike.**
(*Urolestes melanoleucus.*)

LIST OF BIRDS OF SOUTH AFRICA

Genus II.—Lanius

1. **Fiscal Shrike.**

Fiscaal ; Johnny Hangman ; Butcher Bird ; Jack
Hanger ; Iqola (Zulus).

(*Lanius collaris.*)

2. **Coroneted Shrike.**

(*Lanius subcoronatus.*)

3. **Lesser Grey Shrike.**

(*Lanius minor.*)

4. **Red-backed Shrike.**

(*Lanius collurio.*)

Genus III.—Eurocephalus

1. **White-crowned Shrike.**

(*Eurocephalus anguitimens.*)

Genus IV.—Nilaus

1. **Brubru Shrike.**

(*Nilaus brubru.*)

2. **Black-browed Brubru Shrike.**

(*Nilaus nigritemporalis.*)

SUBFAMILY II.—MALACONOTINÆ

Genus I.—Telephonus

1. **Black-headed Bush Shrike.**

Inqupan (Zulus and Swazis).

(*Telephonus senegalus.*)

2. **Tchagra.**

(*Telephonus tchagra.*)

3. **Three-streaked Bush Shrike.**

(*Telephonus australis.*)

NATURAL HISTORY OF SOUTH AFRICA

4. **Eastern Three-streaked Bush Shrike.**

(*Telephonus minor.*)

5. **Anchieta's Bush Shrike.**

(*Telephonus anchieta.*)

Genus II.—Dryoscopus

1. **Lesser Puff-back Shrike.**

Snowball Shrike ; Umhlopekasi (Zulus).

(*Dryoscopus cubla.*)

2. **Greater Puff-back Shrike.**

Bonte Canaribyster ; Zwarte Canaribyster ; Iboboni

(Zulus).

(*Dryoscopus ferrugineus.*)

3. **Northern Puff-back Shrike.**

(*Dryoscopus ferrugineus hybridus.*)

4. **Hartlaub's Shrike.**

(*Dryoscopus guttatus.*)

5. **Mozambique Shrike.**

(*Dryoscopus mossambicus.*)

Genus III.—Laniarius

1. **Black and Crimson Shrike.**

Billi-Bonvu.

(*Laniarius atrococcineus.*)

2. **Bacbakiri Shrike.**

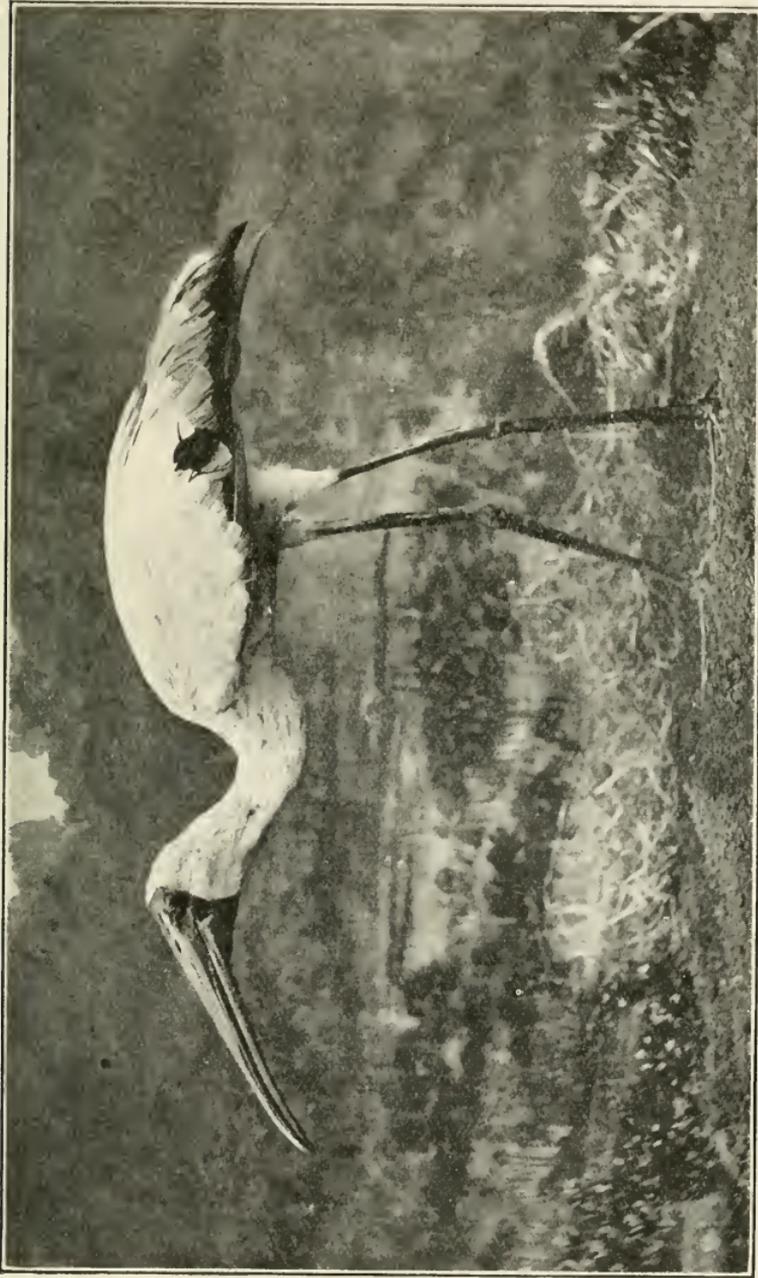
Bacbakiri ; Cock-a-vick.

(*Laniarius gutturalis.*)

3. **Four-coloured Bush Shrike.**

Ngongoni (Zulus).

(*Laniarius quadricolor.*)



The Wood Ibis (*Pseudotantalus ibis*) is a rare bird south of the Zambesi. It subsists on disease-carrying water snails, aquatic insects, batrachia, fishes, locusts, and grasshoppers. Specimen hunters remorselessly pursue and slay this beautiful bird.

NATURAL HISTORY OF SOUTH AFRICA

4. **Ruddy-breasted Bush Shrike.**
(*Laniarius rubiginosus.*)
5. **Olive Bush Shrike.**
(*Laniarius olivaceus.*)
6. **Marais' Bush Shrike.**
(*Laniarius maraisi.*)
7. **Orange-breasted Bush Shrike.**
(*Laniarius sulphureipectus.*)
8. **Southern Grey-headed Bush Shrike.**
Spook Vogel; Uhlaza (Zulus).
(*Laniarius starki.*)
9. **Abbott's Bush Shrike.**
(*Laniarius abbotti.*)
10. **Bertrand's Bush Shrike.**
(*Laniarius bertrandi.*)

Genus IV.—*Nicator*

1. **Zambesi Green Shrike.**
(*Nicator gularis.*)

Genus V.—*Lanioturdus*

1. **White-tailed Shrike.**
(*Lanioturdus torquatus.*)

SUBFAMILY III.—PRIONOPINÆ

Genus I.—*Sigmodus*

1. **Reitz's Helmet Shrike.**
(*Sigmodus retzii.*)
2. **Zambesi Helmet Shrike.**
(*Sigmodus tricolor.*)
3. **Chestnut-fronted Helmet Shrike.**
(*Sigmodus scopifrons.*)

LIST OF BIRDS OF SOUTH AFRICA

Genus II.—Prionops

1. **Smith's Helmet Shrike.**
Mtimbakazana (Swazi); Ipemvu (Zulu).
(*Prionops talacoma.*)

Family XIV.—Crateropodidæ

SUBFAMILY I.—CRATEROPODINÆ

Genus I.—Crateropus

1. **Jardine's Babbler.**
Kekkelaar.
(*Crateropus jardinii.*)
2. **Kirk's Babbler.**
Invanana (Matabele).
(*Crateropus kirki.*)
3. **Black-faced Babbler.**
(*Crateropus melanops.*)
4. **Hartlaub's Babbler.**
(*Crateropus hartlaubi.*)
5. **Pied Babbler.**
(*Crateropus bicolor.*)

SUBFAMILY II.—BRACHYPODINÆ

Genus I.—Pycnonotus

1. **Cape Bulbul.**
Geelgat, or Kuif-Kop.
(*Pycnonotus capensis.*)
2. **Damara Land Bulbul.**
(*Pycnonotus tricolor.*)

NATURAL HISTORY OF SOUTH AFRICA

3. **Black-capped Bulbul.**

Toppie ; Top-Knot ; Blackhead, or Snake Bird ;
Ipoti (Zulus and Matabeles).
(*Pycnonotus layardi.*)

4. **Black-fronted Bulbul.**

(*Pycnonotus nigricans.*)

Genus II.—Andropadus

1. **Sombre Bulbul.**

Bosch-Vogel ; Iwili (Zulus).
(*Andropadus importunus.*)

2. **Slender Bulbul.**

(*Andropadus debilis.*)

Genus III.—Chlorocichla

1. **Yellow-bellied Bulbul.**

Ibwada (Zulus).
(*Chlorocichla flaviventris.*)

2. **Damara Bulbul.**

(*Chlorocichla occidentalis.*)

3. **Peter's Bulbul.**

(*Chlorocichla oleagina.*)

Genus IV.—Phyllostrophus

1. **Cape Bristle-necked Bulbul.**

(*Phyllostrophus capensis.*)

2. **Swahali Bristle-necked Bulbul.**

(*Phyllostrophus capensis suahelicus.*)

3. **Yellow-streaked Bulbul.**

(*Phyllostrophus flavistriatus.*)

LIST OF BIRDS OF SOUTH AFRICA

4. Nyassa Bulbul.

(*Phyllostrophus milanjensis.*)

5. Grey-bellied Bulbul.

(*Phyllostrophus cerviniventris.*)

SUBFAMILY III.—BRACHYPTERYGINÆ

Genus I.—Parisoma

1. Tit Babbler.

(*Parisoma subcæruleum.*)

2. Damara Tit Babbler.

(*Parisoma subcæruleum cinerascens.*)

3. Layard's Tit Babbler.

(*Parisoma layardi.*)

4. Hartlaub's Tit Babbler.

(*Parisoma plumbeum.*)

Family XV.—Sylviidæ

Genus I.—Sylvia

1. Common Whitethroat.

(*Sylvia cinerea.*)

2. Garden Warbler.

(*Sylvia simplex.*)

Genus II.—Phylloscopus

1. Willow Wren.

(*Phylloscopus trochilus.*)

Genus III.—Hypolais

1. Icterine Warbler.

(*Hypolais icterina.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus IV.—Acrocephalus

1. **Great Reed Warbler.**
(*Acrocephalus arundinaceus.*)
2. **Marsh Warbler.**
(*Acrocephalus palustris.*)
3. **African Reed Warbler.**
(*Acrocephalus baticatus.*)
4. **Sedge Warbler.**
(*Acrocephalus schænobænus.*)

Genus V.—Locustella

1. **River Grasshopper Warbler.**
(*Locustella fluviatilis.*)

Genus VI.—Phlexis

1. **Victorin's Warbler.**
(*Phlexis victorini.*)

Genus VII.—Euryptila

1. **Cinnamon-breasted Warbler.**
(*Euryptila subcinnamomea.*)

Genus VIII.—Bradypterus

1. **Stripe-throated Reed Warbler**
(*Bradypterus prachypterus.*)
2. **Barratt's Reed Warbler.**
(*Bradypterus barratti.*)
3. **Knysna Reed Warbler.**
(*Bradypterus sylvaticus.*)
4. **Babbling Reed Warbler.**
(*Bradypterus babæcula.*)



The Flamingo (*Phaenicopterus roseus*). In the days of our fathers these beautiful and unique birds migrated to South Africa in large numbers: they are now rare visitors owing to their murderous and cowardly persecution by so-called sportsmen.

NATURAL HISTORY OF SOUTH AFRICA

5. **Pondo Reed Warbler.**
(*Bradypterus pondænsis.*)
6. **Robert's Reed Warbler.**
(*Bradypterus transvaalensis.*)

Genus IX.—*Schœnicola*

1. **Fan-tailed Reed Warbler.**
(*Schœnicola apicalis.*)

Genus X.—*Eremomela*

1. **Yellow-bellied Bush Warbler.**
(*Eremomela flaviventris.*)
2. **Sharpe's Yellow-bellied Bush Warbler.**
(*Eremomela flaviventris sharpei.*)
3. **Buckley's Bush Warbler.**
(*Eremomela polioxantha.*)
4. **Zambesi Bush Warbler.**
(*Eremomela helenoræ.*)
5. **Brown-throated Bush Warbler.**
(*Eremomela usticollis.*)
6. **Dusky-faced Bush Warbler.**
(*Eremomela scotops.*)
7. **Damara Bush Warbler.**
(*Eremomela damarensis.*)
8. **White-throated Bush Warbler.**
(*Eremomela albigularis.*)
9. **Baumgart's Bush Warbler.**
(*Eremomela baumgarti.*)

LIST OF BIRDS OF SOUTH AFRICA

Genus XI.—Camaroptera

1. **Green-backed Bush Warbler.**
Kers-Oojie; Glass Eye; Bush Goat; Imbuzana
(Zulus).
(*Camaroptera olivacea.*)
2. **Grey-backed Bush Warbler.**
(*Camaroptera sundevalli.*)
3. **Ruppell's Bush Warbler.**
(*Camaroptera brevicaudata.*)
4. **Grey-green Bush Warbler.**
(*Camaroptera griseoviridis.*)

Genus XII.—Sylviella

1. **Crombec.**
Stomp-Stertje (Stump-Tail).
(*Sylviella rufescens.*)
2. **Zambesi Crombec.**
(*Sylviella pallida.*)
3. **Fleck's Crombec.**
(*Sylviella flecki.*)
4. **Nyassa Crombec.**
(*Sylviella whytei.*)

Genus XIII.—Cryptolopha

1. **Yellow-throated Fly-Catcher Warbler.**
(*Cryptolopha ruficapilla.*)

Genus XIV.—Apalis

1. **Bar-throated Warbler.**
(*Apalis thoracica.*)
2. **Fairy Warbler.**
(*Apalis scita.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus XV.—Chlorodyta

1. **Black-breasted Bush Warbler.**
(*Chlorodyta flavida.*)
2. **Eastern Black-breasted Bush Warbler**
(*Chlorodyta neglecta.*)
3. **Damara Bush Warbler.**
(*Chlorodyta damarensis.*)
4. **Yellow-rumped Bush Warbler.**
(*Chlorodyta icteropygialis.*)

Genus XVI.—Calamonastes

1. **Barred Wren Warbler.**
(*Calamonastes fasciolatus.*)
2. **Stierling's Barred Wren Warbler.**
(*Calamonastes stierlingi.*)

Genus XVII.—Prinia

1. **White-breasted Wren Warbler.**
(*Prinia substriata.*)
2. **Saffron-breasted Wren Warbler.**
(*Prinia hypoxantha.*)
3. **Cape Wren Warbler.**
(*Prinia maculosa.*)
4. **Tawny-flanked Wren Warbler.**
(*Prinia mystacea.*)
5. **Black-chested Wren Warbler.**
(*Prinia flavicans.*)

