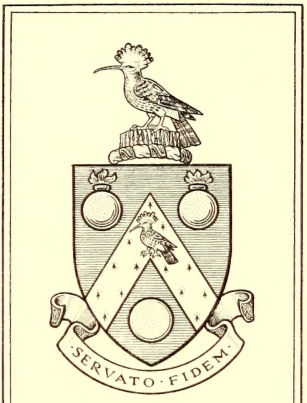

JOHN
COLEBROOK-ROBJENT

A SYNOPSIS OF THE ACCIPITRES

No. 15 of twenty-eight copies privately printed on large paper, each having 22 coloured plates of eggs

A

SYNOPSIS

OF THE

ACCIPITRES

(Diurnal Birds of Prey)

Comprising Species and Subspecies described up to 1920, with their Characters and Distribution

BY

H. KIRKE SWANN, F.Z.S., M.B.O.U.

Corresponding Fellow Amer. Orn. Union

SECOND EDITION

REVISED AND CORRECTED THROUGHOUT

LONDON

PRIVATELY PRINTED FOR THE AUTHOR

PREFACE TO SECOND EDITION.

THE necessity for a second edition of my work on the *Accipitres* arose in the first place out of the many corrections called for in the first part of my "Synoptical List," owing to the fact that that first part was rather a compilation than an original work, and in the second place out of the additions and corrections to the whole work that followed upon a more intensive study of the various groups. For this second edition I have had the advantage of consulting Mr. W. Sclater's MS. list of the *Accipitres* which he prepared for publication in the interval between my two editions, but kindly placed at my disposal on learning of the preparation of my second edition. From Mr. Sclater's MS. list I have received some amount of help with the nomenclature and also with the type species of the genera. I owe also a great measure of thanks to Mr. Outram Bangs, Dr. Chapman, Dr. Richmond, Dr. Wetmore, Dr. Oberholser, Mr. J. H. Riley, and other American friends who assisted me in my work at the American museums last autumn, while the authorities at the Brit. Museum (Nat. Hist.) and at Tring have continued to give me every facility for my work. Even now, I am not sure that I can claim that this second edition, practically re-written as it is, is either complete or perfect, but, so far as human exertion can go, I have striven to make it so, and I leave it to my critics to discover its shortcomings. The signs (*) and (†) I have prefixed to the numbers in this edition denote respectively that I have skins or eggs in my own collection. Of skins I possess now about 1000 of some 200 different forms, while of eggs I have 1200 of 156 different forms. All others, needless to say, are desiderata.

H. K. S.

March, 1922.

PREFACE TO FIRST EDITION.

In concluding my work on the *Accipitres*, a work which I fear has grown far beyond my original intention of publishing a mere list, I have to acknowledge my indebtedness to the sources from which I have received inspiration and help. In the first place I must acknowledge that a good deal of the systematic part and the generic characters have been borrowed from the late Richard Bowdler Sharpe's "Catalogue of the Accipitres in the Collection of the British Museum" (1874) of which his annotated copy, laid down on sheets and extended, came into my possession after his death, as also his interleaved copy of the *Accipitres* portion in Gray's "Genera of Birds," upon which he based his 1874 monograph. For permission to make use of the former work I have to thank the Trustees of the British Museum. I have also derived assistance from Mr. W. L. Sclater's work at the British Museum (Natural History) in so far as his had preceded mine, and his MS. Catalogue of the skins, which he kindly gave me permission to use. I have also to thank Mr. Bannerman, Mr. Chubb and other assistants at the Museum for help rendered during my studies there. To Lord Rothschild and Dr. Hartert for the use of the superb collections at Tring I am grateful, and to Dr. Hartert especially for much personal assistance. The Rev. F. C. R. Jourdain and a number of other friends have also given me help and encouragement in various ways in what, although an arduous and unprofitable undertaking, will I hope be of some permanent help in systematizing this interesting group of birds.

March, 1920.

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A

SYNOPSIS

OF THE

ACCIPITRES

(DIURNAL BIRDS OF PREY)

PART I.

ORDER ACCIPITRES.

Fam. 1. CATHARTIDÆ (New World Vultures).
Nostrils perforated; head, neck and forepart of breast bare; hind toe short and weak. Male larger than female usually.

Gen. I. VULTUR Linn. (1758).
[= *Sarcorhamphus*, auct. plur.]
Type by subs. desig. (Allen 1907) *V. Gryphus* L.

Size large, length 38 in.; head with an erect fleshy caruncle; outer toe about equal to inner.

*1.	*Vultur gryphus* (Linn.), Syst. Nat., i., p. 86 (1758). [*Chile.*] Great Condor. Wing ♂ 800-809, ♀ 787-830 mm.; ad. plumage black, with a whitish wing patch; immature brown.	Andes of S. America, (W. Venezuela to Chile and Patagonia).

*† A * prefixed to a number denotes that skins are in my collection, and a † that eggs are in my collection. I am desirous of obtaining by exchange or purchase sets of eggs or skins of any form not represented in my collections.

Gen. II. SARCORHAMPHUS Dum. (1806).

[= *Gypagus*, auct. plur.]

Type by subs. desig. *Vultur papa* L.

Size moderate ; head with fleshy caruncle ; outer toe longer than inner.

*2. *Sarcorhamphus papa* (Linn.), S.N., i., p. 86 (1758). [*India occidentalis* : type loc. subst. : *Brazil*, Brab. and Chubb.] King Vulture.

Wing ♂ 494-500 ; bare skin of head and neck brilliantly coloured ; plumage black and cream colour.

S. America, N. to Mexico.

Gen. III. CORAGYPS Geoffroy (1853).

Type by monotypy *Vultur atratus* Btr.

Head without caruncle ; tail square.

†3. *Coragyps atratus atratus* (Bartr.) Travels N. & S. Carolina, p. 289 (1791). [*Carolina*]. Black Vulture.
[= *Catharista urubu urubu*, ed. 1.]

Wing ad. 443-448 mm. ; tail 215 mm. ; tarsus 85 mm. ; plumage black ; skin of head and neck black.

N. & Central America, Cuba, Jamaica.

*3a. *Coragyps atratus brasiliensis* (Bonap.) Consp. Av., i., p. 9 (1850). [Ex. Wied—*S. Brazil.*] S. American Black Vulture.

Smaller : wing 405-438 ; tail 213 ; tarsus 79 mm. ; plumage not differing.

S. America.

DSI

GEN. IV. CATHARTES Illiger (1811).

Type by subs. desig. (Vigors 1825) *Vultur aura* L.

Tail rounded.

†*4. *Cathartes aura aura* (Linn.), S.N., i., p. 86 (1758). [*America calidiore*: type loc. subst. *Vera Cruz, Mexico*, apud Nelson.] Turkey Vulture.

Wing 500-530 (♂ largest); tail 253-270; tarsus 59 mm.; crown whitish; head and neck dark reddish purple to light crimson (in life); iris brown; plumage brownish black, with metallic reflections on mantle and chest; wing coverts chiefly brown.

N. America: 53° N. in Canada to Mexico and Guatemala; Bahamas, Cuba, Jamaica.

4a. *Cathartes aura meridionalis*,[1] subsp. nov. [nom. nov. *Cathartes aura aura* (Linn.) ed. 1, et auct. plur. Type loc. sugg. *Colombia*].
S. American Turkey-Vulture.

Larger, wing 530-550 (example from Colombia in B.M. coll. 550 mm.); tail 292, tarsus 74 mm.; plumage averaging blacker.

W. South America, from Colombia to Peru, N. Chile and Argentina (S. to Rio Negro ?).

4b. *Cathartes aura insularis* subsp. nov. [ad. *Cozumel I., Yucatan*, 1885, G. F. Gaumer, B.M. reg. no. 87, 5, 1, 962, type in Brit. Mus., descr. in Biol. Centr. Amer.]
Cozumel Turkey-Vulture.

Much smaller; wing 470-505 (type, not sexed, ♀ ?, 475 mm.); plumage much

Cozumel I., Yucatan.

[1] It being apparent that Linnaeus described the N. American and not the S. American race, the former becomes the typical form and the name *septentrionalis* (Wied) must be dropped. Lack of material renders it doubtful if the examples found in Western S. America are really distinct, but as they certainly average larger and a trifle blacker I have felt it convenient to maintain the separation with a change of name.

blacker, and more glossed with green and purple.

†4c. *Cathartes aura iota* Molina, Saggio St. N. Chile, pp. 235, 343 (1786). ["*Chile*" type loc. subst. *Concepcion*[1], Chile.] Southern Turkey-Vulture.

Smaller than typical form; wing ad. 486-500; head and neck "pink in life" (Sharpe); median wing coverts and secondaries very distinctly shaded and edged with whitish ashy.

Falkland Is., Magellan Str., Patagonia, Chile, N. at least to Concepcion.

5. *Cathartes ruficollis* Spix, Av. Bras. i., p. 2, 1824. [*Interior Bahia et Piauhy.*] Yellow-headed Turkey-Vulture. [= *C. urubitinga*, Pelz. & *C. perniger*, Sharpe.]

Wing ad. 481-500 mm.; occiput blue, rest of head yellow, neck orange; iris carmine; entire plumage glossy black (including wing coverts); shafts to outer primaries above and below white.[2]

Eastern S. America (Surinam, Brit. Guiana, Venezuela, Amazonia Brazil, N. Argentina).

Gen. V. GYMNOGYPS Lesson (1842).
Type by mon. *Vultur californicus* Sh.

Head without caruncle; tail square.

[1] An example from this locality agreeing well with Falkland Is. birds is in the Tring Mus.

[2] This yellow-headed and entirely black S. American bird seems to constitute a distinct species from the *aura* group. Ir is the *urubitinga* of Pelzeln and Sharpe's *perniger* is undoubtedly a synonym. His type was from N. side of River Amazon (Wallace) and was only distinguished by the shafts of primaries being brown above, but although shafts in old birds of *ruficollis* are generally white they are not invariably so, and I have seen N. American examples of *C. aura aura* with white shafts. Cory, speaking of Bahama birds, says they are yellowish externally in winter. In Tring Museum are examples with both brown and white shafts from Venezuela of the yellow-headed bird; also an undoubted example from Morovi, Chaco, Argentine.

6. *Gymnogyps californicus* (Shaw & Nodder), Nat. Misc., ix., p. 1, pl. 301 (1797). [*Coast California*; type in Brit. Mus.] Californian Condor. — S. California to Lower California.

Size of *Vultur*; length 40 in.; wing ad. 760 mm.; plumage black, with brown margins to all the feathers; a buffy white patch on secondaries.

Fam. II. SERPENTARIIDÆ.

Both inner and outer toes connected with middle one by well-developed basel web; tarsus much developed.

Gen. VI. SAGITTARIUS Hermann (1783).

Head with crest of long spatulate plumes.

†7. *Sagittarius serpentarius serpentarius* (Miller), Var. Subj. Nat. Hist., pl. 28, (1779). [*Cape of Good Hope.*] Secretary Bird. — S. & E. Africa N. to Benguela on W. and Zambesi on E.

Wing ad. 645; tail 583; tarsus 342 mm.; plumage ashy grey; crest, quills, rump and abdomen black.

7a. *Sagittarius serpentarius gambiensis* Ogilby, P.Z.S., 1835, p. 105. [*Senegambia.*] Northern Secretary Bird. — Senegambia, Sudan to Shoa.

Plumage paler. [Doubtfully distinct].

Fam. III. ÆGYPIIDAE (Old World Vultures).

Head and neck bare, or with short down only, no feathers; nostrils not perforated.

Gen. VII. ÆGYPIUS Savigny (1809).

Type by mon. *Vultur monachus* L.

Nostrils rounded.

†8.	*Ægypius monachus* (Linn)., S.N., ed. xii., i., p. 122 (1766). [Ex Edwards-*Arabia* err. ?] Cinereous Vulture. Size large ; length 42 in. ; wing ad. 760-836 mm. ; plumage blackish brown ; ruff of feathers round hind neck.	S. Europe, N. Africa, C. Asia to India and China.

Gen. VIII. GYPS Savigny (1809).

Type *G. vulgaris* = *fulvus.*

Nostrils perpendicular, rather oval ; tail with 14 feathers.

†*9.	*Gyps fulvus fulvus* Hablizl, N. Nord. Beytr. iv., p. 58 (1783). [*Gilan, N. Persia.*] Griffon Vulture. Size large ; length 40 in. ; wing ad. 690-748 mm. ; plumage stone-buff ; neck ruff of white down ; head with white down ; crop patch dark stone colour (in immature birds fawn to chocolate).	S. Europe (acc. Britain), N. Africa, Arabia, Palestine, Persia, Afghanistan, Himalayas, Turkestan.[1]
†9a.	*Gyps fulvus fulvescens* Hume, Ibis, 1869, p. 356. [*Gurgaon, Punjab*, type in B. M.] Indian Griffon. Wing ad. 685-747 mm. ; plumage paler and more isabelline reddish.	Plains of N. India ; Suakim?

[1] *Gyps fulvus cinnamomeus* Reich. is a synonym based on a young bird apparently.

†9b. *Gyps fulvus coprotheres* (Forst.) Naturgesch. African. Vögel, p. 35 (1798). [*S. Africa.*] Kolbe's Griffon.

Wing ad. 685 mm.; paler than *G. fulvus fulvus*, especially below, and shaft stripes nearly obsolete.

S. Africa, N. to Zambesi and Damaraland.

10. *Gyps himalayensis* Hume, Rough Notes, i., p. 14 (1869). [*Simla*, type in Br. Mus.] Himalayan Griffon.

Wing ad. 800-810 mm.; plumage above isabelline whitish; below light buff with broader whitish shaft stripes.

Turkestan. Himalayas, Thibet.

11. *Gyps rueppelli rueppelli* (A. Brehm), Naum., 1852, heft 3, p. 44. [*Khartoum.*] Rueppell's Vulture.

Wing ad. 660-700 mm.; down on head yellow; plumage above blackish brown with whitish edgings; below creamy buff; crop-patch dark brown.

N.E. Africa (Egypt, Sudan, Nubia), N. Nigeria, Senegambia.

*11a. *Gyps rueppelli erlangeri* Salvad., Bol. Mus. Torino, xxiii., No. 576, p. 3 (1908). [*Shoa*, type in Turin Mus.] Erlanger's Vulture.

Wing ♂ 665 mm.; down on head whitish; plumage above browner; below whitish.

Abyssinia, Erythræa, Somaliland.

†12. *Gyps indicus indicus* (Scop.) Del. Faun. et Flor. Insubr., ii., p. 85 (1786). [ex. Sonnerat, *Pondicherry*?] Indian Longbilled Vulture. [= *G. indicus pallescens* Hume.]

Indian Peninsula, S. of Indo-Gangetic Plain, except Sind & Ceylon.

Above pale earthy brown; below whitey brown; crop-patch dark brown; ruff white (Hume).

12a. *Gyps indicus tenuirostris* Hume (ex. Hodgson MS.) Stray Feathers, vii., p. 326 (1878). [*Khatmandoo, Nepal,* type in Brit. Mus.] Himalayan Long-billed Vulture. [= *G. indicus indicus,* ed. 1.]

Wing ad. 590-600 mm.; head bare; ruff and upper parts dark brown with fulvous central streaks; rump white; below light brown with white streaks; crop-patch brown.

Lower Himalayas, Bengal, Assam, Burma; Indo-Chinese countries? Malay Peninsula?

Gen. IX. PSEUDOGYPS Sharpe (1873).

Type by subs desig. (Sharpe 1874) *Vultur bengalensis* Gm.

Tail with 12 feathers.

†13. *Pseudogyps bengalensis* (Gmel.), S.N., i., p. 245 (1788). [*Bengal.*] Indian White-backed Vulture.

Size large; length 30 in.; wing ad. 557-608 mm.; above and crop-patch back ruff white, rather scanty; rump white; below chocolate brown.

India, Indo-Chinese countries, Malay Peninsula.

14. *Pseudogyps africanus africanus* (Salvad.), Nat. Stor. R. Accad. Torin., 7th May, 1865, p. 133. [*Sennar.*] African White-backed Vulture.

Wing ad. 557 mm.; above and crop-patch dark brown; below pale brown, with yellowish-white shaft lines.

N.E. Africa, Khartoum to Abyssinia & Upper White Nile.

14a. *Pseudogyps africanus schillingsi* Erlanger, Orn. M.B., xi., p. 22 (1903). [*Mkomasi, German E. Africa.*] German E. Africa.
Eastern White-backed Vulture.

Plumage more greyish.

†14b. *Gymnogyps africanus fuelleborni* Erlanger, Orn. M. B., xi., p. 22 (1903). [*Rukwa See, Nyasaland.*] Nyasaland to Angola; Transvaal.
Southern White-backed Vulture.

Plumage paler.

14c. *Pseudogyps africanus zechi* Erlanger Orn. M. B., xi., p. 22 (1903). [*Kratschi, Togoland.*] Togoland.
Western White-backed Vulture

Plumage still paler.

Gen. X. TORGOS Kaup (1828).
Type *Vultur auricularis* = *tracheliotus.*

Head with fleshy folds and a neck-lappet; tarsus longer than middle toe.

†15. *Torgos tracheliotus tracheliotus* (Forst.) Levaillant, Reise Afr., iii., p. 363, pl. 12 (1791) [*Cape Colony.*] S. Africa.
Sociable Vulture.

Wing ad. 747-785 mm.; above and crop-patch brown; ruff of brown feathers on hind neck; below clothed with white down, with brown lanceolate feathers on breast and abdomen.

15a. *Torgos tracheliotus nubicus* H. Smith in Griffith's Animal Kingdom, i., p. 164 (1829). [Nubia.]
Northern Sociable Vulture.

With the ear-lappets lacking ; [doubtfully distinct].

Egypt, Abyssinia, Upper White Nile, cas. in Europe.

†16. *Torgos calvus* (Scop.), Del. Faun. Insubr., ii., p. 85 (1786). [ex. Sonnerat, *Pondicherry*.]
Pondicherry Vulture.

Wing ad. 570-608 mm. ; above and crop-patch black ; across breast a circlet of of white down ; below black ; ruff small, black.

Turkestan, India, Burma, Siam, Cambodia.

Gen. XI. TRIGONOCEPS
Lesson (Echo du Monde Savant, Dec. 1842).
Type (mon.) *Vultur occipitalis*.

Head covered with down ; no neck-lappet.

17. *Trigonoceps occipitalis* (Burch.), Trav., ii., p. 329 (1824). [*Makkwari R., Bechuanaland*.]
White-headed Vulture.

Length ad. about 36 in. ; wing 582 mm. ; plumage blackish brown, rump paler ; ruff dark brown ; crop-patch and under parts white.

N.E. Africa & S. Africa, Senegal on W.

Gen. XII. NEOPHRON Savigny (1809).
Type *Vultur percnopterus* L.

Forepart of chest bare.

†*18. *Neophron percnopterus percnopterus* (Linn.),

S.N., i., p. 87 (1758). [*Egypt.*] Egyptian Vulture.

Length about 25 in.; wing ad. 475-520 mm.; skin of head and neck yellow; Plumage white; primaries black.