Genus XVIII.—Spiloptila

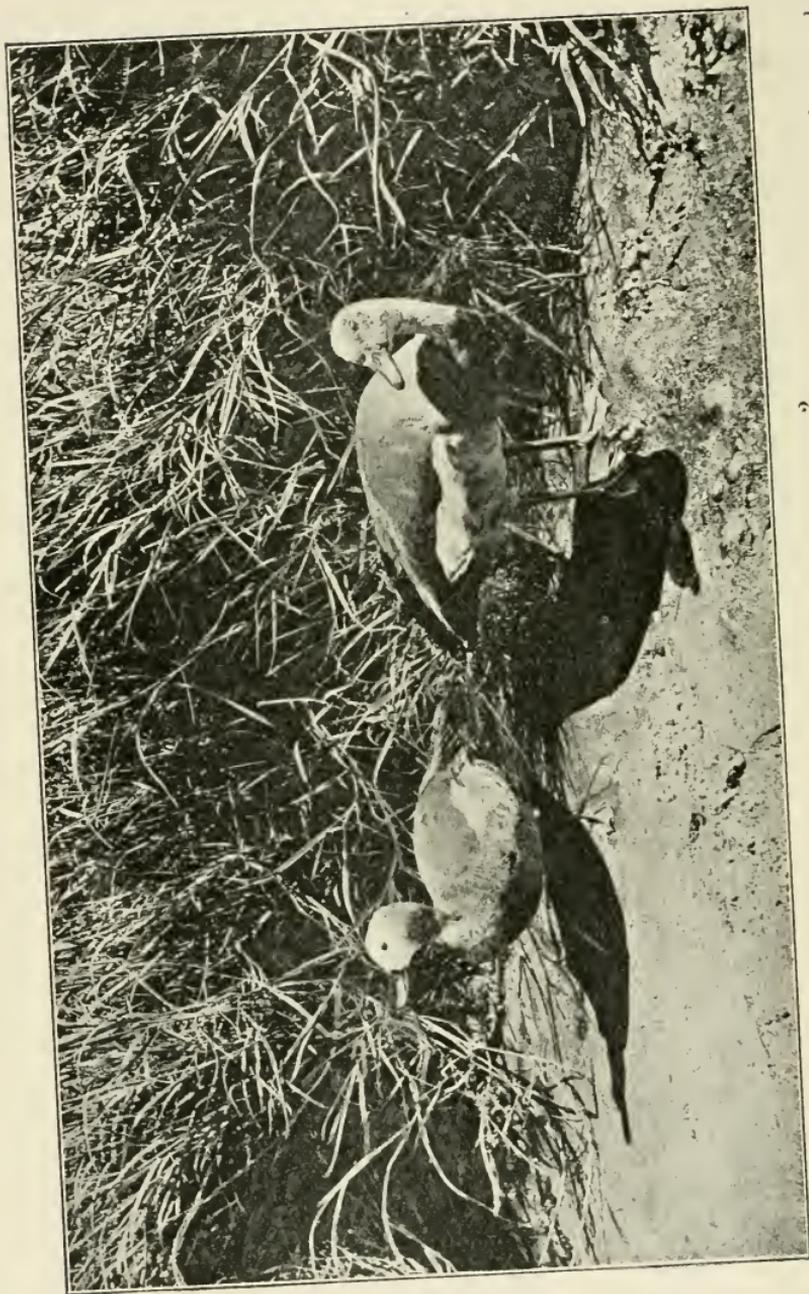
1. **Rufous-eared Wren Warbler.**
(*Spiloptila ocularia.*)

LIST OF BIRDS OF SOUTH AFRICA

2. **Malapo Wren Warbler.**
(*Spiloptila ocularia malopensis.*)
3. **Chirinda Wren Warbler.**
(*Spiloptila chirindensis.*)
4. **Rudd's Wren Warbler.**
(*Spiloptila ruddi.*)

Genus XIX.—Cisticola

1. **Tawny-headed Grass Warbler.**
Red-headed Wren ; Ugigi (Zulus).
(*Cisticola fulvicapilla.*)
2. **Smith's Grass Warbler.**
Ngceta (Zulus).
(*Cisticola aberrans.*)
3. **Grey Grass Warbler.**
(*Cisticola cinerascens.*)
4. **Rufous-fronted Grass Warbler.**
(*Cisticola erythrops.*)
5. **Fraser's Grass Warbler.**
(*Cisticola rufa.*)
6. **Pinc-Pinc Grass Warbler.**
Ting-Ting ; Kloppertje.
(*Cisticola textrix.*)
7. **Levaillant's Grass Warbler.**
(*Cisticola tinniens.*)
8. **Wren Grass Warbler.**
Kloppertje ; Tinky ; Little Grass Bird ; Ndogwe
(Zulus).
(*Cisticola terrestris.*)
9. **Mediterranean Grass Warbler.**
(*Cisticola cursitans.*)



1

1. South African Shelduck, or Berg Eend (*Casarca cana*). This duck frequents ponds, dams, and rivers, and is often captured and domesticated. It can be crossed with the domestic duck.

2

2. Egyptian Goose, or Berg Gans (*Alopochen aegyptiaca*), on the right. This goose is widespread in South Africa, and renders excellent service in destroying noxious insect life. All the duck tribe render similar excellent service, yet we stupidly shoot them for sport and the pot.

Wild geese in migration travel 90 miles an hour.

LIST OF BIRDS OF SOUTH AFRICA

10. **Grey-backed Grass Warbler.**
(*Cisticola subruficapilla.*)
11. **Buff-fronted Grass Warbler.**
(*Cisticola lugubris.*)
12. **Natal Grass Warbler.**
Ubhou (Zulus).
(*Cisticola natalensis.*)
13. **Dusky Grass Warbler.**
(*Cisticola obscura.*)
14. **Muller's Grass Warbler.**
(*Cisticola muelleri.*)
15. **Rufous Grass Warbler.**
(*Cisticola rufilata.*)
16. **Grey-headed Grass Warbler.**
(*Cisticola strangei.*)
17. **Smith's Warbler.**
(*Cisticola chiniana.*)
18. **Southern Smith's Warbler.**
(*Cisticola chiniana magna.*)
19. **Pale Wren Grass Warbler.**
(*Cisticola lavendulæ.*)
20. **Sylvia Grass Warbler.**
(*Cisticola sylvia.*)
21. **Cinnamon-crowned Grass Warbler.**
(*Cisticola cinnamomeiceps.*)
22. **Little Pinc-Pinc Warbler.**
(*Cisticola minuta.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus XX.—Heliolais

1. **Red-winged Grass Warbler.**
(*Heliolais erythroptera.*)
2. **Bosor Red-wing Grass Warbler.**
(*Heliolais kirbyi.*)

Genus XXI.—Pinarornis

1. **Sooty Chat Warbler.**
(*Pinarornis plumosus.*)
2. **Rhodesia Chat Babbler.**
(*Pinarornis rhodesiæ.*)

Genus XXII.—Chætops

1. **Rufous Rock Jumper.**
(*Chætops frenatus.*)
2. **Orange-breasted Rock Jumper.**
(*Chætops aurantiacus.*)
3. **Damara Rock Jumper.**
(*Chætops pycnopygius.*)

Genus XXIII.—Sphenæacus

1. **Cape Grass Bird.**
(*Sphenæacus africanus.*)
2. **Eastern Province Grass Bird.**
(*Sphenæacus intermedius.*)
3. **Natal Grass Bird.**
Idle Dick ; Lazy Dick ; Nvuze (Zulus).
(*Sphenæacus natalensis.*)
4. **Transvaal Grass Bird.**
(*Sphenæacus transvaalensis.*)

LIST OF BIRDS OF SOUTH AFRICA

Genus XXIV.—Melocichla

1. **Rufous-fronted Thrush Warbler.**
(*Melocichla mentalis orientalis.*)

Genus XXV.—Calamocichla

1. **Cunene Warbler.**
(*Calamocichla cunenensis.*)
2. **Zulu Warbler.**
(*Calamocichla zuluensis.*)

Family XVI.—Turdidæ

Genus I.—Turdus

1. **Natal Thrush.**
(*Turdus guttatus.*)
2. **Ground-scraper Thrush.**
Chu-chu-roo-foo (Bechuanas).
(*Turdus litsipsirupa.*)
3. **Gurney's Thrush.**
(*Turdus gurneyi.*)
4. **Cape Thrush.**
Umuswi (Zulus).
(*Turdus olivaceus.*)
5. **Cabanis Thrush.**
(*Turdus cabanisi.*)
6. **Kurrichaine Thrush.**
(*Turdus libonyanus.*)
7. **Peter's Thrush.**
(*Turdus libonyanus tropicalis.*)
8. **Verreaux's Thrush.**
(*Turdus libonyanus verreauxi.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus II.—Erithacus

1. **Eastern Nightingale.**
(*Erithacus philomela.*)
2. **Melsetter Robin.**
(*Erithacus swynnertoni.*)

Genus III.—Monticola

1. **Cape Rock Thrush.**
Ikwela' Matyeni (Zulus).
(*Monticola rupestris.*)
2. **Sentinel Rock Thrush.**
(*Monticola explorer.*)
3. **Short-toed Rock Thrush.**
(*Monticola brevipes.*)
4. **Angola Rock Thrush.**
(*Monticola angolensis.*)

Genus IV.—Myrmecocichla

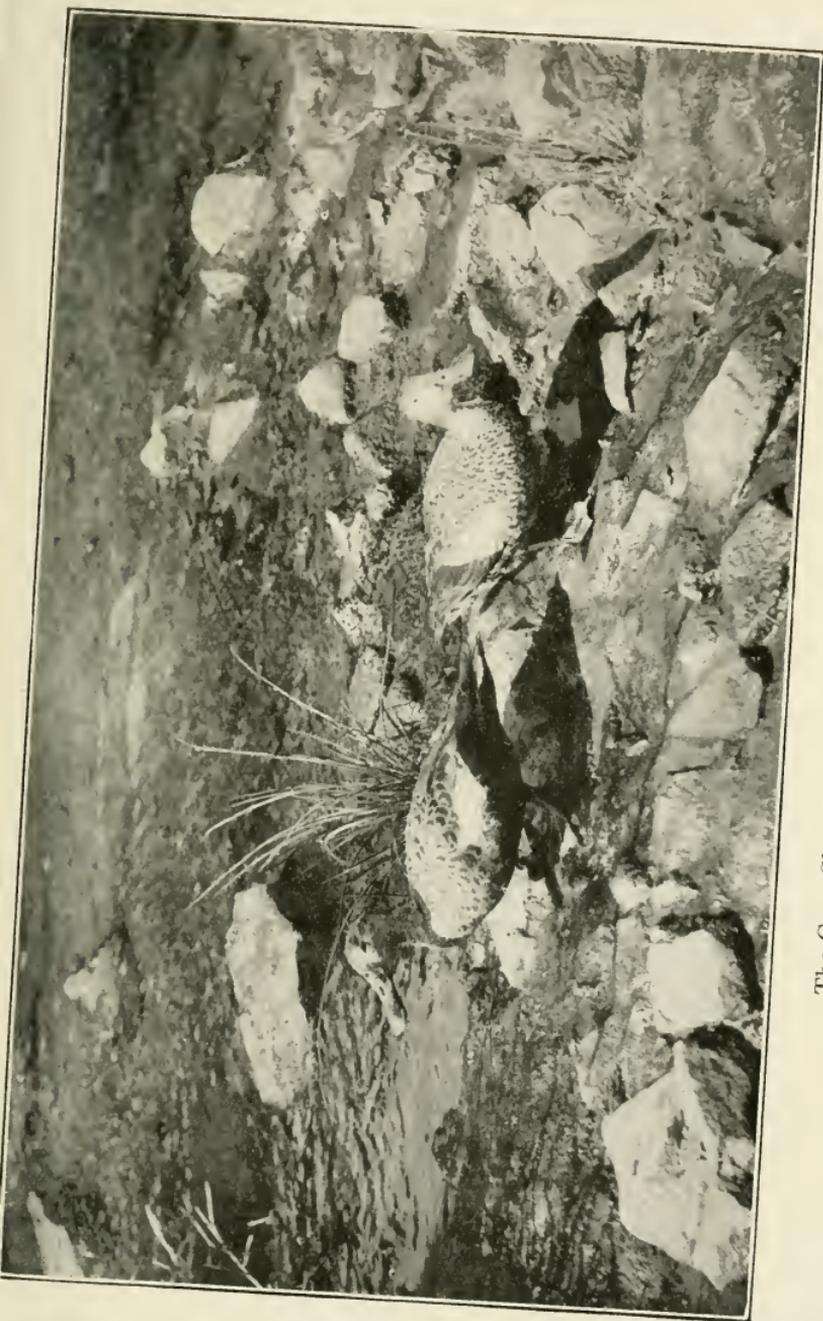
1. **Ant-eating Chat.**
(*Myrmecocichla formicivora.*)
2. **Buff-streaked Chat.**
(*Myrmecocichla bifasciata.*)

Genus V.—Pratincola

1. **South African Stone Chat.**
Bontrochie.
(*Pratincola torquata.*)

Genus VI.—Saxicola

1. **Mountain Chat.**
(*Saxicola monticola.*)



The Cape Shoveller Duck (*Spatula capensis*) at home. Various fresh-water snails are the intermediary hosts of parasites which prey on man and his domestic animals; and ducks are Nature's chief enemies of these snails. Yet we mercilessly shoot them down, and philosophers prate of the "Age of Reason," in which we are privileged to live.

NATURAL HISTORY OF SOUTH AFRICA

2. **Capped Wheat Ear.**
Schaap Wachter (*i.e.*, Shepherd) ; Nachtegaal and
Rossignol.
(*Saxicola pileata.*)
3. **Livingstone's Wheat Ear.**
(*Saxicola pileata livingstonii.*)
4. **European Wheat Ear.**
(*Saxicola oenanthe.*)
5. **Damara Chat.**
(*Saxicola albicans.*)
6. **Layard's Chat.**
(*Saxicola layardi.*)
7. **Familiar Chat.**
Speckvreter.
(*Saxicola familiaris.*)
8. **Galton's Chat.**
(*Saxicola familiaris galtoni.*)
9. **Hellmayer's Chat.**
(*Saxicola familiaris hellmayeri.*)
10. **Falkenstein's Chat.**
(*Saxicola falkensteini.*)

Genus VII.—Emarginata

1. **Sickle-winged Chat.**
Klappertje.
(*Emarginata sinuata.*)
2. **Grey Chat.**
(*Emarginata cinerea.*)
3. **Hartlaub's Chat.**
(*Emarginata pollux.*)

LIST OF BIRDS OF SOUTH AFRICA

4. Schlegel's Chat.

(*Emarginata cinerea schlegeli.*)

Genus VIII.—*Thamnolæa*

1. White-shouldered Bush Chat.

(*Thamnolæa cinnamomeiventris.*)

2. Arnot's Bush Chat.

Inquelechaine (Matabeli).

(*Thamnolæa arnotti.*)

Genus IX.—*Cossypha*

1. Noisy Robin Chat.

Piet-myn-vrouw ; Mocking Bird ; Monanda
(Zulus).

(*Cossypha bicolor.*)

2. Natal Robin Chat.

(*Cossypha natalensis.*)

3. Heuglin's Robin Chat.

(*Cossypha heuglini.*)

4. Cape Robin Chat.

Jan Fredric, or Cape Robin ; Ugaka (Zulus)

(*Cossypha caffra.*)

5. White-shouldered Robin Chat.

(*Cossypha humeralis.*)

6. Brown Robin Chat.

(*Cossypha signata.*)

7. Pondo Robin Chat.

(*Cossypha haagneri.*)

Genus X.—*Cichladusa*

1. Morning Warbler.

(*Cichladusa arcuata.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus XI.—Tarsiger

1. **White-starred Bush Robin.**

(*Tarsiger stellatus.*)

2. **Silent Bush Robin.**

(*Tarsiger silens.*)

Genus XII.—Erythropygia

1. **Smith's Ground Robin.**

(*Erythropygia pæna.*)

2. **Hartert's Ground Robin.**

(*Erythropygia pæna damarensis.*)

3. **Zambesi Ground Robin.**

(*Erythropygia zambesiana.*)

4. **White-browed Ground Robin.**

(*Erythropygia leucophrys.*)

5. **Damara Ground Robin.**

(*Erythropygia munda.*)

6. **Rufous-breasted Ground Robin.**

(*Erythropygia quadrivirgata.*)

7. **Cape Ground Robin.**

Bosch Creeper; Katlachter, or Slang Verclicker.