S. Europe; Africa S. to Mashonaland; Mediterranean region to N.W. India; Canary Is., Cape Verde Is.

18a. *Neophron percnopterus rubripersonatus* Zaruday & Harms., Orn. Mb., x., pp. 52-3 (1902). [*Persian Baluchistan.*] Red-faced Egyptian Vulture.

Bare skin of face orange red.[1]

Persian Baluchistan.

†18b. *Neophron percnopterus ginginianus* (Lath.), Ind. Orn., i., p. 7 (1790). [*Gingee, S. Arcot dist.*; ex. Sonnerat.] Indian White Vulture.

Smaller than typical form; length 21 in.; wing 393 mm.; bill yellow instead of horn brown.

Indian Peninsula, rare in Ceylon.

Gen. XIII. NECROSYRTES Gloger (1842).

Type *Cathartes monachus* Temm.

With a fur-like chest-patch.

*19. *Necrosyrtes monachus monachus* (Temm.), Pl. Col., i., pl. 222 (1823). [*Senegal*, type in Leyden Mus.] Northern Hooded Vulture.

Length 24 in.; wing ad. 467 mm.; plumage chocolate brown; hind neck covered with whitish down; crop-patch creamy white, encircled with white down.

W. Africa.

[1] Dr. Hartert draws my attention to the fact that as this race was established from observations only, it must be considered a doubtful one, no skins being available.

19a. *Necrosyrtes monachus pileatus* (Burch.), Trav., ii., p. 195 (1824). [*Hopetown dist., Cape Province.*] Hooded Vulture.

S. Africa, N.E. & E. Africa.

Larger ; length 26 in. ; wing 480-510 mm. ; with shorter and stouter bill.

Fam. IV. *AQUILIDÆ.*

Crown of head always clothed with feathers, its sides either feathered or bare ; outer toe not reversible. Female usually larger than male.

Sub-Fam. I. *POLYBORINÆ.*

Toes connected near base by interdigital membrane ; sides of face mostly bare.

Gen. XIV. POLYBORUS Vieill. (1816).

Type " Caracara " Buff [= *P. plancus*].

Nostrils oval. Size large (22-26 in.).

†*20. *Polyborus plancus* (Mill.) Var. Subj. Nat. Hist., Pl. 17 (1778). [*Tierra del Fuego.*] Common Caracara.

S. America, Patagonia to 20° S. lat. on W. & Amazon on E. side.

Wing ♀ 405 ; tail 240 mm. ; above and below blackish brown with narrow whitish bars ; crown and belly uniform ; tail whitish with dusky crosslines and a terminal blackish band ; face and throat white.

†21. *Polyborus cheriway cheriway* (Jacq.), Beitr., p. 17, tab. 4 (1784). [*Venezuela.*] Audubon's Caracara.

S. United States Central and Northern S. America.

Wing ♂ 400, ♀ 418 mm.; above black, mantle only with creamy buff wavy bars; upper tail coverts white; tail buff with 13 or 14 black bars and a broad terminal band.

21a. *Polyborus cheriway pallidus* Nelson, Pr. Biol. Soc., Wash., xii., p. 8 (1898). [*Tres Marias Is.*] Tres Marias Caracara. — Tres Marias Is., W. Mexico.

Paler insular race.

†22. *Polyborus lutosus* Ridgw., Bull. U.S. Geol. Surv. Terr., i., p. 459 (1875). [*Guadaloupe.*] Guadeloupe Caracara. — Guadeloupe I., W. Mexico (now extinct).

Wing ♂ 380-400, ♀ 393-416 mm.; general plumage marked with transverse bars of brownish black and brownish white; crown, wing-coverts, terminal portion of primaries and terminal band on tail blackish brown.

Gen. XV. IBYCTER Vieill. (1816)

Type *Falco americanus* Bodd.

Head generally with recurved crest.
Nostrils round. Size variable (16-25 in.).

23. *Ibycter ater* (Vieill.), Analyse, p. 22 (1816). [*Brazil.*] Yellow-throated Caracara. — Amazon District of S. America.

Wing ad. 322 mm.; plumage black with greenish reflections; a white band across base of tail.

*24. *Ibycter americanus americanus* (Bodd.), Tabl. Pl. Enl., p. 25 (1783). [*Cayenne.*] Red-throated Caracara.

Wing ♂ 335-59, ♀ 355-60 mm.; plumage black with greenish reflections, but abdomen white; face and throat deep red.

Tropical S. America from Panama to the Guianas, Brazil, Ecuador and Peru.

*24a. *Ibycter americanus guatemalensis* subsp. nov. [ad. ♀? Guatemala, T. C. Eyton coll., in coll. H. Kirke Swann, wing 390 mm.] Northern Red-throated Caracara.

Larger, with longer wings and tail; wing ♂ (B.M. Guatemala examples) 376-82; ♀385-90.

Guatemala and Central America.

25. *Ibycter megalopterus* (Meyen), Nov. Act. Cæs., xvi., Suppl., i., p. 64, pl. 7 (1834). [*Chile.*] Mountain Caracara.

Wing ad. 370 mm.; plumage black with greenish reflections, but upper tail coverts, base and tip of tail and abdomen white.

S. America, Pacific side of Andes.

26. *Ibycter albigularis albigularis* (Gould), P.Z.S., 1837, p. 9. [*Santa Cruz*, type in Brit. Mus.] White-throated Caracara.

Wing ad. 395 mm.; above brownish black; upper tail-coverts, base and tip of tail and entire under parts white; sides irregularly marked with black.

Patagonia.

27. *Ibycter albigularis circumcinctus* Scott, Auk, xxvii., 1910, p. 152. [*Chubut, Patagonia.*] Scott's Caracara.

Wing ♂ 410 mm.; plumage black; rump, upper tail-coverts and base and terminal band on tail white; below white with a variable band of black across lower throat.

Patagonia, E. of Andes.

28. *Ibycter carunculatus* (Des Murs), Rev. et Mag. Zool., 1853, p. 154. [*Colombia.*] Carunculated Caracara. — Highlands of Ecuador and Colombia.

Wing ad. 392 mm. ; skin of face and throat wrinkled and orange colour ; plumage black ; rump, upper tail-coverts, tips of quills, a broad terminal band on tail, and vent white ; breast with drop-shaped white marks.

29. *Ibycter australis* (Gmel.), S.N., i., p. 259 (1788). [" *Statenland.*"] Forster's Caracara. — Falkland Is.

Wing ad. 423 mm. ; above and below black ; nape, outer upper tail-coverts, throat and breast with lanceolate white stripes ; tail broadly tipped with white.

Gen. XVI. MILVAGO Spix (1824).
Type *M. ochrocephalus* = *M. chimachima*.

Feathers on back of head erectile, forming 2 tufts ; size small (about 16 in.).

*30. *Milvago chimachima chimachima* (Vieill.), N. Dict., v., p. 259 (1816). [ex. Azara—*Paraguay.*] Yellow-headed Caracara. — Brazil and Amazonia to Guiana, Colombia and Panama.

Wing ad. 265 ; tail 183 mm. ; above brown, with pale ashy margins ; head, neck, basal two-thirds of tail, and under parts white.

30a. *Milvago chimachima cordata* Bangs & Penard, Bull. M.C.Z., lxii., p. 35 (1918). [*Panama.*] Panama Caracara. — Panama.

[Not seen].

*31. *Milvago chimango chimango* (Vieill.), N. Dict., v., p. 260 (1816). [ex. Azara—*Paraguay*.] S. America from S.E. Brazil to Tierra del Fuego
Chimango Caracara.

Wing ad. 292 ; tail 170 mm. ; above rufous brown ; head and neck with black central streaks ; upper tail-coverts white ; tail with broad subterminal dark band ; below brownish ochre with dark shaft stripes.

31a. *Milvago chimango temucoensis* W. Sclat. Bull. B. O. C., xxxviii., p. 43 (1918). [*Palal, near Temuco, Chile*, type in B.M.] Chile.
Chilian Chimango.

Wing 280-293 mm. ; much darker and more richly coloured.

Sub-Fam. II. *ACCIPITRINÆ*.

Outer toe connected to middle one by an interdigital membrane ; tibia and tarsus about equal in length.

Gen. XVII. GYMNOGENYS Lesson (Traitè, livr. i., Feb., 1830).
Type *Vultur radiatus* Scop.

Lores and sides of face bare ; size large (23.50—27 in.).

*32. *Gymnogenys radiatus* (Scop.), Del. Faun. et Flor. Insubr., ii., p. 85 (1786). [*Madagascar*.] Madagascar.
Madagascar Gymnogene.

Wing ♂ 395, tail 305 ; wing ♀ 405, tail 305 mm. ; plumage silvery grey, lower back

rump and abdomen white, narrowly barred with black; quills and tail chiefly black, latter with broad median band of white.

***33.** *Gymnogenys typicus typicus* Smith, S. Afr. Q. J., i., p. 107 (1830). [*East Cape Colony.*] Banded Gymnogene. — S. Africa, N.E. Africa (Abyssinia & White Nile).

Wing ♂ 420-450, tail 291; wing ♀ 480[1], tail 305 mm.; general plumage dark grey; breast and abdomen broadly barred with black and white; tail black, tipped with white, with a broad band of dull white and an indistinct one nearer base.

***33a.** *Gymnogenys typicus pectoralis* Sharpe, Bull. B.O.C., xiii., p. 50 (1902). [*Efulen.*] Cameroon Gymnogene. — Cameroons.

Smaller; wing ♀ 405; rather more heavily barred with black below, the black bars nearly equal to white bars.

33b. *Gymnogenys typicus kempi* subsp. nov. [♂ *Bo, Sierra Leone,* Feb. 1904, R. Kemp., Brit. Mus. Reg. No., 1905, 1, 2, 5, 3.] Sierra Leone Gymnogene. — Sierra Leone.

Much smaller; wing ♂ 360, ♀ 392 mm.; below as pale as typical form.