(*Erythropygia coryphæus.*)

Family XVII.—Muscicapidæ

Genus I.—Lioptilus

1. **Bush Black Cap.**

(*Lioptilus nigricapillus.*)

Genus II.—Bradyornis

1. **Black Fly-Catcher.**

(*Bradyornis ater.*)

LIST OF BIRDS OF SOUTH AFRICA

2. **Tropic Black Fly-Catcher.**
(*Bradyornis ater tropicalis.*)
3. **Brown Fly-Catcher.**
(*Bradyornis infuscatus.*)
4. **Mariqua Fly-Catcher.**
(*Bradyornis mariquensis.*)
5. **Mouse-coloured Fly-Catcher.**
(*Bradyornis murinus.*)
6. **Reichenow's Fly-Catcher.**
(*Bradyornis griscus.*)

Genus III.—Muscicapa

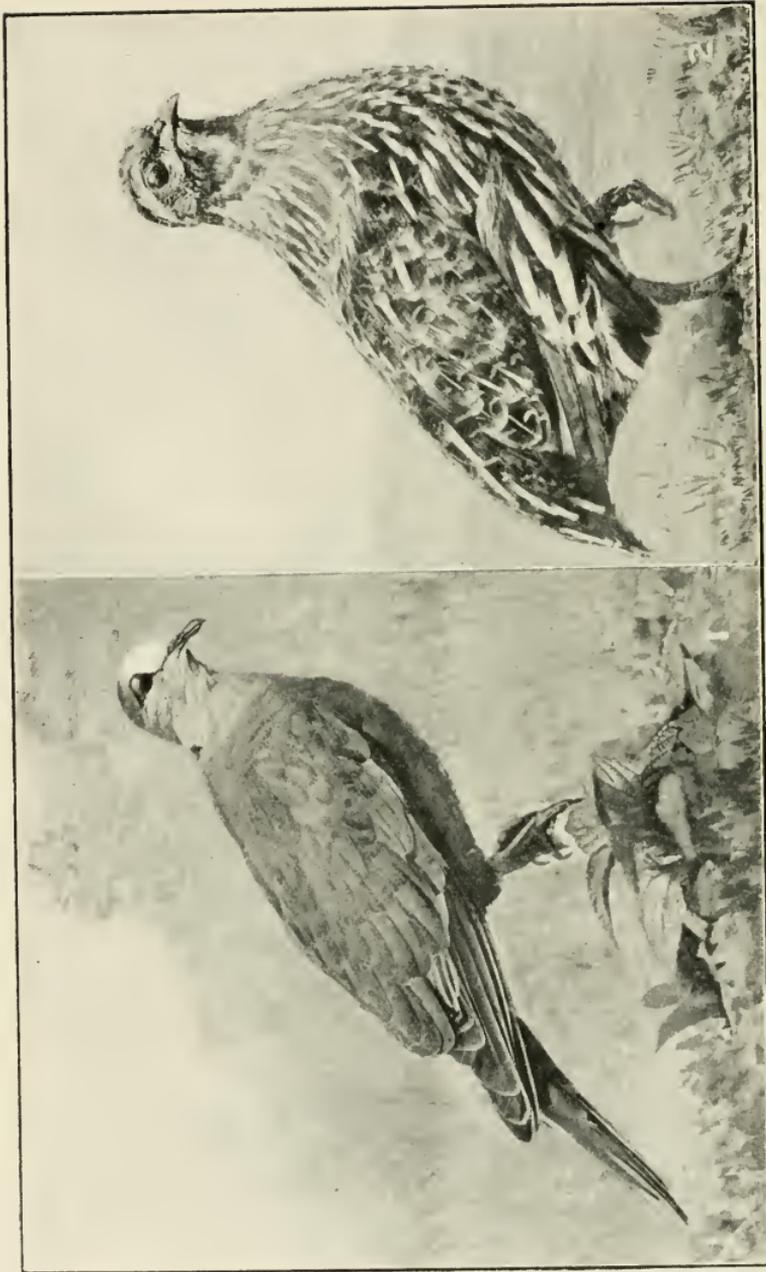
1. **Spotted Fly-Catcher.**
(*Muscicapa grisola.*)
2. **Blue-grey Fly-Catcher.**
(*Muscicapa caerulescens.*)
3. **Shelley's Grey Fly-Catcher.**
(*Muscicapa subadustus.*)

Genus IV.—Alseonax

1. **Dusky Fly-Catcher.**
Izervogelje.
(*Alseonax adusta.*)

Genus V.—Chloropeta

1. **Natal Yellow Fly-Catcher.**
(*Chloropeta natalensis.*)
2. **Sundevall's Yellow Fly-Catcher.**
(*Chloropeta icterina.*)



1. Red-eyed Dove (*Turtur semitorquatus*). The pigeons and doves subsist on grain, berries, wild fruits, and a variety of seeds of grasses, weeds, and trees. Some species are a serious pest to the agriculturist.
2. The Cape Quail (*Coturnix africana*) spread over the veld on their arrival in the early spring and subsist on the seeds of weeds and grasses, also on insects. When the corn and grain spring up they migrate to the cultivated lands and wage a terrible war on destructive insects, their larvæ, and eggs. In return for their inestimable services they are penalised by being put on the game list to be shot at sight. Every shot fired at a quail is a shot at your pocket book. Quails destroy the hibernating insects. Encourage them to remain with you in winter.

LIST OF BIRDS OF SOUTH AFRICA

Genus VI.—Hyliota

1. **Mashonaland Fly-Catcher.**
(*Hyliota australis.*)
2. **Rhodesia Fly-Catcher.**
(*Hyliota rhodesiæ.*)
3. **Barboza's Fly-Catcher.**
(*Hyliota barbozæ.*)

Genus VII.—Smithornis

1. **Cape Broad Bill.**
(*Smithornis capensis.*)

Genus VIII.—Bias

1. **Black and White Fly-Catcher.**
(*Bias musicus.*)

Genus IX.—Platystira

1. **Green-throated Fly-Catcher.**
(*Platystira peltata.*)

Genus X.—Pachyprora

1. **Cape Fly-Catcher.**
(*Pachyprora capensis.*)
2. **White-flanked Fly-Catcher.**
Incwaba (Zulus); Mabota (Mashonas).
(*Pachyprora molitor.*)
3. **Pririt Fly-Catcher.**
(*Pachyprora pririt.*)
4. **Orange-breasted Fly-Catcher.**
(*Pachyprora sheppardi.*)

NATURAL HISTORY OF SOUTH AFRICA

5. Reichenow's Fly-Catcher.

(*Pachyprora puella soror.*)

6. Red-eyed Fly-Catcher.

(*Pachyprora erythroptalma.*)

7. St Lucia Fly-Catcher.

(*Pachyprora fratrum.*)

Genus XI.—*Erythrocercus*

1. Livingstone's Fly-Catcher.

(*Erythrocercus livingstonii.*)

Genus XII.—*Trochocercus*

1. Blue-mantled Fly-Catcher.

(*Trochocercus cyanomelas.*)

2. Swynnerton's Fly-Catcher.

(*Trochocercus megalolophus.*)

3. Sharpe's Fly-Catcher.

(*Trochocercus albonotatus.*)

Genus XIII.—*Terpsiphone*

1. Paradise Fly-Catcher.

Uve (Zulus).

(*Terpsiphone perspicillata.*)

2. Lead-headed Fly-Catcher.

(*Terpsiphone plumbeiceps.*)

Genus XIV.—*Sheppardia*

1. Yellow-breasted Fly-Catcher.

(*Sheppardia gunningi.*)

LIST OF BIRDS OF SOUTH AFRICA

Family XVIII.—Dicruridæ

Genus I.—Dicrurus

1. **Fork-tailed Drongo.**

Katekowe ; Bijvreter (Bee-Eater) ; Black Fork-tail ; Smoke Bird ; Intengu (Zulus).

(*Dicrurus afer.*)

2. **Square-tailed Drongo.**

Intongwana (Zulus).

(*Dicrurus ludwigi.*)

Family XIX.—Campophagidæ

Genus I.—Campophaga

1. **Black Cuckoo Shrike.**

(*Campophaga nigra.*)

2. **Hartlaub's Cuckoo Shrike.**

(*Campophaga hartlaubi.*)

Genus II.—Graucalus

1. **Black-chested Cuckoo Shrike.**

(*Graucalus pectoralis.*)

2. **Grey Cuckoo Shrike.**

Blaauw Katakuro.

(*Graucalus cæsius.*)

Family XX.—Hirundinidæ

Genus I.—Chelidon

1. **House Martin.**

(*Chelidon urbica.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus II.—Cotile

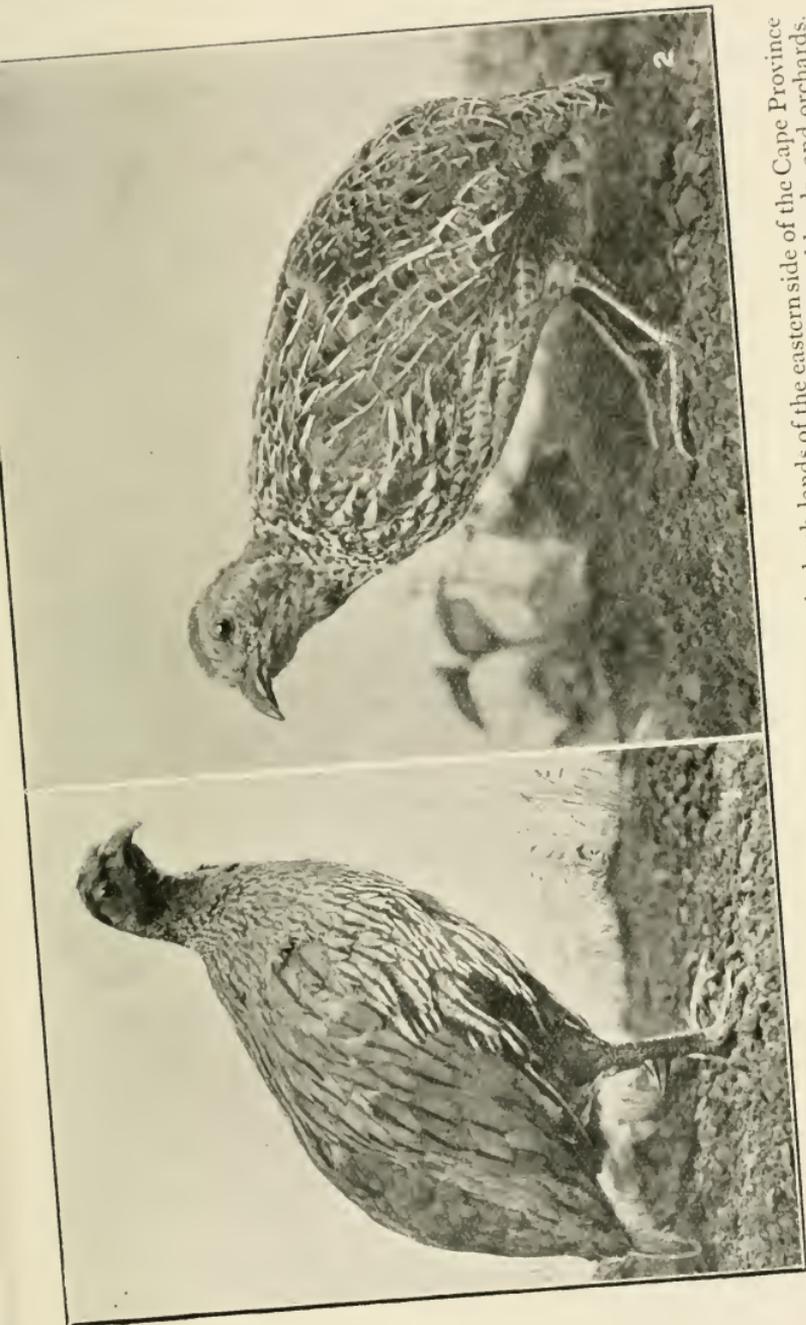
1. **European Sand Martin.**
(*Cotile riparia.*)
2. **South African Sand Martin.**
(*Cotile paludicola.*)
3. **Banded Sand Martin.**
(*Cotile cincta.*)

Genus III.—Ptyonoprogne

1. **Rock Martin.**
(*Ptyonoprogne fuligula.*)
2. **Andersson's Rock Martin.**
(*Ptyonoprogne anderssoni.*)

Genus IV.—Hirundo

1. **European Swallow.**
(*Hirundo rustica.*)
2. **Angola Swallow.**
(*Hirundo angolensis.*)
3. **White-throated Swallow.**
(*Hirundo albigularis.*)
4. **Pearl-breasted Swallow.**
(*Hirundo dimidiata.*)
5. **Blue Swallow.**
(*Hirundo atrocærulea.*)
6. **Wire-tailed Swallow.**
(*Hirundo smithi.*)



1. The Red-necked Pheasant (*Pternistes nudicollis*) polices the bush-lands of the eastern side of the Cape Province and Natal, and prevents the insects becoming a serious menace to forests, cultivated lands, and orchards.
2. The Cape Redwing Partridge (*Francolinus levillanti*) and its brothers and cousins, one and all, render valuable services in destroying gorged female ticks and hosts of destructive ground frequenting insects and their larvæ which would otherwise become a serious plague. In return for their services men hunt and shoot them for "sport."

NATURAL HISTORY OF SOUTH AFRICA

7. Grey-rumped Swallow.
(*Hirundo griseopyga.*)
8. Larger Stripe-breasted Swallow.
(*Hirundo cucullata.*)
9. Smaller Stripe-breasted Swallow.
(*Hirundo puella.*)
10. Rufous-breasted Swallow.
(*Hirundo semirufa.*)
11. Monteiro's Swallow.
(*Hirundo monteiri.*)

Genus V.—*Petrochelidon*

1. South African Cliff Swallow.
(*Petrochelidon spilodera.*)

Genus VI.—*Psalidoprocne*

1. Black Rough-winged Swallow.
(*Psalidoprocne holomelana.*)
2. Eastern Rough-winged Swallow.
(*Psalidoprocne orientalis.*)

Family XXI.—Pittidæ

Genus I.—*Pitta*

1. Angolian Pitta.
(*Pitta angolensis.*)

LIST OF BIRDS OF SOUTH AFRICA

Order II.—PICARIÆ

SUBORDER I.—UPUPÆ

Family I.—Upupidæ

Genus I.—Upupa

1. South African Hoopoe.

(*Upupa africana.*)

Family II.—Irrisoridæ

Genus I.—Irrisor

1. Wood Hoopoe.

Kakelaar (Chatterer); Hlebabafazi (Zulus); Inshlaza (Matabele).

(*Irrisor viridis.*)

Genus II.—Rhinopomastus

1. Scimitar Bill.

(*Rhinopomastus cyanomelas.*)

SUBORDER II.—CYPSELI

Family I.—Cypselidæ

Genus I.—Cypselus

1. White-bellied Swift.

(*Cypselus africanus.*)

2. European Swift.

(*Cypselus apus.*)

NATURAL HISTORY OF SOUTH AFRICA

3. Kalahari Swift.

(*Cypselus apus kalaharicus.*)

4. Black Swift.

(*Cypselus barbatus.*)

5. African White-rumped Swift.

(*Cypselus caffer.*)

6. Indian Swift.

(*Cypselus affinis.*)

Genus II.—*Tachornis*

1. Palm Swift.

(*Tachornis parva.*)

Genus III.—*Chætura*

1. Reichenow's Spine-tail Swift.

(*Chætura stictilæma.*)

2. Böhm's Spine-tail Swift.

(*Chætura böhmi.*)

Family II.—Caprimulgidæ

Genus I.—*Caprimulgus*

1. European Night-Jar.

Nacht-Uil (Night-Owl); Isavolo (Zulus). (Both names are applied to all species of Night-Jars.)

(*Caprimulgus europæus.*)

2. Rufous-cheeked Night-Jar.

(*Caprimulgus rufigena.*)

3. Fiery-necked Night-Jar.

(*Caprimulgus fervidus.*)

LIST OF BIRDS OF SOUTH AFRICA

4. **South African Night-Jar.**

(*Caprimulgus pectoralis.*)

5. **Freckled Night-Jar.**

(*Caprimulgus trimaculatus.*)

6. **Mozambique Night-Jar.**

(*Caprimulgus fosii.*)

7. **Natal Night-Jar.**

(*Caprimulgus natalensis.*)

Genus II.—Cosmetornis

1. **Standard-wing Night-Jar.**

Amadamba (Mashonas); Manooella (Matabele).

(*Cosmetornis vexillarius.*)

SUBORDER III.—ANISODACTYLI

Family I.—Coraciidæ

Genus I.—Coracias

1. **European Roller.**

Blue Jay.

(*Coracias garrulus.*)

2. **Moselikatze's Roller.**

Moselikatze's Bird; Fefe (Zulus and Matabele);

Veve (Swazis); Le-cler-cler (Bechuanas).

(*Coracias caudatus.*)

3. **Racquet-tailed Roller.**

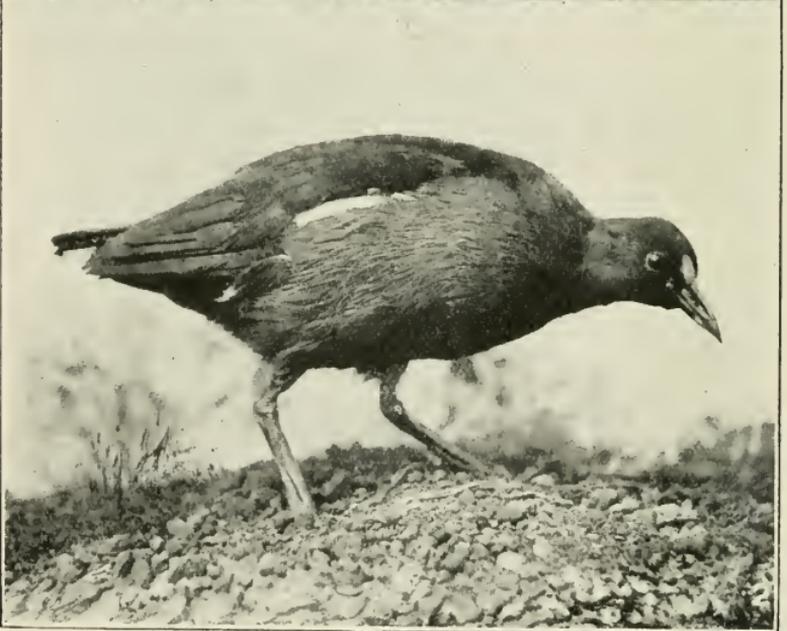
(*Coracias spatulatus.*)

4. **Purple Roller.**

(*Coracias mosambicus.*)

5. **Fawn-breasted Racquet-tailed Roller.**

(*Coracias weigalli.*)



1. Black Crake (*Limnocorax niger*).

2. Lesser Moor Hen (*Gallinula angulata*).

The crakes and moor hens frequent vleis, marshes, ponds, and rivers, and feed on insects, worms, and small crustacea; also on the water snails which are intermediary hosts of the Bilharzia parasite and liver fluke.