33c. *Gymnogenys typicus graueri* subsp. nov. [♀ *Kissenyi, Lake Kivu,* Dec. 26, 1907, — E. Africa.

[1] Dr. Hartert tells me the N.E. African examples at Tring have the wing 445-460 mm., but I cannot see any great differences in plumage except in those from the tropical zone which I have separated both as being darker and differing in size. The barring is variable in all forms, but the tendency of the tropical zone birds is to show more black than white below.

Rud. Grauer leg. No. 1746, type in Tring Mus.]
E. African Gymnogene.

Wing ♀ 445-450 mm. ; more heavily barred below, black bars wider than white bars.

Gen. XVIII. CIRCUS Lacep. (1799).

Types by subs. desig. (Lesson 1828) *Falco æruginosus* L.

Sides of face feathered ; with distinct facial ruff ; lores furnished with bristles ; nostrils oval with no bony excrescence ; tarsus reticulated behind ; size moderate ; length (males) 17-22.50 in. ; females 19-24.50 in.

Key to Natural Groups and Species (Males).

A. Above bluish ashy, or greyish.
  a. Thighs uniform white.

†34. *Circus cyaneus cyaneus* (Linn.), S.N., i., p. 126 (1766). [ex. Edwards : *Europe* = *London*, apud Hartert.]
Hen Harrier.

Wing ♂ 335-360, ♀ 380-400 mm. ; throat and chest bluish ashy ; upper tail-coverts white.

Europe and Siberia ; N.E. Africa, India, China, Japan (winter).

†*34a. *Circus cyaneus hudsonius* (Linn.), S.N., i., p. 128 (1766). [ex. Edwards—*Hudson's Bay*.]
Marsh Hawk.

Wing ♂ 354, ♀ 380 mm. ; more brownish ashy above and below.

N. America, Central America and W. Indies (winter).

†*35. *Circus macrourus* (S. G. Gmel.), N. Comm. Petrop., xv., p. 439, pls. viii., ix. (1771). [*Woronez, S. Russia.*]
Pallid Harrier.

Wing ♂ 340-360, ♀ 370-390 mm.; throat and chest white; upper tail-coverts white, banded with ashy grey.

E. Europe and Central Asia to Altai; Africa India, Burma, China in winter.

b. Thighs white, with rufous streaks or spots.

†*36. *Circus pygargus*[1] (Linn.), S.N., i., p. 89 (1758). [ex. Albin: *Europe = England.*]
Montagu's Harrier.

Wing ♂ 350-375 mm.; throat and chest pale bluish grey; upper tail-coverts white, tipped with deep ash colour.

Europe and Marocco; Palestine, Africa, India, China in winter.

c. Thighs white, barred across with orange rufous.

37. *Circus cinereus* Vieill., N. Dict., iv., p. 434 (1816). [ex. Azara—*Paraguay.*]
Cinereous Harrier.

Wing ♂ 310, ♀ 360 mm.; throat and chest white, barred with orange tawny; upper tail-coverts white.

S. America, N. to Central Peru and E. Bolivia, migrating to Straits of Magellan and Falkland Is.

d. Thighs rufous, either uniform or spotted and margined with white.

38. *Circus assimilis assimilis* Jard. and Selb., Ill. Orn., Ser. i., pl. 51 (1828). [*Near Sydney, N.S.W.*]
Spotted Harrier.

E. Australia, Tasmania, Celebes.

[1] *C. pygargus abdullæ* Floericke is undoubtedly a melanism of this form.

Wing ♂ 400, ♀ 455 mm. ; throat and chest rufous with white spots ; upper tail-coverts ashy brown, tipped and spotted with white.

38a. *Circus assimilis rogersi* Math., Nov. Zool., xviii., p. 244 (1912). [*Fitzroy R., N.W. Australia.*]
Lesser Spotted Harrier.

N.W. Australia.

Said to be smaller and darker.

B. Above brown.

a. Thighs white, with rufous streaks or spots.

39. *Circus approximans approximans* Peale, U.S. Explor. Exped., viii., p. 64 (1848). [*Fiji Is.*].
Fijian Harrier.

Fiji Islands.

Throat and chest white streaked with pale rufous brown ; upper rail-coverts white, slightly spotted with pale rufous.

†39a. *Circus approximans gouldi* (Bp.), Consp., i., p. 34 (1850). [*N.S. Wales.*]
Allied Harrier.

S. & E. Australia, Tasmania.

Larger ; wing ad. 410 mm.

39b. *Circus approximans inexpectatus* Math., Nov. Zool., xviii., p. 245 (1912). [*Parry's Creek, N.W. Australia.*]
Little Allied Harrier.

N.W. & N. Australia.

Smaller form.

*39c. *Circus approximans drummondi* Math. & Iredale, Ibis, 1913, p. 419. [*New Zealand.*] New Zealand Harrier. — New Zealand.

Said to be smaller and darker than *C. a. gouldi*; wing ♂ 398 mm.

b. Thighs rufous, the feathers margined with white.

40. *Circus ranivorus* (Daud.), Traité, ii., p. 170 (1800). [Ex Levaillant, *S. Africa.*] S. African Marsh Harrier. — S. Africa, North to Transvaal and Nyasaland.

Wing ♂ 382, ♀ 394 mm.; throat and chest brown, the feathers margined with white; abdomen rufous; upper tail-coverts orange rufous, tipped with white.

†*41. *Circus æruginosus æruginosus* (Linn.), S.N., i., p. 91 (1758). [*Europe*: type loc. *Sweden*, apud Hartert.] Marsh Harrier. — Europe; Siberia (rare); in winter to India, China, Japan, Philippine Is., Africa.

Wing ♂ 385-418, ♀ 392-435 mm.; throat and chest creamy buff, the latter streaked with brown; upper tail-coverts white.

†41a. *Circus æruginosus harterti*, Zedl., J.f.O., 1914, p. 133. [*N. Algeria and Marocco.*] Hartert's Harrier. — N. Africa; S. Spain.

Wing ♂ (Andalusia) 380-390 mm.; ♂ much brighter coloration, more black and white; head whiter; secondaries and tail light bluish grey; (♀ lighter).

C. Above black or blackish.

a. Thighs white.

42. *Circus maillardi maillardi* Verr. in Maill., l'Ile de la Réun., ii., p. 12 (1863). [*Reunion I.*]
Maillard's Harrier.

Wing ad. 340-357 mm.; secondaries and tail grey, with black subterminal band; below white; throat, chest and upper breast streaked with black; upper and under tail-coverts white.

Reunion I., Comoro Is.

42a. *Circus maillardi macroscelis* A. Newton, P.Z.S., 1863, p. 180. [*Madagascar*].
Madagascar Harrier.

Larger; wing ad. 407-440; plumage similar.

Madagascar.

43. *Circus wolfi* Gurney, P.Z.S., 1865, p. 823, pl. xliv. [*New Caledonia.*]
Wolf's Harrier.

Markings on throat and chest browner and broader; under tail-coverts also streaked.

New Caledonia, New Hebrides.

44. *Circus spilonotus* Kaup, Contr. Orn., 1850, p. 59. [*Asia = E. Siberia.*]
Eastern Marsh Harrier.

Wing ♂ 400, ♀ 424 mm.; throat and chest white, streaked with black; upper tail-coverts white with remains of ashy brown bars.

E. Siberia, in winter to E. China, Burma and Malay Archipelago.

45. *Circus spilothorax* Salvad. and d'Alb., Ann. Mus. Civ. Genov., vii., p. 807 (1875). [*Yule I.*]
New Guinea Harrier.

S.E. New Guinea.

The same, but with distinct transverse spots of dusky cinereous on upper tail-coverts.

*46. *Circus melanoleucus* (Forst.), Indisch. Zool., p. 12, pl. ii. (1781). [*Ceylon.*]
Pied Harrier.

Wing ♂ 340-365, ♀ 360-380 mm.; throat and chest black; upper tail-coverts barred with black.

E. Siberia, Mongolia, E. & S. India, Burma Malay Pen., Borneo, Philippines (winter).

*47. *Circus buffoni* (Gmel.), S.N., i., p. 277 (1788). [ex. Latham—*Cayenne.*]
Long-winged Harrier.

Wing ad. 430 mm.; throat and chest black; upper tail-coverts white with remains of rufous bars.

E. side of S. America, from Magellan Str. to Brit. Guiana and Venezuela; Trinidad.

b. Thighs black.

48. *Circus maurus* (Temm.), Pl. Col., i., pl. 461 (1828). [*Colonie du Cap du Bonne-Esperance.*]
Black Harrier.

Wing ♂ 342, ♀ 380 mm.; throat and chest brownish black; upper tail-coverts white, the lower ones spotted with black.

S. Africa.

Females (usually much different from males).

A. Above brown.

a. Thighs white.

Below white, striped with dark brown; upper tail-coverts white, barred with dark brown.

C. melanoleucus

b. Thighs white, with streaks or spots of rufous or brown.

Below tawny buff, streaked with brown; upper tail-coverts white.	*C. cyaneus.*
Below nearly white, streaked with brown.	*C. hudsonius.*
Below creamy buff, with pointed spots of rufous brown; upper tail-coverts white.	*C. spilonotus.*
Below buffy white, with rufous centres to the feathers; upper tail-coverts white.	*C. pygargus.*
Below creamy white, with streaks of brown; upper tail-coverts white, barred with dark brown.	*C. macrourus*

c. Thighs white, barred with orange tawny.

Breast brown with white spots, rest of under parts barred with orange tawny and white; upper tail-coverts white, barred with reddish.	*C. cinereus.*

d. Thighs rufous.