LIST OF BIRDS OF SOUTH AFRICA

Genus II.—Eurystomus

1. **Cinnamon Roller.**
Tchegala (Matabele).
(*Eurystomus afer.*)
2. **Madagascar Purple Roller.**
(*Eurystomus glaucurus.*)

Family II.—Meropidæ

Genus I.—Merops

1. **European Bee-Eater.**
Berg Zwaluw (Mountain Swallow); Makwirokwiro
(Mashonas).
(*Merops apiaster.*)
2. **Blue-cheeked Bee-Eater.**
(*Merops persicus.*)
3. **Böhm's Bee-Eater.**
(*Merops böhmi.*)
4. **Carmine-throated Bee-Eater.**
Inconyani (Matabele and Swazis).
(*Merops nubicoides.*)

Genus II.—Dicrocercus

1. **Swallow-tailed Bee-Eater.**
(*Dicrocercus hirundinous.*)

Genus III.—Melittophagus

1. **Little Bee-Eater.**
Iguondwana (Zulus).
(*Melittophagus meridionalis.*)

NATURAL HISTORY OF SOUTH AFRICA

2. **White-fronted Bee-Eater.**

Inkota (Zulus).

(*Melittophagus bullockoides.*)

Family III.—Alcedinidæ

Genus I.—Ceryle

1. **Pied Kingfisher.**

Isqula (Zulus).

(*Ceryle rudis.*)

2. **Giant Kingfisher.**

Isivuba (Zulus).

(*Ceryle maxima.*)

Genus II.—Alcedo

1. **Half-collared Kingfisher.**

Blauw Vischvanger.

(*Alcedo semitorquata.*)

Genus III.—Corythornis

1. **Malachite Kingfisher.**

Intangaza (Matabele).

(*Corythornis cyanostigma.*)

Genus IV.—Ispidina

1. **Natal Kingfisher.**

Ispigileni (Zulus).

(*Ispidina natalensis.*)

Genus V.—Halcyon

1. **Grey-headed Kingfisher.**

(*Halcyon swainsoni.*)

LIST OF BIRDS OF SOUTH AFRICA

2. **Brown-hooded Kingfisher.**
Bush Kingfisher ; 'Nongozolo (Zulus).
(*Halcyon albiventris.*)
3. **Peter's Kingfisher.**
(*Halcyon orientalis.*)
4. **Striped Kingfisher.**
(*Halcyon chelicuti.*)
5. **Angola Kingfisher.**
(*Halcyon cyanoleucus.*)
6. **Mangroove Kingfisher.**
(*Halcyon senegaloides.*)

Family IV.—Coliidæ

Genus I.—*Colius*

1. **Speckled Mouse Bird.**
Muis Vogel ; Indhlazi (Zulus).
(*Colius striatus.*)
2. **Natal Speckled Mouse Bird.**
(*Colius striatus minor.*)
3. **White-backed Mouse Bird.**
(*Colius capensis.*)
4. **Damara Coly.**
(*Colius capensis damarensis.*)
5. **Red-faced Mouse Bird.**
Ishivovu (Zulus).
(*Colius erythromelon.*)
6. **Cinnamon Coly, or Mouse Bird.**
(*Colius kirbyi.*)
7. **White-fronted Mouse Bird.**
(*Colius erythromelon lacteifrons.*)

NATURAL HISTORY OF SOUTH AFRICA

Family V.—Bucerotidæ

Genus I.—*Bucorax*

1. **Brom Vogel.**

Ground Hornbill; Turkey Buzzard; Brom Vogel;
Intsikizi (Amaxosa and Zulus).
(*Bucorax caffer.*)

Genus II.—*Bycanistes*

1. **Trumpeter Hornbill.**

Ikanati (Zulus).
(*Bycanistes buccinator.*)

2. **Crested Hornbill.**

(*Bycanistes cristatus.*)

Genus III.—*Lophoceros*

1. **Crowned Hornbill.**

Toucan; Umkolwana (Zulus).
(*Lophoceros melanoleucus.*)

2. **Monteiro's Hornbill.**

(*Lophoceros monteiri.*)

3. **South African Grey Hornbill.**

(*Lophoceros epirhinus.*)

4. **Red-billed Hornbill.**

Korwe (Bechuanas).
(*Lophoceros erythrorhynchus.*)

5. **Damaraland Hornbill.**

(*Lophoceros damarensis.*)

6. **Yellow-billed Hornbill.**

Mkoto.
(*Lophoceros leucomelas.*)

7. **Neumann's Hornbill.**

(*Lophoceros neumanni.*)



Red-knobbed Coot (*Fulica cristata*) at its nest on the margin of a pond.
The Coot eats water snails which are the intermediary hosts of disease in man and beast.

NATURAL HISTORY OF SOUTH AFRICA

SUBORDER IV.—TROGONES

Family I.—Trogonidæ

Genus I.—*Hapaloderma*

1. **Narina Trogon.**
Bosch Lourie ; Umjenimengu (Zulus)
(*Hapaloderma narina*.)

SUBORDER V.—ZYGODACTYLI

Family I.—Picidæ

SUBFAMILY I.—PICINÆ

Genus I.—*Geocolaptes*

1. **Ground Woodpecker.**
(*Geocolaptes olivaceus*.)

Genus II.—*Campothera*

1. **Knysna Woodpecker.**
Hout-Kapper.
(*Campothera notata*.)
2. **Golden-tailed Woodpecker.**
(*Campothera abingdoni*.)
3. **Smith's Woodpecker.**
(*Campothera smithi*.)
4. **Bennett's Woodpecker.**
(*Campothera bennetti*.)
5. **Capricorn Woodpecker.**
(*Campothera bennetti capricornis*.)

LIST OF BIRDS OF SOUTH AFRICA

Genus III.—Dendropicus

1. **Eastern Cardinal Woodpecker.**
(*Dendropicus hartlaubi.*)
2. **Cardinal Woodpecker.**
Rooi-Bont Hout-Kapper.
(*Dendropicus cardinalis.*)
3. **Malherbe's Woodpecker.**
(*Dendromus malherbei.*)
4. **Black-tailed Woodpecker.**
(*Dendromus scriptoricauda.*)

Genus IV.—Thripias

1. **Bearded Woodpecker.**
Isigopamuti (Zulus).

Genus V.—Mesopicus

1. **Olive Woodpecker.**
(*Mesopicus griseocephalus.*)

SUBFAMILY II.—IYNGINÆ

Genus I.—Iynx

1. **South African Wryneck.**
Scheef Nek.
(*Iynx ruficollis.*)

Family II.—Indicatoridæ

Genus I.—Indicator

1. **Sparrman's Honey Guide.**
Inhlara (Zulus).
(*Indicator sparrmani.*)

NATURAL HISTORY OF SOUTH AFRICA

2. **Yellow-throated Honey Guide.**

Ingede (Zulus).
(*Indicator major.*)

3. **Scaly-throated Honey Guide.**

(*Indicator variegatus.*)

4. **Lesser Honey Guide.**

Honig Vogel.
(*Indicator minor.*)

Genus II.—Prodotiscus

1. **Wahlberg's Honey Guide.**

(*Prodotiscus regulus.*)

Family III.—Capitonidæ

Genus I.—Lybius

1. **Black-collared Barbet.**

Isikurukuru (Zulus).
(*Lybius torquatus.*)

2. **Zomba Barbet.**

(*Lybius zombæ.*)

Genus II.—Tricholæma

1. **Pied Barbet.**

(*Tricholæma leucomelas.*)

2. **Shelley's Barbet.**

(*Tricholæma affinis.*)

Genus III.—Stactolæma

1. **White-eared Barbet.**

(*Stactolæma leucotis.*)

LIST OF BIRDS OF SOUTH AFRICA

2. **Sowerby's Barbet.**
(*Stactolæma sowerbyi.*)
3. **Woodward's Green Barbet.**
(*Stactolæma woodwardi.*)

Genus IV.—*Barbatula*

1. **Tinker Bird.**
Ipengempe (Zulus).
(*Barbatula pusilla.*)
2. **Exton's Tinker Bird.**
(*Barbatula extoni.*)
3. **White-browed Tinker.**
(*Barbatula bilineata.*)

Genus V.—*Trachyphonus*

1. **Levaillant's Barbet.**
(*Trachyphonus cafer.*)

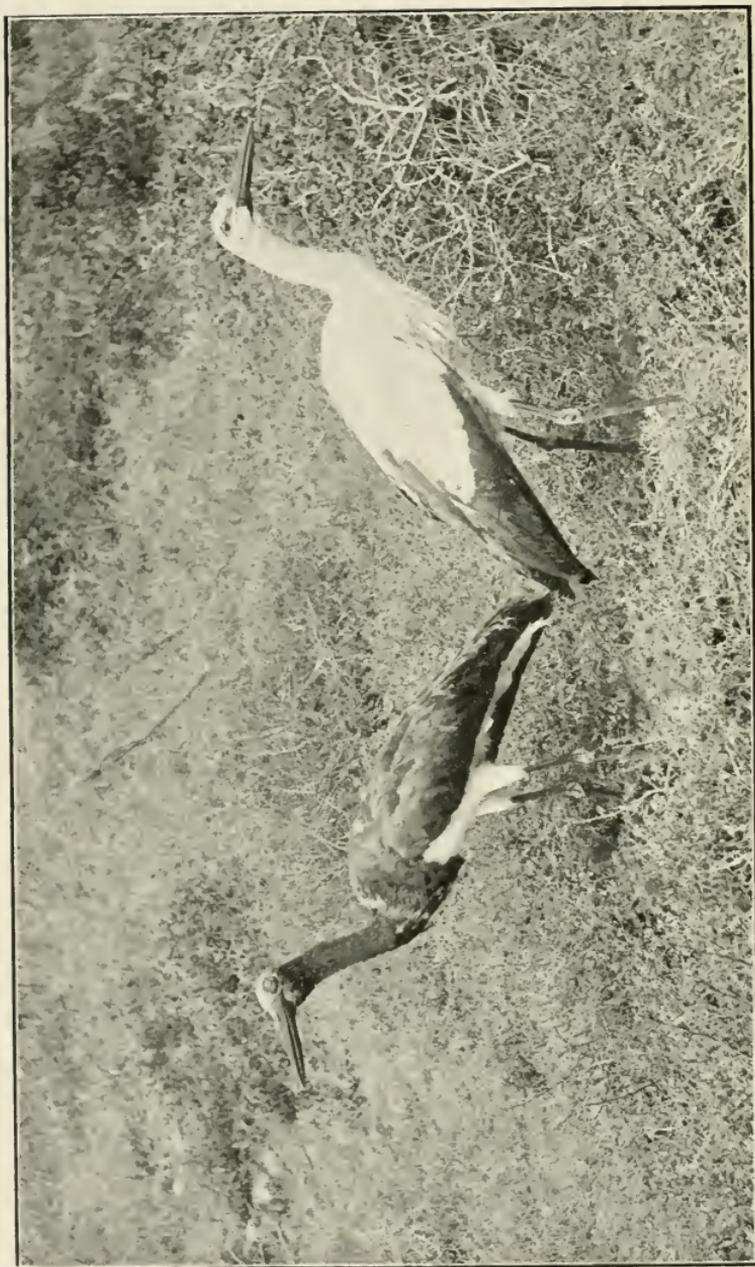
SUBORDER VI.—COCCYGES

Family I.—Cuculidæ

SUBFAMILY I.—CUCULINÆ

Genus I.—*Cuculus*

1. **South African Cuckoo.**
(*Cuculus gularis.*)
2. **European Cuckoo.**
(*Cuculus canorus.*)
3. **Smaller Cuckoo.**
(*Cuculus poliocephalus.*)



2.

1.

1. The Black Stork (*Ciconia nigra*).
2. The White Stork, or Great Locust Bird (*Ciconia alba*).

These storks migrate to South Africa in the summer, and feed on insect pests. The white stork is man's most efficient feathered ally in his war against locusts and grasshoppers.

LIST OF BIRDS OF SOUTH AFRICA

4. **Red-chested Cuckoo.**

Piet-Mijn-Vrouw ; Pezukomkono (Zulus).

(*Cuculus solitarius.*)

5. **Black Cuckoo.**

(*Cuculus clamosus.*)

Genus II.—Chrysococcyx

1. **Emerald Cuckoo.**

Bantwanyana (Zulus).

(*Chrysococcyx smaragdineus.*)

2. **Klaas' Cuckoo.**

Meitje.

(*Chrysococcyx klassi.*)

3. **Didric Cuckoo ; Golden Cuckoo.**

(*Chrysococcyx cupreus.*)

Genus III.—Coccytes

1. **Great Spotted Cuckoo.**

(*Coccytes glandarius.*)

2. **Black and White Cuckoo.**

(*Coccytes jacobinus.*)

3. **Black and Grey Cuckoo.**

(*Coccytes hypopinarius.*)

4. **Levaillant's Cuckoo.**

Inkanku (Zulus).

(*Coccytes cafer.*)

5. **Black-crested Cuckoo.**

Nieuwjaars Vogel.

(*Coccytes serratus.*)

NATURAL HISTORY OF SOUTH AFRICA

SUBFAMILY II.—CENTROPODINÆ

Genus I.—Centropus

1. **Burchell's Coucal.**
Vlei Lourie ; Ufukwe (Zulus) ; Fouqua.
(*Centropus burchelli.*)
2. **Senegal Coucal.**
(*Centropus senegalensis.*)
3. **Fleck's Coucal.**
(*Centropus flecki.*)
4. **Bronzy-tailed Coucal.**
(*Centropus cupreicauda.*)
5. **White-browed Coucal.**
(*Centropus supercilliosus.*)
6. **Natal Coucal.**
(*Centropus nigrorufus.*)

Genus II.—Ceuthmochares

1. **Green Coucal.**
(*Ceuthmochares australis.*)

Family II.—Musophagidæ

Genus I.—Turacus

1. **Knysna Plantain Eater, or Lourie.**
Lourie ; Igolomi (Amaxosa) ; Igwalawala (Zulus).
(*Turacus corythaix.*)
2. **Transvaal Lourie.**
(*Turacus corythaix phæbus.*)
3. **Livingstone's Lourie.**
(*Turacus livingstonii.*)



PLATE X.—South African Lanner (*Falco biarmicus*).
The Lanner is a bold and merciless hunter.

LIST OF BIRDS OF SOUTH AFRICA

4. **Reichenow's Lourie.**

(*Turacus reichenowr.*)

Genus II.—Gallirex

1. **Purple-crested Lourie.**

(*Gallirex porphyreolophus.*)

2. **Zambesi Purple-crested Lourie.**

(*Gallirex chlorochlamys.*)

Genus III.—Schizorhis

1. **Grey Lourie.**

Go-Way Bird; Groote Muis Vogel; Maquaai
(Bechuanas).

(*Schizorhis concolor.*)

Order III.—PSITTACI

Family I.—Psittacidæ

SUBFAMILY I.—PIONINÆ

Genus I.—Pæocephalus

1. **Levaillant's Parrot.**

Isikweyiya (Amaxosa); Isikwenene (Zulus).
(*Pæocephalus robustus.*)

2. **Meyer's Parrot.**

(*Pæocephalus meyeri.*)

3. **Meyer's Parrot** (Transvaal form).

(*Pæocephalus meyeri transvaalensis.*)

4. **Meyer's Parrot** (Damara form).

(*Pæocephalus meyeri damarensis.*)

NATURAL HISTORY OF SOUTH AFRICA

5. **Ruppell's Parrot.**

(*Pæocephalus ruppelli.*)

SUBFAMILY II.—PALÆORNITHINÆ

Genus I.—Agapornis

1. **Rosy-faced Lovebird.**

(*Agapornis roseicollis.*)

2. **Nyassaland Lovebird.**

(*Agapornis lilianæ.*)

3. **Black-faced Lovebird.**

(*Agapornis nigrigenis.*)

Order IV.—STRIGES

Family I.—Strigidæ

Genus I.—Strix

1. **Barn Owl.**

Dood Vogel.

(*Strix flammea.*)

2. **Grass Owl.**

(*Strix capensis.*)

Family II.—Bubonidæ

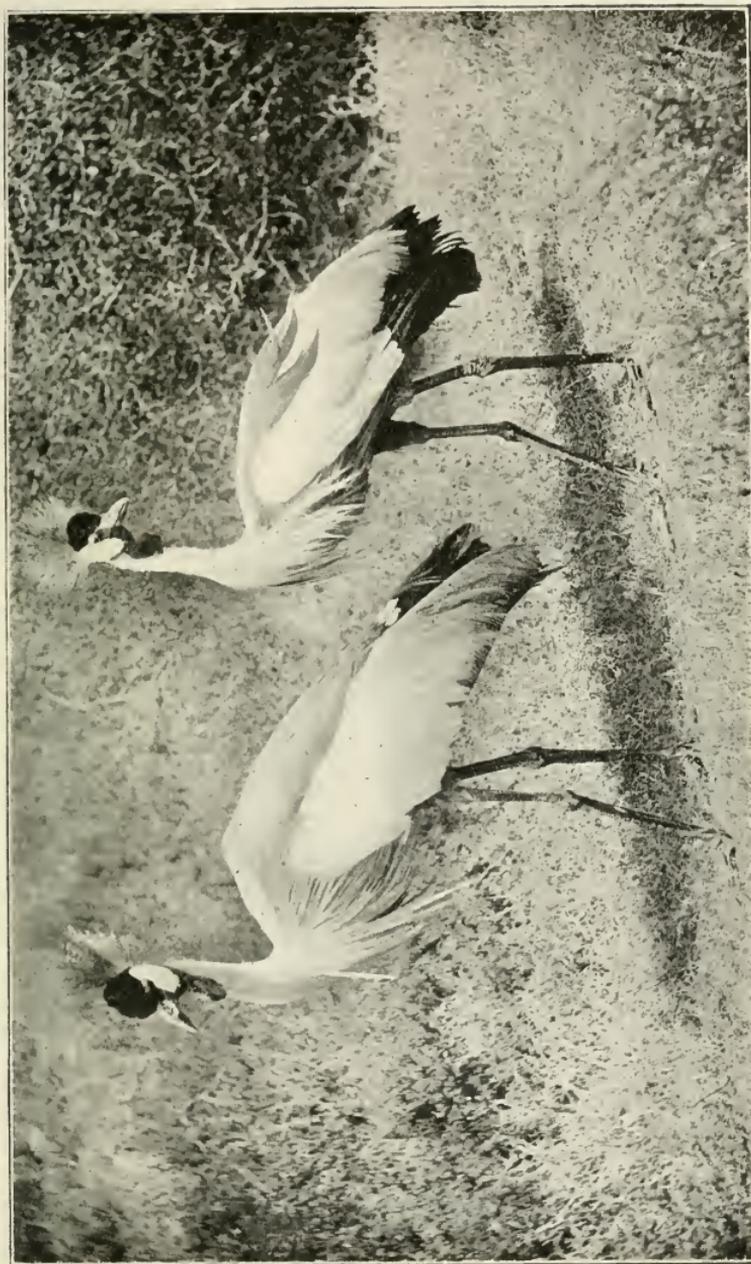
Genus I.—Asio

1. **Marsh Owl.**

(*Asio capensis.*)

2. **White-faced Owl.**

(*Asio leucotis.*)



The Crowned Crane, or Mahem (*Balerica regulorum*), which preys on the larger insect pests and their larvæ. When reared in captivity it becomes as tame as tame as domestic fowl, and will keep the vicinity of the homestead free from many species of insect pests.

NATURAL HISTORY OF SOUTH AFRICA

Genus II.—Syrnium

1. **Woodford's Owl.**
Ibengwana (Zulus).
(*Syrnium woodfordi.*)

Genus III.—Bubo

1. **Cape Eagle Owl.**
(*Bubo capensis.*)
2. **Spotted Eagle Owl.**
Isikuluhulu (Amaxosa); Isikora (Zulus).
(*Bubo maculosus.*)
3. **Verreaux's Eagle Owl.**
(*Bubo lacteus.*)
4. **Damara Eagle Owl.**
(*Bubo ascalaphus trothæ.*)

Genus IV.—Scops

1. **Cape Scops Owl.**
(*Scops capensis.*)

Genus V.—Glaucidium

1. **Pearl-spotted Owl.**
Mundugulu (Zulus).
(*Glaucidium perlatum.*)
2. **Barred Owl.**
(*Glaucidium capense.*)

Genus VI.—Scotopelia

1. **Pel's Fishing Owl.**
(*Scotopelia peli.*)

LIST OF BIRDS OF SOUTH AFRICA

Order V.—ACCIPITRES

Family I.—Falconidæ

Genus I.—Falco

1. **South African Peregrine**
(*Falco minor.*)
2. **Peregrine Falcon.**
(*Falco peregrinus.*)
3. **South African Lanner.**
(*Falco biarmicus.*)
4. **Hobby.**
(*Falco subbuteo.*)
5. **African Hobby.**
(*Falco cuvieri.*)
6. **Red-necked Falcon.**
(*Falco ruficollis.*)

Genus II.—Tinnunculus

1. **South African Kestrel.**
Roodevalk ; Rooivalk, or Steenvalk
(*Tinnunculus rupicolus.*)
2. **Larger Kestrel.**
(*Tinnunculus rupicoloides.*)
3. **Lesser Kestrel.**
(*Tinnunculus naumanni.*)
4. **Western Red-legged Kestrel.**
(*Tinnunculus vespertinus.*)
5. **Eastern Red-legged Kestrel.**
(*Tinnunculus amurensis.*)

NATURAL HISTORY OF SOUTH AFRICA

6. Dickinson's Kestrel.

(*Tinnunculus dickinsoni.*)

Genus III.—Baza

1. Cuckoo Falcon.

(*Baza verreauxi.*)

Genus IV.—Poliohierax

1. Pygmy Falcon.

(*Poliohierax semitorquatus.*)

Genus V.—Aquila

1. Verreaux's Eagle.

Dassievanger, or Berghaan ; Nomakwezana
(Amaxosa).

(*Aquila verreauxi.*)

2. Tawny Eagle.

Chok, or Coo Vogel.

(*Aquila rapax.*)

3. Wahlberg's Eagle.

(*Aquila wahlbergi.*)

Genus VI.—Eutolmætus

1. Booted Eagle.

(*Eutolmætus pennatus.*)

2. African Hawk Eagle.

(*Eutolmætus spilogaster.*)

3. Martial Eagle.

(*Eutolmætus bellicosus.*)

Genus VII.—Spizætus

1. Crowned Hawk Eagle.

(*Spizætus coronatus.*)

LIST OF BIRDS OF SOUTH AFRICA

Genus VIII.—Lophoætus

1. **Crested Hawk Eagle.**

Kuifkop Valk ; Black Hawk ; Isipumongati
(*i.e.*, Fool) (Zulus).
(*Lophoætus occipitalis*.)

Genus IX.—Haliætus

1. **Sea Eagle.**

Groote Visch Vanger ; Oudekeloek ; Inkwazi
(Zulus).
(*Haliætus vocifer*.)

Genus X.—Helotarsus

1. **Bateleur.**

Berghaan.
(*Helotarsus ecaudatus*.)

Genus XI.—Gypohierax

1. **Vulturine Sea Eagle.**

(*Gypohierax angolensis*.)

Genus XII.—Gypætus

1. **Southern Lammergeyer.**

Olukulu (Amaxosa).
(*Gypætus ossifragus*.)

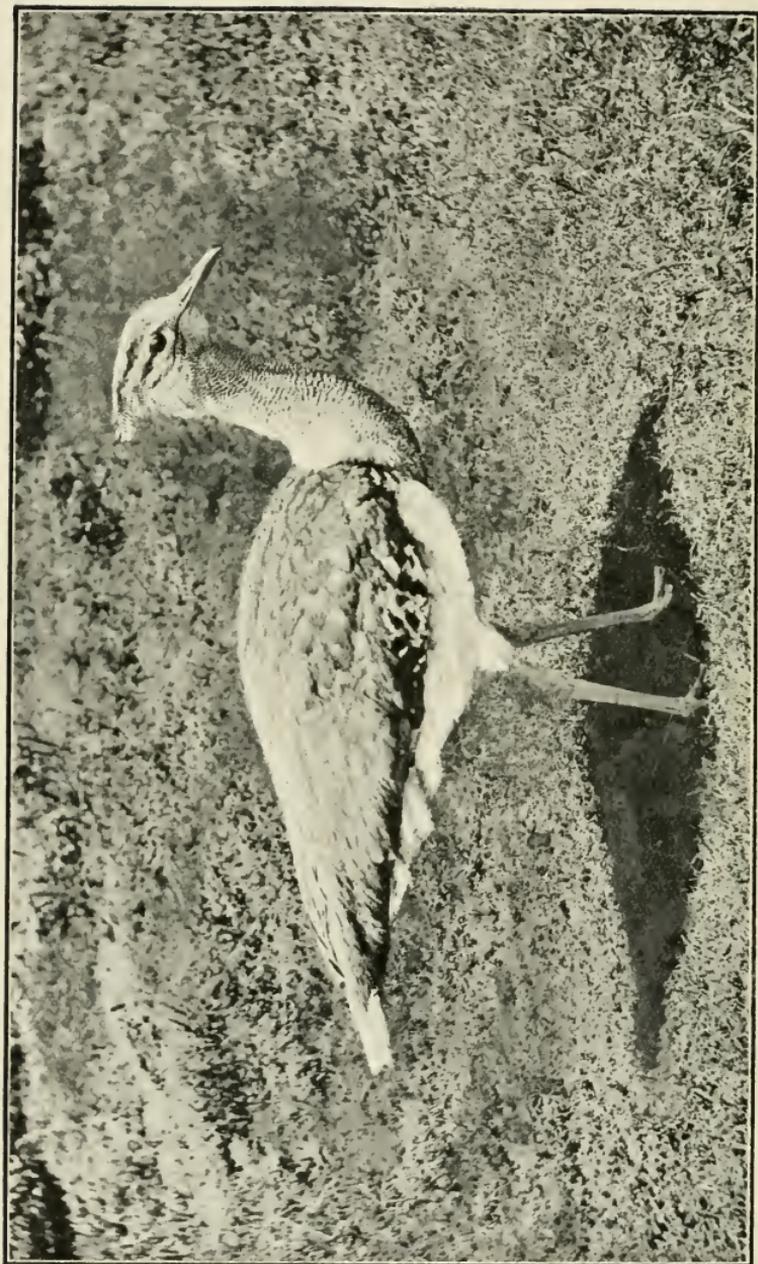
Genus XIII.—Circætus

1. **Black-breasted Harrier Eagle.**

(*Circætus pectoralis*.)

2. **Banded Harrier Eagle.**

(*Circætus fasciolatus*.)



Giant Bustard, or Gom Paauw (*Otis kori*), female. This large bustard feeds exclusively on grasshoppers, locusts, and other pests which infest the South African veld; but because its flesh is good to eat, men have almost exterminated it. Such is the wisdom of man.

LIST OF BIRDS OF SOUTH AFRICA

Genus XIV.—Asturinula

1. **African Buzzard Eagle.**
(*Asturinula monogrammica.*)
2. **Northern Buzzard Eagle.**
(*Asturinula monogrammica meridionalis.*)

Genus XV.—Buteo

1. **Jackal Buzzard.**
Jakkals Vogel ; Inhlandhlokaxi (Zulus).
(*Buteo jakal.*)
2. **Augur Buzzard.**
(*Buteo augur.*)
3. **Steppe Buzzard.**
(*Buteo desertorum.*)

Genus XVI.—Milvus

1. **Yellow-billed Kite.**
Kuiken Dief (*i.e.*, Chicken Thief) ; Untloyiya
(Amaxosa).
(*Milvus aegyptius.*)
2. **Black Kite.**
(*Milvus korschun.*)

Genus XVII.—Elanus

1. **Black-shouldered Kite.**
Witte Sperwel ; Urebe (Zulus).
(*Elanus ceruleus.*)

Genus XVIII.—Machærhamphus

1. **Andersson's Pern.**
(*Machærhamphus anderssoni.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus XIX.—*Pernis*

1. Honey Buzzard.

(*Pernis apivorus.*)

Genus XX.—*Accipiter*

1. Little Sparrow Hawk.

(*Accipiter minullus.*)

2. Pale Sparrow Hawk.

(*Accipiter minullus tropicalis.*)

3. African Sparrow Hawk.

Unhloile (Zulus).

(*Accipiter rufiventris.*)

4. Ovampo Sparrow Hawk.

(*Accipiter ovampensis.*)

5. Black Sparrow Hawk.

(*Accipiter melanoleucus.*)

Genus XXI.—*Astur*

1. African Goshawk.

(*Astur tachiro.*)

2. Little Banded Goshawk.

(*Astur polyzonoides.*)

Genus XXII.—*Melierax*

1. Chanting Goshawk.

Blaauw Valk.

(*Melierax canorus.*)

2. Mechow's Goshawk.

(*Melierax mechowi.*)

LIST OF BIRDS OF SOUTH AFRICA

3. **Gabar Goshawk.**

Klein Sperwel.
(*Melierax gabar.*)

4. **Black Gabar.**

(*Melierax niger.*)

Genus XXIII.—Circus

1. **Montagu's Harrier.**

(*Circus cineraceus.*)

2. **Pale Harrier.**

(*Circus macrurus.*)

3. **Black Harrier.**

Wit Kruis Valk.
(*Circus maurus.*)

4. **Marsh Harrier.**

(*Circus æruginosus.*)

5. **South African Harrier.**

Kikvorsch Vanger (*i.e.*, Frog Catcher).
(*Circus ranivorus.*)

Genus XXIV.—Polyboroides

1. **Harrier Hawk.**

(*Polyboroides typicus.*)

Family II.—Vulturidæ

Genus I.—Gyps

1. **Kolbe's Vulture.**

Aasvogel (*i.e.*, Carrion Bird), or Witte Aasvogel;
Xalanga (Amaxosa); Inge (Zulus).
(*Gyps kolbii.*)

NATURAL HISTORY OF SOUTH AFRICA

2. **Ruppell's Vulture.**

(*Gyps rueppelli.*)

Genus II.—Pseudogyps

1. **African White-backed Vulture**

(*Pseudogyps africanus.*)

Genus III.—Otogyps

1. **Black Vulture.**

Zwarte Aasvogel.

(*Otogyps auricularis.*)

Genus IV.—Lophogyps

1. **White-headed Vulture.**

(*Lophogyps occipitalis.*)

Genus V.—Neophron

1. **Egyptian Vulture.**

Pharaoh's Hen, or Pharaoh's Chicken ; Witte Kraai.