Below dark brown, with a white band, marked with brown, across breast; upper tail-coverts white, tinged with grey and rufous.	*C. æruginosus.*
Below brown, streaked with white; upper tail-coverts rufous, tipped with white.	*C. ranivorus.*

Gen. XIX. MICRASTUR Gray (1841).

Type *Falco brachypterus* Temm. = *M. melanoleucus.*

Nostrils round, with a bony excrescence; tarsi and feet large and robust; tarsus reticulated behind; in front covered with small scutellae.

49. *Micrastur melanoleucus melanoleucus* (Vieill.) N.D. x., p. 327 (1817). [Paraguay.] Collared Harrier-Hawk.

S. Mexico to Colombia, Venezuela, Brazil and Paraguay.

Size large; length ♂ 20 in., wing 263 mm.; ♀ about 24 in.; above blackish with white nuchal collar; tail with 3 white bands;

below white with black shaft lines ; juv. below barred ; intermediate plumage below pale ochraceous fawn, as well as sides of face and nuchal collar.

49a. *Micrastur melanoleucus buckleyi*, Swann, Syn. List Accip., ed. 1, p. 15 subst. [ad., ♂ ?, Sarayacu, Ec. Feb. 1880, Buckley, B. Mus. coll. No. 87, 5. 1. 122.] Buckley's Harrier-Hawk. — Ecuador

Much smaller ; wing ♂ [?] 217 mm. ; tarsi and feet much smaller and weaker ; white tail bands above partly obscured by brown patches in centre and below less extensive ; those on outer feathers only 4 in number in place of 6 in typical form.

50. *Micrastur mirandollei* (Schl.), Nederl. Tijdschr., i., p. 131 (1863). [*Dutch Guiana*, type in Leyden Mus.] Mirandolle's Harrier-Hawk. — Upper E. Peru, Guiana, Panama.

Size medium ; length (♀) 17.5 ; wing 248 mm. ; above slate ; tail with 3 bands of ashy-brown showing white below ; below white with black shaft lines ; no nuchal collar.

Gen. XX. CLIMACOCERCUS Cab. (1845)

Type *C. concentricus* = *C. gilvicollis*.

Size small ; feet very much smaller ; tarsi more slender, with broad and regular scales in front.

***51.** *Climacocercus ruficollis* (Vieill.), N. Dict., x., p. 322 (1817). [*S. America*, type in Paris Mus.] Red-necked Harrier-Hawk. — Central and East Brazil, Paraguay. N. Argentina.

Wing ♂ 175, ♀ 195 mm.; above slate or rufous (rufous phase); tail with 3 greyish white bands; below greyish white, rather finely but not closely barred with greyish black; throat white, fore-neck and chest rufous.

*52. *Climacocercus zonothorax* Cab., J.f.O., 1865, p. 406. [*Porto Cabello, Venez.*, type in Berlin Mus.]
Barred Harrier-Hawk.

Colombia, Venezuela.

Wing ♂ 178, ♀ 183 mm.; above blackish brown, head blacker with irregular white nuchal collar; tail blackish, with 3 narrow white bands (4 in immature birds); below thickly barred with black and white; throat white, foreneck brown.

53. *Climacocercus gilvicollis* (Vieill.), N. Dict., x., p. 323 (1817). [*Patr. ign.*: *Cayenne?* type in Paris Mus.]
White-throated Harrier-Hawk.

Guiana & Amazonia to Ecuador E. Peru, N.E. Bolivia, and to 10° S. lat. in Brazil.

Wing ♂ 168, ♀ 182 mm.; above (male) ashy brown (female blackish); tail blackish with 3 irregular white bands (4 in immature; below whitish, breast finely barred with wavy blackish lines; lower abdomen white; throat pale grey.

54. *Climacocercus plumbeus* (W. Sclat.) Bull. B.O.C., xxxviii., p. 44 (1918). [*Carondelet, Rio Bogota, prov. Esmeraldas*, type in B. M.]
Plumbeous Harrier-Hawk.

N.W. Ecuador.

Tail with only one white band; general colour greyer than in *gilvicollis*; wing ♂ (type) 178 mm.

*55. *Climacocercus guerilla*[1], (Cass.), Pr. Phil. Acad., 1848, p. 87. [*Talapa, Mex.*] Grey-throated Harrier-Hawk. — Mexico to Colombia, Venezuela, Brazil, and Ecuador.

Wing ♂ 176, ♀ 185 mm.; above blackish; tail with 3 irregular white bands; throat and cheeks pale grey; below dull white closely barred down to thighs with blackish narrow bands (narrower and closer than in *zonothorax*.

Gen. XXI. GERANOSPIZIAS Sundev. (1873).

Type by sub. desig. Chubb (1916) *G. gracilis*.

Tarsus scaled behind; thighs without overhanging tuft of feathers; ridge of bill greater than half length of middle toe (without claw); commissure slightly festooned.

Size moderate (length 16.5-24-5 in.).

56. *Geranospizias cærulescens cærulescens* (Vieill.), N. Dict., x., p. 318 (1817). *Amer. merid.*; type loc. subst. *Brazil*, Brab. and Chubb.] Grey Crane-Hawk. — Venezuela, Guiana, E. Colombia; W. Brazil.

Wing ♂ 245, ♀ 270 mm.; plumage slaty blue, with little trace of white cross bars except on thighs and under wing-coverts; tail ochraceous white with 2 broad black bands; immature less blue and with belly ochraceous buff, but not strongly barred.

56a. *Geranospizias cærulescens balzarensis* W. Sclater, Bull. B.O.C., xxxviii., p. 44 (1918). [*Balzar Mtns., Guayas Prov.*, type in B.M.] Ecuador Crane-Hawk. — Ecuador (Guayas Prov. & Puna I.), Peru.

[1] In revising this group the forms *jugularis and interstes* appear to be untenable and are therefore omitted.

Wing 290 ; rather more barred below than *G. c. cærulescens*.

56b. *Geranospizias cærulescens niger* (Du Bus), Bull. Ac. Roy. Brux., xiv., p. 103 (1847). [*Mexico*, type in B. M.] Black Hawk. — Central America from S. Mexico to Panama.

Wing ♂ 290 mm., ♀ 310 mm. : like *G. c. cærulescens*, except that general plumage is slaty black.

57. *Geranospizias gracilis* (Temm.), Pl. Col., i., pl. 91 (1821). [*E. Brazil*, type in Leyden Mus.] Wood Hawk. — Brazil, E. Bolivia, Paraguay, N. Argentina.

Larger ; wing ad. 325-340 mm. ; less bluish ; the entire under parts barred with whitish, some bars also appearing on the wings.

Gen. XXII. UROTRIORCHIS Sharpe (1874).

Type *Astur macrourus* Hartl.

Tail longer than wing, very strongly graduated ; size large (length 24 in').

58. *Urotriorchis macrourus macrourus* (Hartl.), J.f.O., 1855, p. 353. [ex. Temm. MS.—*Gold Coast*, type in Leyden Mus.] W. African Grey Hawk. — W. Africa (Gold Coast).

Wing ♂ 303, tail 328 mm. ; wing ♀ 315, tail 354 mm. ; above blue grey, lighter on head and nape ; upper tail-coverts white ; tail very long, black above, greyish below, irregularly banded and tipped with white ; below chestnut.

*58a. *Urotriorchis macrourus batesi*, subsp. nov. (♀ Bitye, R. Ja, Cameroons, April 17th, 1914, G. L. Bates, in Coll. H. Kirke Swann).
Bates's Grey Hawk.

Above darker grey; below darker chestnut; wing ♂ 266-80, tail 365-85; wing ♀ 293-306, tail 385-400 mm.; tail longer and wings shorter than in typical form.

Cameroon,

Gen. XXIII. PARABUTEO Ridgw. (1874).
Type *Buteo harrisi* Aud.

Nostrils with bony tubercle near upper margin; thighs with overhanging tuft of feathers; tarsus scaled almost right across and feathered further down than length of middle toe. Size large (length about 23 in.).

59. *Parabuteo unicinctus unicinctus* (Temm.), Pl. Col., pl. 313 (1824). [*Brazil*, type in Paris Mus.]
One-banded Buzzard-Hawk.

Wing ♂ 295-332, ♀ 315-367 mm.; general colour blackish brown, variegated by lighter spotting; lesser wing-coverts and thighs rufous; tip and base of tail and also tail-coverts white.

S. America, S. to Chile on W. and Buenos Ayres on E.

†59a. *Parabuteo unicinctus harrisi* (Audub.), B. Am., pl. cccxcii., 1831; Orn. Biog., v., p. 30. [*Between Bayou Sara and Natchez, Mississippi.*]
Harris's Buzzard-Hawk.

Wing ♂ 315-340, ♀ 340-365 mm.; general colour sooty black, tinged with chestnut on rump. (Female more brownish).

Central and N. America from Panama to Southern U.S.

Gen. XXIV. MELIERAX Gray (1840).

Type *Falco musicus* Daud.

Tarsus scaled in front, reticulated on outer aspect, not feathered so far down as length of middle toe.

*60.	*Melierax musicus musicus* Daudin, Traité, ii., p. 116 (1800). [ex. Levaillant—*Cape Colony.*] Chanting Goshawk. Size large ; wing ♂ 333-360, ♀ 373 mm. ; general plumage bluish ash ; quills black ; wing-coverts and secondaries whitish freckled with grey ; upper tail-coverts white ; central tail feathers black, outer feathers white, barred with black ; belly white, narrowly barred with greyish-black.	S. Africa below 15° S. lat.
*60a.	*Melierax musicus metabates*, Heugl., Ibis, 1861, p. 72. [*Upper White Nile.*] Many-banded Hawk. Smaller ; wing ♂ 298-310, ♀ 310-325 mm. ; tail-coverts white, with numerous bars of slaty grey ; below white, more minutely barred with ashy grey.	N. E. Africa. Sudan to Mogador, W. Arabia.
60b.	*Melierax musicus neumanni*, Hart., Vög. pal. Fauna, ii., p. 1165 (1914). [*Merowe, Dongola*, type in Tring Mus.] Neumann's Goshawk. Lighter form ; wing ♂ 300-310, ♀ 328 mm. ; freckling of wing coverts and secondaries developed into bars ; tail-coverts rather less barred.	Nubia to Sudan & Hausaland.
61.	*Melierax poliopterus* Cab., J.f.O., 1868, p. 413. [*E. Africa*, type in Berlin Mus.] E. African Goshawk.	E. Africa, Somaliland to Kilimanjaro.