(*Neophron percnopterus.*)

Genus VI.—Necrosyrtes

1. **Hooded Vulture.**

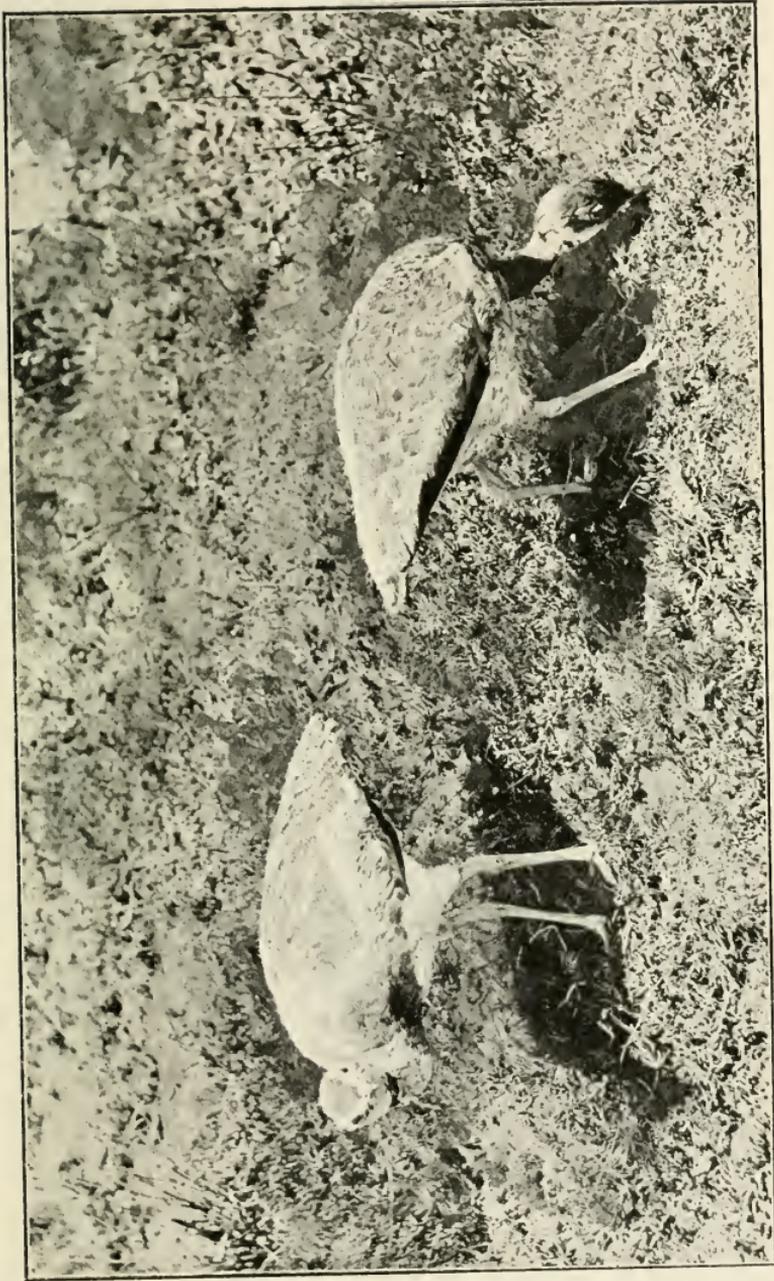
(*Necrosyrtes pileatus.*)

Family III.—Pandionidæ

Genus I.—Pandion

1. **Osprey.**

(*Pandion haliaetus.*)



Barrow's Knorhaan, or Bustard (*Otis barrowii*), male and female.

There are many species of bustards inhabiting the South African veld. In our struggle for existence against the insect hordes these bustards are all valuable allies, therefore no man's hand should be raised against them.

NATURAL HISTORY OF SOUTH AFRICA

Family IV.—Serpentariidæ

Genus I.—Serpentarius

1. Secretary Bird.

Slang Vreter (Snake Eater), or Secretaris; Inx-anxosi (Amaxosa); Intungunono (Zulus).
(*Serpentarius secretarius*.)

Order VI.—STEGANOPODES

Family I.—Phalacrocoracidæ

SUBFAMILY I.—PHALACROCORACINÆ

Genus I.—Phalacrocorax

1. White-breasted Duiker.

(*Phalacrocorax lucidus*.)

2. Trek Duiker.

Cape Cormorant.

(*Phalacrocorax capensis*.)

3. Bank Duiker.

(*Phalacrocorax neglectus*.)

4. Reed Duiker.

Crown Duiker; Long-tailed Cormorant.

(*Phalacrocorax africanus*.)

SUBFAMILY II.—PLOTINÆ

Genus I.—Plotus

1. Snake Bird.

Anhinga; Darter; Sweet-Water Duiker.

(*Plotus rufus*.)

LIST OF BIRDS OF SOUTH AFRICA

Family II.—Sulidæ

Genus I.—Sula

1. **Malagash.**
Cape Gannet.
(*Sula capensis.*)
2. **Masked Booby.**
(*Sula cyanops.*)
3. **Brown Booby.**
(*Sula leucogastra.*)

Family III.—Fregatidæ

Genus I.—Fregata

1. **Frigate Bird.**
(*Fregata aquila.*)

Family IV.—Phæthontidæ

Genus I.—Phæthon

1. **Red-tailed Tropic Bird.**
(*Phæthon rubricauda.*)

Family V.—Pelecanidæ

Genus I.—Pelecanus

1. **Eastern White Pelican.**
(*Pelecanus roseus.*)
2. **Pink-backed Pelican.**
(*Pelecanus rufescens.*)

NATURAL HISTORY OF SOUTH AFRICA

Order VII.—HERODIONES

Family I.—Ciconiidæ

Genus I.—*Abdimia*

1. **White-bellied Stork.**

(*Abdimia abdimii.*)

Genus II.—*Dissura*

1. **Woolly-necked Stork.**

(*Dissura microscelis.*)

Genus III.—*Ciconia*

1. **White Stork.**

Great Locust Bird ; Springhaans Vogel ; Ingo-
lantete (Zulus).

(*Ciconia alba.*)

2. **Black Stork.**

(*Ciconia nigra.*)

Genus IV.—*Anastomus*

1. **African Open Bill.**

(*Anastomus lamelligerus.*)

Genus V.—*Ephippiorhynchus*

1. **Saddle Bill, or African Jabiru.**

(*Ephippiorhynchus senegalensis.*)

Genus VI.—*Leptopilus*

1. **Marabou.**

(*Leptopilus crumeniferus.*)

Genus VII.—*Pseudotantalus*

1. **Wood Ibis.**

(*Pseudotantalus ibis.*)

LIST OF BIRDS OF SOUTH AFRICA

Family II.—Scopidæ

Genus I.—*Scopus*

1. **Hammerkop.**

Paddevanger (*i.e.*, Toad Catcher); Mud Lark;
Utekwane (Amaxosa); Itegwana (Zulus);
Machanoka (Transvaal).
(*Scopus umbretta.*)

Family III.—Ardeidæ

Genus I.—*Ardea*

1. **Goliath Heron.**

(*Ardea goliath.*)

2. **Grey Heron.**

(*Ardea cinerea.*)

3. **Black-headed Heron.**

(*Ardea melanocephala.*)

4. **Purple Heron.**

(*Ardea purpurea.*)

Genus II.—*Herodias*

1. **Great White Egret.**

(*Herodias alba.*)

2. **Yellow-billed Egret.**

Intarga (Matabele).

(*Herodias brachyrhyncha.*)

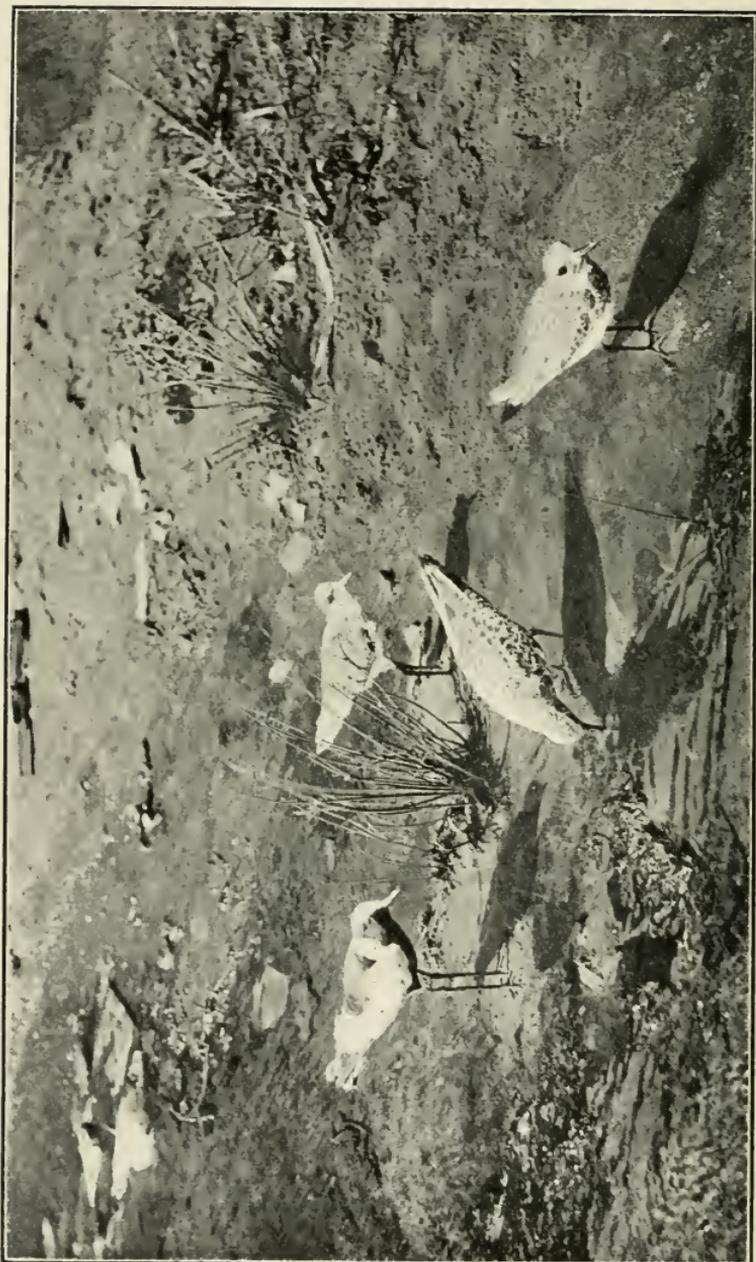
3. **Little Egret.**

(*Herodias garzetta.*)

Genus III.—*Melanophoyx*

1. **Black Heron.**

(*Melanophoyx ardesiaca.*)



Blacksmith Plover (*Hoplopterus armatus*) and three Grey Plovers (*Squatarola hebetica*) in their home on the mud flats.

LIST OF BIRDS OF SOUTH AFRICA

2. **Red-throated Heron.**

(*Melanophoyx vinaceigula.*)

Genus IV.—Bubulcus

1. **Cattle Egret.**

Buff-backed Egret ; Tick Bird ; Mafudsangombo
(*i.e.*, Cattle Herd) (Mashonas).

(*Bubulcus ibis.*)

Genus V.—Ardeola

1. **Squacco Heron.**

(*Ardeola ralloides.*)

Genus VI.—Erythrocnus

1. **Rufous-bellied Heron.**

(*Erythrocnus rufiventris.*)

Genus VII.—Butorides

1. **Green-backed Heron.**

(*Butorides atricapilla.*)

Genus VIII.—Nycticorax

1. **Night Heron.**

(*Nycticorax griseus.*)

2. **White-backed Night Heron.**

(*Nycticorax leuconotus.*)

Genus IX.—Ardetta

1. **Red-necked Little Bittern.**

(*Ardetta payesi.*)

NATURAL HISTORY OF SOUTH AFRICA

2. **European Little Bittern.**

(*Ardetta minuta.*)

3. **African Dwarf Bittern.**

(*Ardetta sturmi.*)

Genus X.—Botaurus

1. **Cape Bittern.**

Roerdomp.

(*Botaurus capensis.*)

Family IV.—Ibididæ

Genus I.—Ibis

1. **Sacred Ibis.**

Schoorsteen Veger (*i.e.*, Chimney Sweeper).

(*Ibis æthiopica.*)

Genus II.—Geronticus

1. **Bald Ibis.**

Wilde Kalkoen, or Wild Turkey; Umewangele
(Amaxosa).

(*Geronticus calvus.*)

Genus III.—Hagedashia

1. **Hadada.**

Ingagane (*i.e.*, Black Ibis) (Amaxosa).

(*Hagedashia hagedash.*)

Genus IV.—Plegadis

1. **Glossy Ibis.**

(*Plegadis falcinellus.*)

LIST OF BIRDS OF SOUTH AFRICA

Family V.—Plataleidæ

Genus I.—Platalea

1. African Spoon Bill.

(*Platalea alba.*)

Order VIII.—ODONTOGLOSSÆ

Family I.—Phœnicopteridæ

Genus I.—Phœnicopterus

1. Greater Flamingo.

(*Phœnicopterus roseus.*)

-2. Lesser Flamingo.

(*Phœnicopterus minor.*)

Order IX.—ANSERES

Family I.—Anatidæ

Genus I.—Plectropterus

1. Spur-winged Goose.

Wilde Maccauw, or Maccoa; Peele Peele (Bechu-
anas); Isikwi (Kafirs); Letsikhin (Basutos).

(*Plectropterus gambensis.*)

2. Black Spur-winged Goose.

(*Plectropterus niger.*)



2.

1. A River-side Scene near Maritzburg, Natal.

1. Solitary Snipe (*Gallinago major*).
2. Painted Snipe (*Rostratula capensis*) in act of flying.
Snipe feed on marsh frequenting soft-bodied insect life and young fresh water snails. They are all of economic value and should not be shot for sport.

LIST OF BIRDS OF SOUTH AFRICA

Genus II.—Sarcidiornis

1. **Knob-billed Duck.**
Comb Duck.
(*Sarcidiornis melanonota.*)

Genus III.—Nettopus

1. **Dwarf Goose.**
(*Nettopus auritus.*)

Genus IV.—Dendrocygna

1. **White-faced Duck.**
Masked Duck.
(*Dendrocygna viduata.*)
2. **Whistling Duck.**
(*Dendrocygna fulva.*)

Genus V.—Alopochen

1. **Berg Gans.**
Egyptian, or Nile Goose; Isikwi (Amaxosa);
Lefalva (Basutos).
(*Alopochen aegyptiacus.*)

Genus VI.—Casarca

1. **South African Shelduck.**
Berg Eend.
(*Casarca cana.*)

Genus VII.—Anas

1. **Geelbec, or Yellow Bill.**
(*Anas undulata.*)
2. **Black Duck.**
Idada (Amaxosa and Zulus).

NATURAL HISTORY OF SOUTH AFRICA

Genus VIII.—Nettion

1. **Cape Widgeon.**

Teal Eendje.

(*Nettion capense.*)

2. **Hottentot Teal.**

(*Nettion punctatum.*)

Genus IX.—Pæcilonetta

1. **Red Bill.**

Smee Eendje ; Semto Letata (Basutos).

(*Pæcilonetta erythrorhyncha.*)

Genus X.—Spatula

1. **European Shoveller.**

(*Spatula clypeata.*)

2. **Cape Shoveller.**

Slop.

(*Spatula capensis.*)

Genus XI.—Nyroca

1. **South African Pochard.**

(*Nyroca erythrophthalma.*)

Genus XII.—Thalassornis

1. **White-backed Duck.**

(*Thalassornis leuconota.*)

Genus XIII.—Erismatura

1. **Maccoa Duck.**

(*Erismatura maccoa.*)

LIST OF BIRDS OF SOUTH AFRICA

Order X.—COLUMBÆ

Family I.—Treronidæ

Genus I.—Vinago

1. **Delalande's Green Pigeon.**
Ijubantoto (Zulus).
(*Vinago de'lalandii.*)
2. **Schalow's Green Pigeon.**
(*Vinago schalowi.*)

Family II.—Columbidæ

Genus I.—Columba

1. **Speckled Pigeon.**
Bosch Duif; Ivukutu (Amaxosa); Leeba
(Basutos).
(*Columba phæonota.*)
2. **Olive Pigeon.**
Rameroon Pigeon; Oliven Duif, or Bosch Duif;
Black Pigeon; Izuba (Amaxosa).
(*Columba arquatrix.*)

Genus II.—Turturæna

1. **Delagorgue's Pigeon.**
(*Turturæna delagorguei.*)

Genus III.—Turtur

1. **Red-eyed Dove.**
Ihobe (Zulus).
(*Turtur semitorquatus.*)

NATURAL HISTORY OF SOUTH AFRICA

2. **Bocage's Red-eyed Dove.**

(*Turtur ambiguus.*)

3. **Cape Turtle Dove.**

Tortel Duif; Ehobi (Zulus).

(*Turtur capicola.*)

4. **Tropical Turtle Dove.**

(*Turtur capicola tropicus.*)

5. **Damara Turtle Dove.**

(*Turtur capicola damarensis.*)

6. **Laughing Dove.**

Leeba Khoroana (Basutos).

(*Turtur senegalensis.*)

Genus IV.—Æna

1. **Namaqua Dove.**

Namaqua Duif; Igombosa (Zulus).

(*Æna capensis.*)

Genus V.—Tympanistria

1. **Tambourine Dove.**

White-breasted Dove; Isebelu (Zulus).

(*Tympanistria bicolor.*)

Genus VI.—Chalcopelia

1. **Emerald-spotted Dove.**

Isikombazena (Zulus).

(*Chalcopelia afra.*)

2. **Damara Emerald-spotted Dove.**

(*Chalcopelia afra volkmanni.*)

Genus VII.—Haplopetia

1. **Lemon Dove.**

Cinnamon, or Lemon Dove; Lamœn Duif.