Wing ♂ 295-315, ♀ 323 mm. ; above darker slate, except throat, chest and wings, which are light grey, the wings uniform instead of freckled ; below white, with narrow blackish bars ; upper tail-coverts white.

62. *Melierax mechowi* Cab., J.f.O., 1882, p. 229. [*Angola.*]
Angola Goshawk.

Angola, Damaraland to Mashonaland, Nyasaland.

Wing ♂ 310, ♀ 330 mm. ; much darker above and below than *M. c. metabates*, which has white bars below rather broader than dark bars, reverse being case in this species ; wing-coverts and secondaries uniform ; upper tail-coverts black, barred with white.

*63. *Melierax gabar* (Daud.), Traité, ii., p. 89 (1800). [ex. Levaillant—*interior of S. Africa.*]
Red-faced Goshawk.

S. Africa, E. & N.E. Africa.

Size small ; wing ♂ 180, ♀ 210 mm. ; above, throat and chest ashy grey ; rump blackish, upper tail-coverts white ; quills and tail ashy brown, latter with 3 bands of black ; below white barred with dusky. (*M. niger*, a common melanistic phase, is uniform black).

Gen. XXV. ASTUR Lacep. (1801).

Type by subs. desig. (Vigors 1824) *Falco palumbarius* (= *gentilis*) **L.**

Bill short, cutting edge of upper mandible with a festoon ; nostrils oval, with no bony tubercle ; toes moderate, middle one somewhat longest, outer and inner nearly equal.

KEY TO NATURAL GROUPS AND SPECIES (ADULTS).

A. With conspicuous line of white on each side of crown, from above hinder ear-coverts. Size large (20-24 in.).

†64.	*Astur gentilis gentilis* Linn., S.N., i., p. 89 (1758). [*Alps* = *Dalecarlian Alps*, apud Hartert.] Common Goshawk. Wing ♂ 315-334, ♀ 355-380 mm.; crown blackish; above ashy brown; below white barred with blackish brown; tail with 4 dark bands.[1]	Europe and W. Asia (Asia Minor, Palestine etc.); in winter to N. Africa and Himalayas.
*64a.	*Astur gentilis arrigonii* Kleinsch., Orn. MB., xi., pp. 152-3 (1903). [*Sardinia*.] Sardinian Goshawk. Smaller and much darker race; wing ♂ 292-305, ♀ 335-45 mm.	Sardinia, Corsica?
†64b.	*Astur gentilis schvedowi* Menz., Orn. Geogr. Eur. Russia, p. 439 (1882). [*Transbaikalia*.] Siberian Goshawk. Less brownish, purer grey; markings below rather finer and paler; wing ♂ 290-323, ♀ 353-359 mm.	N. Asia to Thibet; Japan; in winter to India and Burma.

[1] The young of most species of the genus *Astur*, both in the typical group and many succeeding ones, are brown above, the feathers more or less margined with ochraceous or rufous, and ochraceous to creamy white (according to age) below with *longitudinal* markings, usually in the form of streaks on throat and large oval spots on breast and flanks, although in some species the flanks may be barred. Those juvenile examples of *A. gentilis* which are whitish below are clearly older than those which are ochraceous, as may be seen by lifting a feather, when a rudimentary bar is seen at the base. All birds of prey change a little with their annual moults so it is a fallacy to assume there are only the juvenile and adult plumages. The characters given, as in other genera, are those of average *adult* birds.

64c. *Astur gentilis albidus* Menz., Orn. Geogr. Eur. Russia, p. 438 (1882). [*Amurland and Kamschatka.*]
Kamtschatka Goshawk.

Kamtschatka.

" White " race ; entire colouration more or less obsolete ; wing ♂ 360, ♀ 370 mm.

†*64d. *Astur gentilis atricapillus* (Wils.), Am. Orn., vi., p. 80, pl. 52, fig. 3 (1812). [*Near Philadelphia.*]
American Goshawk.

N. America (except Pacific side), acc. in Brit. Isles.

Wing ♂ 325, ♀ 352 mm. ; above bluish ash, with blackish shaft stripes ; crown deeper black ; below closely freckled or vermiculated, instead of barred ; tail bands more indistinct.

64e. *Astur gentilis striatulus* Ridgw., Hist. N. Am. Birds, iii., p. 240 (1874). [*Puget Sound.*]
Western Goshawk.

W. North America, Sitka to Sierra Nevada.

Markings of lower parts fine and delicate and so dense as to present a nearly uniform appearance ; tail bands obsolete.

65. *Astur hensti* Schl., Mus. P.B. Revue Accipitr., p. 62 (1873). [*Madagascar*, type in Leyden Mus.]
Henst's Goshawk.

Madagascar.

Wing ♂ 280, ♀ 330 mm. ; above sepia brown ; head, neck and upper mantle blackish slate ; nape varied with white ; tail with 6 irregular darker bands ; below white, thickly and broadly barred with blackish.

B. Sides of crown uniform with crown itself; no distinct red nape band; total length under 20 in.

†*66. *Astur tachiro tachiro* (Daud.), Traitè, ii., p. 90 (1800). [ex. Levaillant—*Pays d'Auteniquoi.*]
African Goshawk.

Wing ♂ 215, ♀ 235 mm.; above brownish or slate; tail with about 3 darker bands; below white, barred with dark rufous brown

S. Africa (Cape Colony, Natal, E. Transvaal).

66a. *Astur tachiro benguellensis* subsp. nov. [♀ *Kabisombo R., Quilengo, Benguella,* Feb. 2, 1895, W. J. Ansorge, type in Tring Mus.]
Angolan Goshawk.

Much larger; wing ♀ 260, tail 230 mm.; more heavily barred below and on under wing-coverts, with no rufous wash.

Angola.

66b. *Astur tachiro sparsimfasciatus* Reichen., Orn. M.B., iii., p. 97 (1895). [*Zanzibar.*]
Zanzibar Goshawk.

Wing 248-260 mm.; below lighter; cross bands more distinct; no bars on under wing-coverts.

Zanzibar Is.,

66c. *Astur tachiro nyansæ*[1] Neumann, Orn. M.B. x., p. 138 (1902). [*Fort Portal, Victoria Nyanza.*]
Uganda Goshawk.

Smaller; wing ♂ 210, ♀ 246 mm.; stripes below brownish black, wing-coverts barred.

N. & W. Coasts of Victoria Nyanza; (Uganda).

[1] *A. hilgerti* Erlanger (J. f. O. 1904, p 173) is, I believe, a melanism of this form.

66d. *Astur tachiro tenebrosus* Lönnberg, Ark. f. Zool. xi., No. 5, p. 2 (1917). [*Londiani.*] Lönnberg's Goshawk. — Brit. E. Africa.

Larger and darker than *A. t. sparsimfasciatus*; under wing-coverts barred.

66e. *Astur tachiro macroscelides* Hartl., J.f.O., 1855, pp. 354, 360. [*Gold Coast*, type in Leyden Mus.] West African Goshawk. — W. Africa (Gold Coast to Sierra Leone).

Smaller; wing ♂ 200, ♀ 222 mm.; thighs rufous, without bars; under wing-coverts white.

66f. *Astur tachiro unduliventer* (Rüpp.), Neue Wirb., p. 40, taf. 18, fig. 1. (1835). [*Semien prov., Abyssinia.*] Abyssinian Goshawk. — N.E. Africa (Abyssinia).

Wing ♂ 190-195, ♀ 215 mm.; thighs and flanks rufous, and transverse bars more richly rufescent.

*67. *Astur trivirgatus trivirgatus* (Temm.), Pl. Col., i., pl. 303 (1824). [*Sumatra.*] Indian Crested Goshawk. — Hilly parts of India and Ceylon, Malay Archipelago.

Wing ♂ 182-198, ♀ 245 mm.; above slaty grey; below with breast rufous, or partly so, and rest of under parts white, barred with rufous.

67a. *Astur trivirgatus rufitinctus* McClell., P.Z.S., 1839, p. 153. [*Banks of Brahmaputra, Assam.*] Larger Crested Goshawk. — E. Himalayas to Assam, Indo-Chinese countries, Formosa.

Larger; wing ♀ 268 mm.

68. *Astur griseiceps* Schl., Mus. P.B., Astures, p. 23 (1862). [*North Celebes*, type in Leyden Mus.]
Grey-headed Goshawk.

Celebes.

Wing ♀ 205 mm.; above brown; head bluish grey; tail with about 4 dark bars; below white, with broad *streaks* of brown; thighs barred with blackish brown.

69. *Astur brutus* (Poll.), Nederl. Tijdschr., iii., p. 80 (1866). [*Mayotte I.*]
Least Goshawk.

Mayotte Is. (Comoro Group)

Smaller; wing ♂ 142, ♀ 163 mm.; above brownish ash; sides of head and of neck rufous; tail with 6 dark bars; below white, barred with rufous.

70. *Astur toussenelli toussenellii* (Verr.). Rev. et Mag., 1854, p. 538. [*Gaboon*, type in Br. Mus.]
Toussenell s Goshawk.