(*Haplopetia larvata.*)

LIST OF BIRDS OF SOUTH AFRICA

Order XI.—PTEROCLETES

Family I.—Pteroclidæ

Genus I.—Pterocles

1. **Spotted Sand Grouse.**
Gheel Patrijs.
(*Pterocles variegatus.*)
2. **Yellow-throated Sand Grouse.**
Nacht Patrijs.
(*Pterocles gutturalis.*)
3. **Double-banded Sand Grouse.**
(*Pterocles bicinctus.*)

Genus II.—Pteroclorus

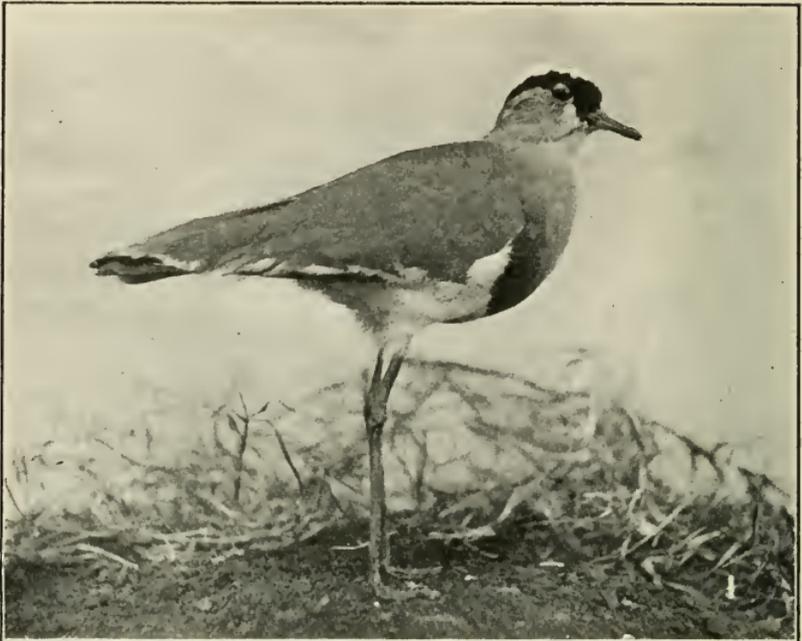
1. **Namaqua Sand Grouse.**
Namaqua Partridge ; Namaqua Patrijs, or Kelkje
Wijn.
(*Pteroclorus namaqua.*)

Order XII.—GALLINÆ

Family I.—Phasianidæ

Genus I.—Francolinus

1. **Coqui.**
Iswempe (Zulus).
(*Francolinus coqui.*)
2. **Angola Coqui.**
(*Francolinus coqui angolensis.*)
3. **Crested Francolin.**
Inkwali (Zulus).
(*Francolinus sephæna.*)



1. The Crowned Lapwing, or Kiewitje (*Stephanibyx coronatus*), is one of Nature's most efficient policemen of the veld.
2. The Curlew (*Numenius arquatus*) frequents the sea beach, marshes, mud flats, and tidal rivers, and feeds on insects, worms, and crustacea. It often ventures inland, and may be seen searching for insects on the veld.

LIST OF BIRDS OF SOUTH AFRICA

4. **Grey-Wing, or Cape Partridge.**
Patrijs, or Berg Patrijs ; Intendele, or Isilwatsha
(Amaxosa) ; Khuale (Basutos).
(*Francolinus africanus.*)
5. **Cape Red-Wing.**
Red-Wing ; Hill Red-Wing ; Itendele (Zulus).
(*Francolinus levaillanti.*)
6. **Orange River Francolin.**
Red-Wing.
(*Francolinus gariensis.*)
7. **Buttikofer's Francolin.**
(*Francolinus jugularis.*)
8. **Shelley's Francolin.**
Thorn Red-Wing ; Isendele (Zulus).
(*Francolinus shelleyi.*)
9. **Red-billed Francolin.**
(*Francolinus adspersus.*)
10. **Noisy Francolin, or Cape Pheasant.**
Pheasant ; Fazant.
(*Francolinus capensis.*)
11. **Natal Francolin.**
Coast Partridge ; Namaqua Pheasant ; Insek-
vehle (Zulus) ; Lesogo (Bechuanas).
(*Francolinus natalensis.*)
12. **Kirk's Francolin.**
(*Francolinus kirki.*)

Genus II.—Pternistes

1. **Red-necked Francolin.**
Pheasant ; Red-necked Pheasant.
(*Pternistes nudicollis.*)

NATURAL HISTORY OF SOUTH AFRICA

2. **Humboldt's Francolin.**

(*Pternistes humboldti.*)

3. **Swainson's Francolin.**

(*Pternistes swainsoni.*)

Genus III.—Coturnix

1. **Cape Quail.**

Kwartzel ; Isagwityi (Amaxosa) ; Kue Kue
(Basutos).

(*Coturnix africana.*)

2. **Harlequin Quail.**

Leguatha (Matabele).

(*Coturnix delagorguei.*)

Genus IV.—Excalfactoria

1. **Blue Quail.**

(*Excalfactoria adansoni.*)

Genus V.—Numida

1. **Crowned Guinea-Fowl.**

Tarantal ; Impangele (Amaxosa and Zulus) ;
Dicawka (Bechuanas).

(*Numida coronata.*)

2. **Damaraland Guinea-Fowl.**

(*Numida papillosa.*)

3. **East African Guinea-Fowl.**

Inkanka (Zambesi natives).

(*Numida mitrata.*)

Genus VI.—Guttera

1. **Crested Guinea-Fowl.**

Inkankatori (Zambesi natives).

(*Guttera edouardi.*)

LIST OF BIRDS OF SOUTH AFRICA

2. Pale-necked Crested Guinea-Fowl.

(*Guttera lividicollis.*)

Order XIII.—HEMIPODII

Family I.—Turnicidæ

Genus I.—Turnix

1. Hottentot Hemipode.

Sand Quail; Reit Kwartel.

(*Turnix hottentotta.*)

2. Kurrichane Hemipode.

Reit Kwartel; Button Quail; Mabuaneng

(Basutos).

(*Turnix lepurana.*)

3. Natal Hemipode.

(*Turnix nana.*)

Order XIV.—FULICARIÆ

Family I.—Rallidæ

Genus I.—Rallus

1. Kafir Rail.

(*Rallus cœrulescens.*)

Genus II.—Crex

1. European Corn Crake.

(*Crex pratensis.*)

2. African Crake.

(*Crex egregia.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus III.—Ortygometra

1. **Spotted Crake.**
(*Ortygometra porzana.*)
2. **Baillon's Crake.**
(*Ortygometra pusilla.*)

Genus IV.—Sarothrura

1. **Jardine's Crake.**
(*Sarothrura lineata.*)
2. **White-spotted Crake.**
(*Sarothrura elegans.*)
3. **Red-chested Crake.**
(*Sarothrura rufa.*)

Genus V.—Coturnicops

1. **White-winged Crake.**
(*Coturnicops ayresi.*)

Genus VI.—Limnobænus

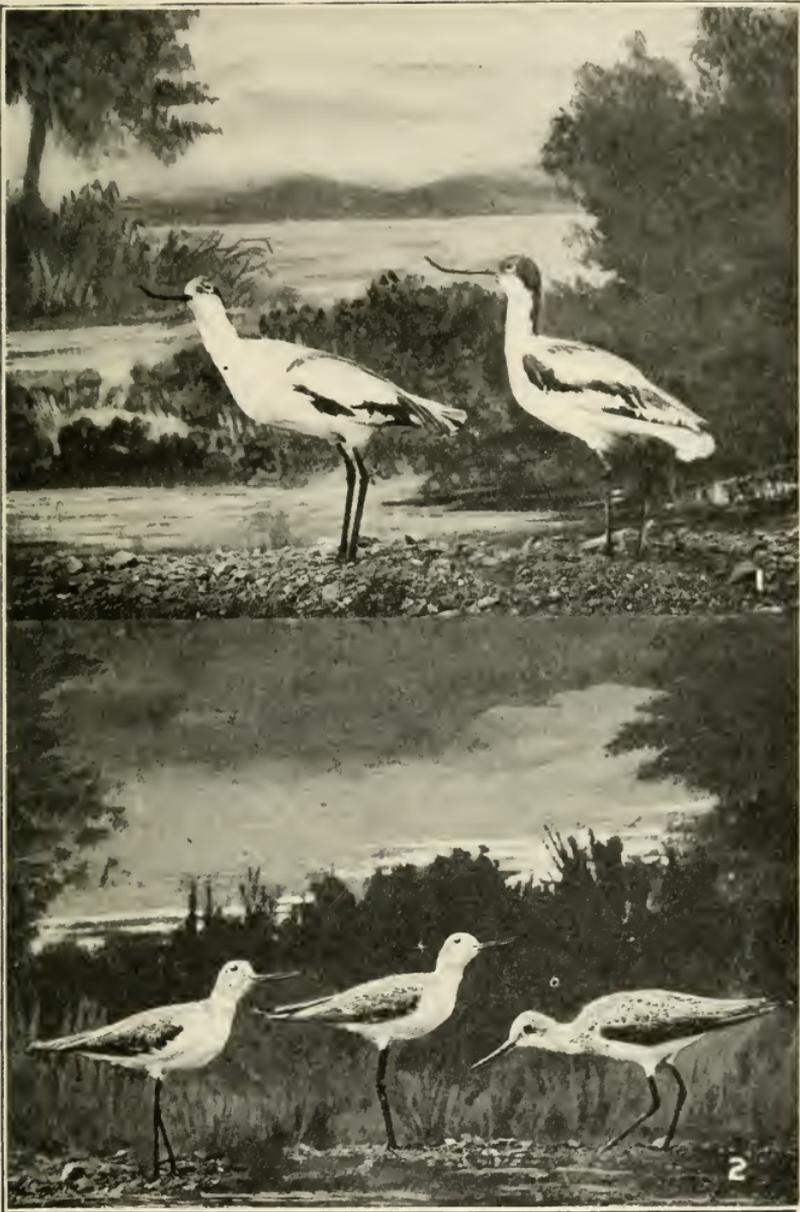
1. **Hartlaub's Crake.**
(*Limnobænus marginalis.*)

Genus VII.—Limnocorax

1. **Black Crake.**
(*Limnocorax niger.*)

Genus VIII.—Gallinula

1. **Water Hen, or Moor Hen.**
Rooi-Bles Reit Haan.
(*Gallinula chloropus.*)
2. **Lesser Moor Hen.**
(*Gallinula angulata.*)



1. The Avocet, with its wonderful upturned beak, sifts the mud for small crustacea and worms. These lovely birds lend charm to the beaches and muddy banks which are their favourite haunts.
- 2 The Greenshanks live in perpetual summer. On the approach of winter in Europe they journey to South Africa, sojourn here awhile, and return. Meantime they carry out their mission in life by preying on aquatic life which swarms in the mud of the lagoons, marshes, and edges of rivers.

NATURAL HISTORY OF SOUTH AFRICA

Genus IX.—Porphyrio

1. **King Reed Hen.**
Koning Reit Haan.
(*Porphyrio madagascariensis.*)
2. **Allan's Reed Hen.**
(*Porphyrio alleni.*)

Genus X.—Fulica

1. **Red-knobbed Coot.**
(*Fulica cristata.*)

Family II.—Heliornithidæ

Genus I.—Podica

1. **Peter's Fin foot.**
Sun Grebe, or Water Treader.
(*Podica petersi.*)

Order XV.—ALECTORIDES

Family I.—Gruidæ

Genus I.—Bugeranus

1. **Wattled Crane.**
Wattled ; Bell ; Kafir Crane ; Igwampi
(Amaxosa).
(*Bugeranus carunculatus.*)

Genus II.—Tetrapteryx

1. **Blue Crane.**
Stanley Crane ; Indwe (Amaxosa).
(*Tetrapteryx paradisea.*)

LIST OF BIRDS OF SOUTH AFRICA

Genus III.—Balearica

1. **Crowned Crane.**

Kafir Crane; Mahem; Ihemu (Amaxosa).
(*Balearica regulorum.*)

Family II.—Otidae

Genus I.—Otis

1. **Red-crested Knorhaan.**

Bush Knorhaan.

(*Otis ruficrista.*)

2. **Black Knorhaan.**

Knorhaan (pronounced Koraan, *i.e.*, Scolding
Cock); Ikala Kalu (Amaxosa).

(*Otis afra.*)

3. **White-quilled Knorhaan.**

(*Otis afroides.*)

4. **Vaal Knorhaan.**

Dikkop Knorhaan.

(*Otis vigorsi.*)

5. **Ruppell's Knorhaan.**

(*Otis rueppelli.*)

6. **Ludwig's Paauw.**

Iseme (Zulus).

(*Otis ludwigi.*)

7. **Stanley Bustard, or Veld Paauw.**

Isema (Amaxosa).

(*Otis cafra.*)

8. **Black-bellied Knorhaan.**

Unofunjwa (Zulus).

(*Otis melanogaster.*)

NATURAL HISTORY OF SOUTH AFRICA

9. **Hartlaub's Knorhaan.**
(*Otis hartlaubi.*)
10. **Blue Knorhaan.**
(*Otis cærulescens.*)
11. **Barrow's Knorhaan.**
(*Otis barrowii.*)
12. **Gom Paauw.**
Gom Paauw (*i.e.*, Gum Peacock, because it eats
mimosa gum); Isemi (Kafirs generally);
Kori (Bechuanas).
(*Otis kori.*)

Order XVI.—LIMICOLÆ

Family I.—Ædicnemidæ

Genus I.—Ædicnemus

1. **Dikkop.**
Dikkop, or Thicknee; Ingangolo (Amaxosa);
Khoho-a-Dira, *i.e.*, Fowl of the Enemy
(Basutos).
(*Ædicnemus capensis.*)
2. **Water Dikkop.**
(*Ædicnemus vermiculatus.*)

Family II.—Dromadidæ

Genus I.—Dromas

1. **Crab Plover.**
(*Dromas ardeola.*)

LIST OF BIRDS OF SOUTH AFRICA

Family III.—Glareolidæ

SUBFAMILY I.—CURSORIINÆ

Genus I.—*Cursorius*

1. **Burchell's Courser.**
(*Cursorius rufus.*)
2. **Temminck's Courser.**
(*Cursorius temmincki.*)

Genus II.—*Rhinoptilus*

1. **Two-banded Courser.**
(*Rhinoptilus africanus.*)
2. **Seebohm's Courser.**
(*Rhinoptilus seebohmi.*)
3. **Bronze-wing Courser.**
(*Rhinoptilus chalcopterus.*)

SUBFAMILY II.—GLAREOLINÆ

Genus I.—*Glareola*

1. **Pratincole.**
(*Glareola pratincola.*)
2. **Nordmann's Pratincole.**
Klein Springhaan Vogel; Little Locust Bird (a name also applied to the Wattled Starling, *Dilophus carunculatus*); Uwhamba (Zulus).
(*Glareola melanoptera.*)

Genus II.—*Galactochrysea*

1. **Emin's Pratincole.**
(*Galactochrysea emini.*)

NATURAL HISTORY OF SOUTH AFRICA

Family IV.—Parridæ

Genus I.—*Actophilus*

1. **African Jacana.**
(*Actophilus africanus*.)

Genus II.—*Microparra*

1. **Smaller Jacana.**
(*Microparra capensis*.)

Family V.—Charadriidæ

SUBFAMILY I.—CHARADRIINÆ

Genus I.—*Arenaria*

1. **Turnstone.**
(*Arenaria interpres*.)

Genus II.—*Lobivanellus*

1. **Wattled Plover.**
Querri-Querri (Mashonas).
(*Lobivanellus lateralis*.)

Genus III.—*Xiphidiopterus*

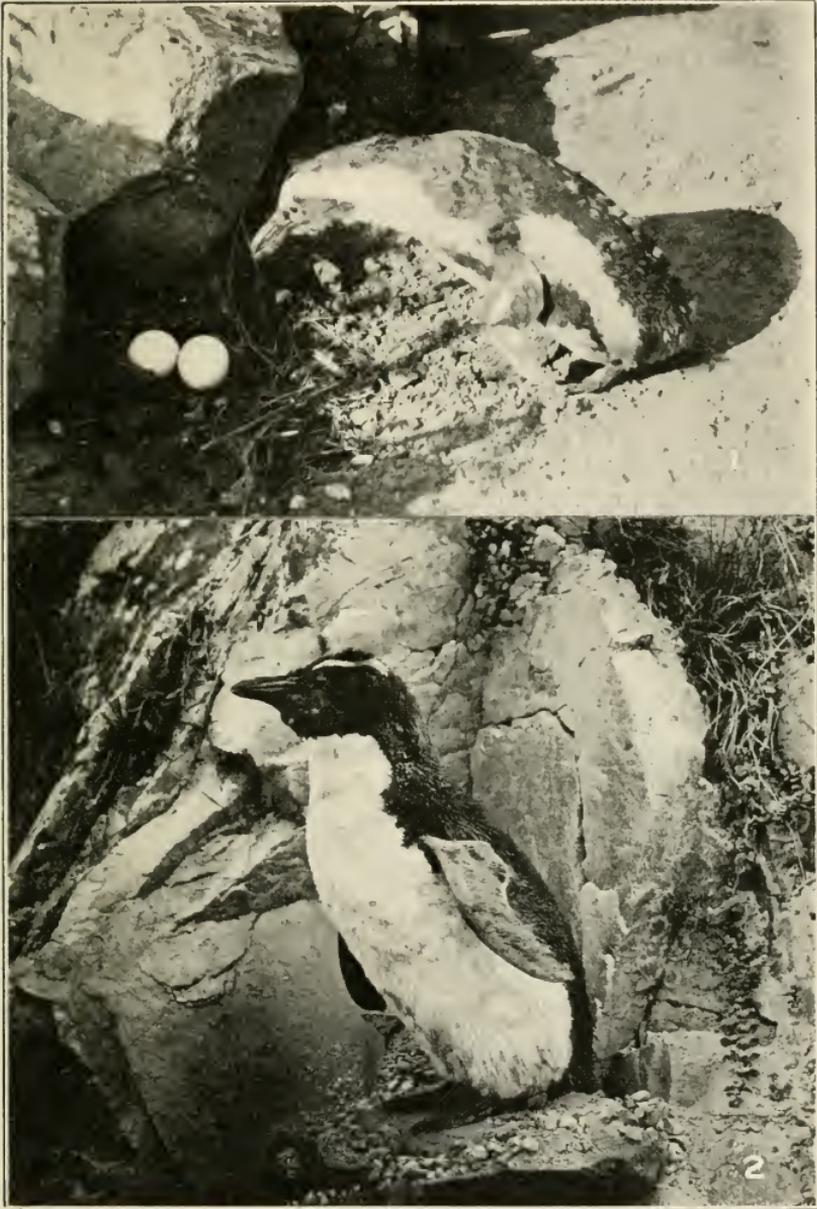
1. **White-headed Wattled Plover.**
(*Xiphidiopterus albiceps*.)

Genus IV.—*Hemiparra*

1. **Long-toed Lapwing.**
(*Hemiparra leucoptera*.)

Genus V.—*Hoplopterus*

1. **Blacksmith Plover.**
Setula Tsipi (Iron Hammer, or Blacksmith)
(Bechuanas).
(*Hoplopterus armatus*.)



1. A Jackass Penguin (*Spheniscus demersus*) at its nest under the shelter of a rock on St Croix Island, in Algoa Bay.
2. Rock-Hopper Penguin (*Catarrhactes chrysocome*). A rare visitor to the coasts of South Africa. This specimen landed alive on the shore of Algoa Bay, presumably from one of the islands in the Antarctic, in February 1914.

NATURAL HISTORY OF SOUTH AFRICA

Genus VI.—Stephanibyx

1. **Crowned Lapwing.**
Kiewit, or Kiewitje ; Ititihoya (Zulus).
2. **Black-winged Plover.**
(*Stephanibyx melanopterus.*)
3. **Swainson's Plover.**
(*Stephanibyx inornatus.*)

Genus VII.—Squatarola

1. **Grey Plover.**
(*Squatarola helvetica.*)

Genus VIII.—Ægialitis

1. **Great Sand Plover.**
(*Ægialitis geoffroyi.*)
2. **Caspian Plover.**
(*Ægialitis asiatica.*)
3. **Ringed Plover.**
(*Ægialitis hiaticola.*)
4. **Kentish Plover.**
(*Ægialitis alexandrina.*)
5. **Three-banded Plover.**
Strandlooper ; Sea-Cow Bird.
(*Ægialitis tricollaris.*)
6. **Fischer's Sand Plover.**
(*Ægialitis venusta.*)
7. **White-fronted Sand Plover.**
(*Ægialitis marginata.*)

LIST OF BIRDS OF SOUTH AFRICA

8. **Tropical White-fronted Sand Plover.**
(*Egialitis marginata pallida.*)
9. **Kittlitz's Sand Plover.**
(*Egialitis pecuaria.*)

SUBFAMILY II.—HÆMATOPODINÆ

Genus I.—Hæmatopus

1. **Black Oyster Catcher.**
Toby.
(*Hæmatopus moquini.*)

Genus II.—Himantopus

1. **Black-winged Stilt.**
Roodepoot Elsje (*i.e.*, Red-legged Cobbler's Awl).
(*Himantopus candidus.*)

Genus III.—Recurvirostra

1. **Avocet.**
Bonte Elsje (*i.e.*, Pied Cobbler's Awl), also Sprinken Vogel.
(*Recurvirostra avocetta.*)

SUBFAMILY III.—TOTANINÆ

Genus I.—Numenius

1. **Curlew.**
(*Numenius arquatus.*)
2. **Whimbrel.**
(*Numenius phaeopus.*)

NATURAL HISTORY OF SOUTH AFRICA

Genus II.—Totanus

1. **Redshank.**
(*Totanus calidris.*)
2. **Greenshank.**
(*Totanus glottis.*)
3. **Marsh Sandpiper.**
(*Totanus stagnatilis.*)
4. **Wood Sandpiper.**
(*Totanus glareola.*)
5. **Green Sandpiper.**
(*Totanus ochropus.*)
6. **Terek Sandpiper.**
(*Totanus cinereus.*)
7. **Common Sandpiper.**
(*Totanus hypoleucus.*)
8. **Dusky Redshank.**
(*Totanus fuscus.*)

Genus III.—Pavoncella

1. **Ruff.**
(*Pavoncella pugnax.*)

Genus IV.—Tringa

1. **Knot.**
(*Tringa canutus.*)
2. **Baird's Sandpiper.**
(*Tringa bairdi.*)
3. **Little Stint.**
(*Tringa minuta.*)
4. **Curlew Sandpiper.**
(*Tringa subarquata.*)



Domesticated Ostriches on a Karoo farm.

NATURAL HISTORY OF SOUTH AFRICA

Genus V.—Calidris

1. **Sanderling.**
(*Calidris arenaria.*)

SUBFAMILY IV.—SCOLOPACINÆ

Genus I.—Gallinago

1. **Double Snipe.**
Great or Solitary Snipe.
(*Gallinago major.*)
2. **Ethiopian Snipe.**
Black-quilled Snipe; Spook Vogel; Kue-Kue
Lemao (Basutos).
(*Gallinago nigripennis.*)

Genus II.—Rostratula

1. **Painted Snipe.**
Golden Snipe.
(*Rostratula capensis.*)

Order XVII.—GAVIÆ

Family I.—Laridæ

Genus I.—Larus

1. **Southern Black-backed Gull.**
(*Larus dominicanus.*)
2. **Hartlaub's Gull.**
(*Larus hartlaubi.*)
3. **Grey-headed Gull.**
(*Larus cirrhocephalus.*)

LIST OF BIRDS OF SOUTH AFRICA

Family II.—Sternidæ

Genus I.—Hydrochelidon

1. Whiskered Tern.
(*Hydrochelidon hybrida.*)
2. White-winged Black Tern.
(*Hydrochelidon leucoptera.*)

Genus II.—Sterna

1. Caspian Tern.
(*Sterna caspia.*)
2. Swift Tern.
(*Sterna bergii.*)
3. Sandwich Tern.
(*Sterna cantiaca.*)
4. Smaller Crested Tern.
(*Sterna media.*)
5. Roseate Tern.
(*Sterna dougalli.*)
6. Kerguelen Tern.
(*Sterna vittata.*)
7. Common Tern.
(*Sterna fluviatilis.*)
8. Arctic Tern.
(*Sterna macrura.*)
9. Damara Tern.
(*Sterna balenarum.*)
10. Little Tern.
(*Sterna minuta.*)

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11. **Saunders' Tern.**

(*Sterna saundersi.*)

12. **Sooty Tern.**

(*Sterna fuliginosa.*)

Genus III.—Anous

1. **Noddy.**

(*Anous stolidus.*)

Genus IV.—Micranous

1. **Lesser Noddy.**

(*Micranous leucocapillus.*)

Genus V.—Gygis

1. **White Noddy.**

(*Gygis candida.*)

Family III.—Rhynchopidæ

Genus I.—Rhynchops

1. **African Skimmer.**

Scissor-billed Tern.

(*Rhynchops flavirostris.*)

Family IV.—Stercorariidæ

Genus I.—Stercorarius

1. **Southern Skua.**

Cape Hawk, or Sea Hen ; Cape Egmont Hen
(Falkland Islanders).

(*Stercorarius antarcticus.*)

2. **Richardson's Skua.**

(*Stercorarius crepidatus.*)

3. **Pomatorhine Skua.**

(*Stercorarius pomatorhinus.*)

LIST OF BIRDS OF SOUTH AFRICA

Order XVIII.—TUBINARES

Family I.—Oceanitidæ

Genus I.—Oceanites

1. **Wilson's Petrel.**
(*Oceanites oceanicus.*)

Genus II.—Garrodia

1. **Garrod's Petrel.**
(*Garrodia nereis.*)

Genus III.—Fregatta

1. **Black-bellied Petrel.**
(*Fregatta grallaria.*)

Family II.—Procellariidæ

SUBFAMILY I.—PROCELLARIINÆ

Genus I.—Procellaria

1. **Storm Petrel.**
Mother Carey's Chicken.
(*Procellaria pelagica.*)

Genus II.—Oceanodroma

1. **Leach's Forked-tail Petrel.**
(*Oceanodroma leucorhoa.*)

SUBFAMILY II.—PUFFININÆ

Genus I.—Puffinus

1. **Great Shearwater.**
(*Puffinus gravis.*)

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2. Mediterranean Shearwater.

(*Puffinus kuhli.*)

3. Gould's Little Shearwater.

(*Puffinus assimilis.*)

4. Sooty Shearwater.

(*Puffinus griseus.*)

Genus II.—*Priofinus*

1. Great Grey Petrel.

(*Priofinus cinereus.*)

Genus III.—*Priocella*

1. Silver-grey Petrel.

(*Priocella glacialoides.*)

Genus IV.—*Majaqueus*

1. Cape Hen.

Black Haglet ; Black Night Hawk ; Stinkpot and Stinker.

(*Majaqueus equinoctialis.*)

Genus V.—*Æstrelata*

1. Long-winged Petrel.

Cape Parson.

(*Æstrelata macroptera.*)

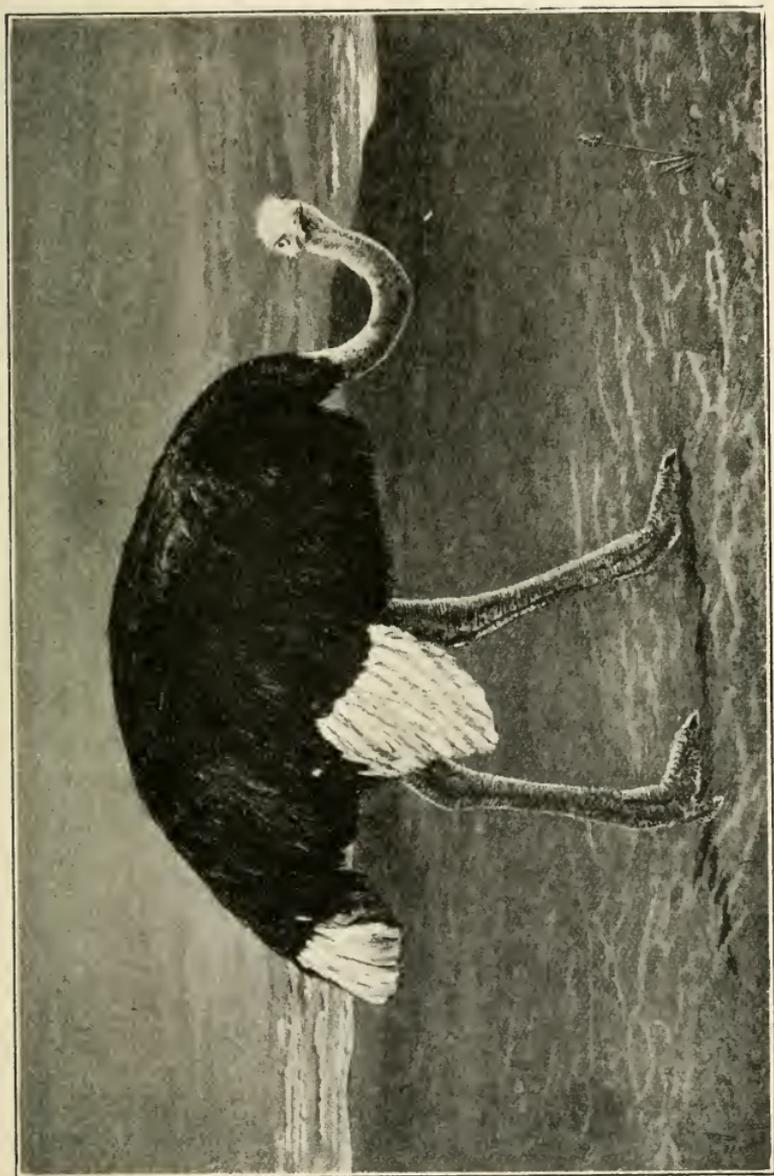
2. Lesson's Petrel.

White Night Hawk, or Mutton Bird.

(*Æstrelata lessoni.*)

3. Schlegel's Petrel.

(*Æstrelata incerta.*)



This specimen of a Hen Ostrich, now in the Port Elizabeth Museum, had its ovaries removed when it was fully adult. Its plumage then changed in colour and texture to that of a cock bird. If a portion of the ovary is left in the body, the feather transformation is only partial. It varies in accordance with the quantity of ovary remaining in the body.

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4. **Soft-plumaged Petrel.**

(*Estrelata mollis.*)

Genus VI.—Ossifraga

1. **Giant Petrel.**

Nelly ; Leopard Bird ; Glutton Bird.

(*Ossifraga gigantea.*)

Genus VII.—Daption

1. **Cape Pigeon.**

(*Daption capensis.*)

Genus VIII.—Prion

1. **Blue Petrel.**

(*Prion caeruleus.*)

2. **Banks' Blue Petrel.**

(*Prion banksi.*)

3. **Broad-billed Blue Petrel.**

(*Prion vittatus.*)

4. **Narrow-billed Blue Petrel.**

Whale Bird.

(*Prion desolatus.*)

5. **Fairy Blue Petrel.**

(*Prion brevirostris.*)

LIST OF BIRDS OF SOUTH AFRICA

SUBFAMILY III.—PELICANOIDINÆ

Genus I.—Pelicanoides

1. **Diving Petrel.**

(*Pelicanoides exul.*)

SUBFAMILY IV.—DIOMEDEINÆ

Genus I.—Diomedea

1. **Wandering Albatross.**

Cape Sheep; Great Albatross; Man-of-War Bird;
Goney.

(*Diomedea exulans.*)

2. **Mollymawk.**

Black-browed Albatross; Molly; Mollyhawk, or
Mollymawk.

(*Diomedea melanophrys.*)

Genus II.—Thalassogeron

1. **Gould's Yellow-nosed Mollymawk.**

(*Thalassogeron culminatus.*)

2. **Yellow-nosed Mollymawk.**

Pretty Bird.

(*Thalassogeron chlororhynchus.*)

3. **Layard's Mollymawk.**

(*Thalassogeron layardi.*)

Genus III.—Phæbetria

1. **Sooty Albatross.**

Blue Bird; Piv, or Piew; Stinkpot.

(*Phæbetria fuliginosa.*)

NATURAL HISTORY OF SOUTH AFRICA

Order XIX.—PYGOPODES

Family I.—Podicipedidæ

Genus I.—Podicipes

1. **Great Crested Grebe.**
(*Podicipes cristatus.*)
2. **Eared Grebe.**
(*Podicipes nigricollis.*)
3. **Robert's Grebe.**
(*Podicipes nigricollis gurneyi.*)
4. **Cape Dabchick.**
(*Podicipes capensis.*)

Order XX.—IMPENNES

Genus I.—Spheniscus

1. **Jackass Penguin.**
Black-footed Penguin.
(*Spheniscus demersus.*)

Genus II.—Catarrhactes

1. **Rock-hopper Penguin.**
(*Catarrhactes chrysocome.*)

LIST OF BIRDS OF SOUTH AFRICA

SUB-CLASS II.—RATITÆ

Order XXI.—STRUTHIONES

Family I.—Struthionidæ

Genus I.—Struthio

1. Southern Ostrich.

Struis Vogel; Inciniba (Amaxosa); In ye (Zulus);
Nche (Bechuanas).

(*Struthio australis*.)

The number of species and sub-species in this list
totals 926.

Fitzsimon

Fitzsimons, F.W.
The Natural History

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