W. Africa (Gaboon).

Wing ♂ 200, ♀ 220 mm.; above blackish slate or slate; tail with 3 more or less regular white bands; below pale vinous to rufous, with indications of white bars; throat greyish white.

70a. *Astur toussenellii lopezi* Alex., Bull. B.O.C., xiii., p. 49 (1903). [*Fernando Po.*, type in B. M.]
Fernando Po Goshawk.

Fernando Po.

Smaller; wing ♀ 185 mm.; thighs chestnut.

71. *Astur castanilius castanilius* (Bp.), Rev. et Mag. de Zool., 1853, p. 578. ["*Amerique de Sud*"—err. =*Gaboon*, type in B. M.] Chestnut-sided Goshawk. W. Africa; Cameroons, French and Portuguese Congo.

Wing ad. 185-230 mm.; below banded with white and dark chestnut from throat to vent; flanks, bright rufous.

72. *Astur trinotatus trinotatus* (Bp.), Consp., i., p. 33 (1850). [*Celebes.*] N. Celebean Goshawk. N. Celebes.

Wing ♂ 160, ♀ 170 mm.; below delicate rufous fawn, without white bars; thighs white.

72a. *Astur trinotatus hæsitandus* (Hart.), Nov. Zool., iii., p. 162 (1896). [*Bonthain Peak.*] S. Celebean Goshawk. S. Celebes.

Size similar; paler below, with more white on abdomen.

73. *Astur henicogrammus* Gray, P.Z.S., 1860, p. 343. [*E. Gilolo*, type in B. M.] Gray's Goshawk. Moluccas (Halmahèra, Morotai).

Wing ♂ 205, ♀ 230 mm.; above deep slate grey; tail with 8 or 9 dark bars; below wholly chestnut with a few whitish cross bars.

74. *Astur hiogaster hiogaster* (Mull. et Schl.), Natuurl. Gesch., p. 110 (1841). [*Ambon.*] Rufous-bellied Goshawk. Moluccas (Ceram and Amboina).

Wing ♂ 195, ♀ 215 mm.; above slate grey; bars on tail nearly obsolete; below cinnamon rufous, without bars.

74a. *Astur hiogaster rooki* Rothsch. & Hart. Nov. Zool., xxi., p. 288 (1914). [*Rook I.*, type in Tring Mus.]
Rook Island Goshawk.

Smaller ; wing ♂ 192-195 mm.

Rook I.

*75. *Astur etorques etorques* (Salvad.), Ann. Mus. Civ. Genov., vii., p. 901 (1875). [*Salawatti I.*]
New Guinea Goshawk.

Larger ; wing ♂ 208, ♀ 238-260 mm. ; above browner ; below more vinous red ; tail with about 10 darker bars.

New Guinea, Salawati and Jobi Is., Bismarck Archipelago.

75a. *Astur etorques rufoschistaceus* Rothsch. and Hart., Nov., Zool., ix., p. 590 (1902). [*Ysabel I.*]
Ysabel Is. Goshawk.

Whole under side deep rufous cinnamon.

Ysabel I., Solomon Archipelago.

75b. *Astur etorques rubianæ* Rothsch. and Hart., Nov. Zool., xii., pp. 250-1 (1905). [*Rubiana I.*]
Solomon Island Goshawk.

Smaller and darker form.

Solomon Is. (Rubiana, Rendova, Gizo).

75c. *Astur etorques bougainvillei* Rothsch. and Hart. Nov. Zool., xii., pp. 250-1 (1905). [*Bougainville I.*]
Bougainville I. Goshawk.

Plumage lighter above.

N. Solomon Is. (Shortland Group and Bougainville I.).

75d. *Astur etorques misoriensis* (Salvad.), Ann. Mus. Civ. Genov., vii., p. 904 (1875). [*Misori I.*]
Misori Goshawk.

Smaller and more delicate grey above.

Is. of Misori, N.W. New Guinea, Jobi I. (?)

75e. *Astur etorques pulchellus* Ramsay, Jnl. Linn. Soc., xvi., p. 131 (1881). [*Solomon Is.*]
Ramsay's Goshawk.

Under wing and tail-coverts whitish; thighs reddish white.

Solomon Is. (Cape Pitt, Florida I., Guadalcanar, Ysabel I.)

76. *Astur sylvestris* (Wall.), P.Z.S., 1863, pp. 484, 487. [*Flores*, type in B. M.]
Flores Goshawk.

Wing ♂ 187, ♀ 205 mm.; above paler ashy grey; crown bluish; tail uniform; below paler salmon colour, with remains of white bars on breast, more numerous on abdomen.

Lesser Sunda Is. (Flores).

*77. *Astur badius badius* (Gmel.), S.N., i., p. 280 (1788). [ex. Brown—*Ceylon.*]
Ceylonese Shikra.

Wing ♂ 172-177, ♀ 203 mm.; above darkish blue grey; tail with 5 or 6 blackish bars; below salmon rufous, with white cross bars.

Ceylon. Travancore.

†*77a. *Astur badius dussumieri* Temm., Pl. Col., livr. 52, pl. 308 (1824). [*India = Bengal*, type in Paris Mus.]
Shikra.

Larger; wing ♂ 180-200, ♀ 210 mm.; above lighter grey, below paler rufous.

Whole of Indian Peninsula.

*77b.	*Astur badius poliopsis* (Hume), Stray Feathers, ii., 1874, p. 325. [*N. Pegu.*] Hume's Shikra. Larger than *A. badius badius*; above darker grey; below with broader and brighter vinous bands.	Assam, Burma, Tenasserim, Siam, Indo-China, Formosa.
7c.	*Astur badius cenchroides* Severtz., Turkist. Jevotn., p. 63 (1873). [*Russian Turkestan*]. Severtzow s Shikra. Wing ♂ 198, tail 165 mm.; wing ♀ 215, tail 180 mm.; tail slightly longer and more definitely barred; below with paler cross bars.	Central Asia (Turkestan), Baluchistan, E. Persia and Punjab, Sind (winter).
78.	*Astur brevipes* Severtz., Bull. Soc. Imp. Nat. Moscou, xxiii., p. 234, tab. i.-iii. (1850). [*Govt. Woronesch, S. Russia.*] Levant Shikra. Larger; wing ♂ 215-222, ♀ 230-240 mm.; mantle blackish slate; bars below paler salmon colour; under wing-coverts distinctly barred.	Central Russia, Dalmatia, Greece, Turkey, Asia Minor, Persia, Syria, Egypt.
*79.	*Astur sphenurus sphenurus* (Rüpp.), Neue Wirb., p. 42 (1835). [*Dahlak I., near Massaua, Red Sea.*] Rüppell's Goshawk. Wing ♂ 178, ♀ 192-204 mm.; above clear bluish ashy, below as in *A. badius badius*, but under wing-coverts buffy white, with faint dusky cross bars; tail with 7 black bands instead of 6.	N.E. Africa, Sudan to Senegambia, Sierra Leone, Nigeria.

79a. *Astur sphenurus riggenbachi* Neumann, Bull. B.O.C., xxi., p. 69 (1914) [*Gassam, E. of Thiés. Senegal* type in Riggenbach coll.]
Riggenbach's Goshawk.

Wing ♂ 177 mm.; much darker above, more like *A. soloensis*; below vinous buff, throat and upper breast uniform in adult, below barred with white.

Senegal.

*80. *Astur polyzonoides* (Smith), Ill. Zool. S. Afr., pl. xi. (1838). [*S. Africa*, type in B. M.]
Little Barred Goshawk.

Smaller; wing ♂ 160, ♀ 190 mm.; above slaty brown; tail (including centre feathers) with 6 darker bars; below white, narrowly barred with rufous brown; wing quills all banded with black below.

S. Africa, N. to Nyasaland.

81. *Astur butleri* Gurney, Bull. B.O.C., vii., p. xxvii. (1898). [*Car Nicobar I.*, type in Norwich Mus.]
Butler's Goshawk.

Wing ♂ 173 mm.; tail with only one indistinct subterminal bar; under wing-coverts white.

Car Nicobar I., Bay of Bengal.

82. *Astur soloensis* Horsf. Trans. Linn. Soc., xiii., p. 137 (1821). [*Java.*]
Chinese Goshawk.
[*A. cuculoides* a synonym.]

Wing ad. 180-200 mm.; tail with 5 bars; body below, pale buffy vinous without bars.

China, S. in winter to Malay Archipelago and New Guinea.

83. *Astur pallidiceps* (Salvad.), Orn. d. Papuasia, etc., i., p. 64 (1879). [*Bouru.*] White-headed Goshawk.

Head, neck and upper part of mantle light greyish white; rest of upper parts slate grey, tail uniform; below vinous rusty red. — Bouru.

84. *Astur poliocephalus* (Gray), P.Z.S., 1858, pp. 170, 189. [*Aru Is.*, type in Br. Mus.] Grey-headed Goshawk.

Wing ♂ 198, ♀ 213 mm.; above as last, but tail with blackish bars; below white. — New Guinea, Salawati, Mysol, Waigiou and Aru Is.

*85. *Astur francescii francescii* (Smith), Afr. Q. Jnl., ii., p. 280 (1834). [*Madagascar*, type in B. M.] Frances's Goshawk.

Smaller; wing ♂ 154-158, ♀ 173 mm.; above uniform dark slate; tail with 7 darker bars; below buffy white, with faint concealed cross bars on chest. — Madagascar.

85a. *Astur francescii pusillus* Gurney, Ibis, 1875, p. 258. [*Joanna I.*] Joanna Island Goshawk.

Smaller and darker above. — Joanna or Anjuan I. (Comoro Group).

*86. *Astur raii raii* Vig. & Horsf., Trans. Linn. Soc., xv., p. 180 (1827.) [*N.S. Wales.*] Grey Goshawk. [*Astur clarus clarus.* ed. 1.]

Much larger; wing ♀ 305-318 mm.; above brownish ash colour; below white barred with dull ashy. — E. side of Australia.

86a. *Astur raii cooktowni* (Math.), Nov. Zool., xviii., p. 245 (1912). [*Cooktown, N.Q.*] Northern Grey Goshawk. — N. Queensland.

Smaller ; wing ♀ 261 mm.

86b. *Astur raii robustus* Zeitz. S. A. Orn., i., pt. 1, p. 13 (1914). [*Melville I.*] Melville Island Goshawk. — Melville I., N. Territory.

Insular race. [Not seen.]

*87. *Astur novæhollandiæ novæhollandiæ* (Gmel.) S.N., i., p. 264 (1788). [ex. Forster : *Australia = Tasmania*, apud Math.] White Goshawk. — Tasmania, N.S. Wales, S. Australia

Wing ♂ 260, ♀ 310 mm. ; above and below pure white.

87a. *Astur novæhollandiæ leucosomus* Sharpe, Cat. Bds. B.M., i., p. 119 (1874). [*New Guinea.*] Lesser White Goshawk. — New Guinea, Waigiou, N. Queensland ?

Smaller ; wing ♂ 198 mm

88. *Astur buergersi* Reich., Orn. M.B., xxii., p. 29 (1914)[1] [*Mäomoboberg*]. Black-and-White Goshawk. — Mountains of New Guinea.

[1] Mr. O. Neumann informed me recently that *A. buergersi* was in his opinion the same as *A. eudiabolus* Rothsch. & Hart., and that a second specimen of *A. buergersi* received was in his opinion adult (although the first was not) and was "nearly black all over, with a few white marks on wing and tail." Dr. Hartert has since written me that *bürgersi* was the juvenile and *eudiabolus* the adult, but he concurs in the identity of the two birds, so *eudiabolus* becomes a synonym. *Astur planes* of Reichenow (J.f.O. 1910, p. 412, *Neu Pommern*) I have still been unable to place or identify, nor is Mr. Neumann certain of it.

	Above slate black; below white streaked and barred with black; wing ♂ 295, ♀ 325 mm.	
89.	*Astur haplochrous* (Sclat.), Ibis, 1859, p. 275 pl. viii. [*Nu I., New Caledonia.*] Black-throated Goshawk.	New Caledonia
	Wing ad. 245 mm.; above, also throat and chest, blackish slate; below white.	
90.	*Astur albigularis albigularis*[1] (Gray), Ann. N.H., (4) v., p. 327 (1870). [*Recherche Bay, S. Christoval,* type in B. M.] White-throated Goshawk.	Solomon Islands (S. Christoval, Ugi, Guadalcanar).
	Wing ad. 254 mm.; above black, or blackish slate; tail unbanded; below white, with or without slight greyish shading or vermiculations on sides of chest.	
90a.	*Astur albigularis meyerianus* Sharpe,[1] Jnl. Linn. Soc., xiii., p. 458, pl. xxii. (1877). [*Jobi I.*] Meyer's Goshawk.	Jobi I. N.W. New Guinea, Ceram-Laut.
	Larger; wing 315 mm.; cheeks white; below with some black shaft streaks and cross bars.	
91.	*Astur poliogaster* (Temm.), Pl. Col., i., pl. 264 (1824). [*Brazil,* type in Leyden Mus.] Grey-bellied Goshawk. [*Astur jardinei* a synonym.]	Brazil (Ypanama), Paraguay, Brit. Guiana.

[1] Dr. Hartert, who examined the description of Oustalet's *Astur sharpei* (Bull. Soc. Philom. (6), xi., p. 25, 1875) with me, thinks it is merely an example of *A. albigularis albigularis*, and I have therefore omitted it.

Wing ♂ 248 mm. ; ♀ 278 mm. ; above dark lead grey ; below greyish white ; tail with 3 ashy bands.

C. An ill-defined white collar on hind neck ; thighs nearly uniform brown, with slight remains of white cross bars.

*92. *Astur collaris*[1] (Kaup), MS. in Mus. Brit. undè ; Scl., Ibis, 1860, p. 148, pl. 6. [" *Nova Granada* " = *Bogota*, type in Brit. Mus.] Semi-collared Sparrow-hawk. Colombia, Venezuela (Mérida).

Wing ad. 180 mm. ; immature ♂ (?) 162 mm. ; above sooty brown ; head black ; tail with 5 darker bands ; below white, broadly barred with rufous brown. Immature chestnut above ; head chocolate ; tail with 6 bands ; below paler chestnut, with obsolete bars.

D. With a well-defined rufous nuchal collar.

93. *Astur pectoralis* Bp., Rev. et Mag. de Zool., 1850, p. 490. [*Brazil.*] Red-collared Goshawk. Brazil, Guiana, Ecuador.

Wing ♂ 230, ♀ 278 mm. ; above brown ; crown black, crested ; tail with 4 black bands ; below, chest rufous, rest of under parts white barred with black.

94. *Astur natalis* Lister, P.Z.S., 1888, p. 523. [*Christmas I.*] Christmas Island Goshawk. Christmas I.

[1] The adult bird has the foot and wing of *Astur* rather than *Accipiter*, and as I am unable to unite the two genera (both on account of the difference in the foot and the already unwieldly size of each genus) I have transferred this bird to *Accipiter*.

Above brownish slate ; inner webs of tail-feathers obscurely barred ; below, breast rufous brown barred with slate, rest paler barred with white.

95. *Astur rufitorques* Peale, U.S. Explor. Exped., p. 68, pl. 19 (1848). [*Fiji Is.*] Fijian Goshawk. — Fiji Islands.

Wing ♂ 205, ♀ 242 mm. ; above light bluish grey ; tail not visibly barred ; throat white ; below pale vinous red.

96. *Astur torquatus torquatus* (Temm.), Pl. Col., i., pl. 43 (1821) [*New Holland and Timor* : terra typica *Timor.*] Collared Goshawk. — Timor, Savu, Alor, Samao.

Wing ♂ 202-215, ♀ 240-248 mm. ; above slate brown ; tail with numerous darker bars ; below white, barred with pale rufous ; thighs and under tail-coverts less barred.

96a. *Astur torquatus sumbaensis* (A. B. Meyer), Abhandl. Ber. Mus., Dresd., 1892-3, p. 3. [*Sumba I.*] Sumba Goshawk. — Lesser Sunda Is. (Sumba, Waingapo).

Wing ♂ 220, ♀ 255 mm. ; bars below wider and darker brown.

96b. *Astur torquatus wallacii* Sharpe, Cat. Bds. B.M., i., p. 128, pl. 5 (1874). [*Lombok*, type in Brit. Mus.] Wallace's Goshawk. — Lesser Sunda Is. and S.W. Islands.

Wing ♂ 210, ♀ 237 mm. ; below much richer vinous salmon colour with narrow white cross bars, the chest nearly uniform salmon colour.

*96c. *Astur torquatus griseigularis* Gray, P.Z.S., 1850, p. 343. [*Batchian*, type in B. M.] Grey-throated Goshawk.

Larger; wing ♂ 250, ♀ 265-285 mm.; above darker, except head; below with some white bars; throat bluish grey.

Molucca Is. (Halmahèra, Ternate, Gebe, Batchian, Morotai? Obi Is.).

96d. *Astur torquatus buruensis*, Streseman, Nov. Zool., xxi., p. 381 (1914). [*Fakol, Buru*, type in Tring Mus.] Bouru Goshawk.

Browner above; wing ♀ 259-270 mm.

Bouru, S. Moluccas.

96e. *Astur torquatus albiventris* Salvad., Ann. Mus. Civ. Genov., vii., p. 982 (1875). [*Kei I.*] White-bellied Goshawk.

Smaller; above as *A. rufitorques*; below pale vinous red; belly white.

Ké or Kei I., Manggur.

96f. *Astur torquatus polionotus* Salvad., Mem. Accad., Torino, xl., p. 147 (1889). [*Timor Laut.*] Tenimber Is. Goshawk.

Plumage above lighter.

Timor Laut or Tenimber, Banda, Babber and Dammer Is.

97. *Astur melanochlamys melanochlamys* (Salvad.), Ann. Mus. Civ. Genov., vii., p. 905 (1875). [*Mt. Arfak.*] Black-backed Goshawk.

Above black; tail barred on inner webs only; below vinous chestnut; throat black.

N.W. New Guinea.

97a. *Astur melanochlamys schistacinus* Rothsch. and Hart., Nov. Zool., xx., p. 482 (1913). [*Mt. Goliath.*]
Mt. Goliath Goshawk.

Above more slaty black ; below paler.

Mount Goliath, Dutch New Guinea.

*98. *Astur fasciatus fasciatus* Vig. & Horsf., Tr. Linn. Soc., xv., p. 181 (1827). [*N.S.Wales*, type in Brit. Mus.
Australian Goshawk.

Wing ♂ 260-272, ♀ 310 mm. ; above slate brown ; tail with numerous darker bars ; below dull rufous, narrowly barred with white and ashy ; under wing-coverts dull rufous barred with fulvous.

E. Australia, S. to Tasmania, Norfolk I.

98a. *Astur fasciatus didimus* (Math.), Austral Avian Rec., i., p. 33 (1912). [*Melville I.*]
Northern Goshawk.

Smaller : " wing 236 mm."

N.W. Australia, Northern Territory.

98b. *Astur fasciatus cruentus* Gould, P.Z.S., 1842 p. 113 (1843). [*York dist. W. Austral.*]
West Australian Goshawk.

Wing ♀ (?) 317 mm. ; below paler ; under wing-coverts barred with vinous grey.

W. Australia.

98c. *Astur fasciatus polycriptus* Rothsch. and Hart. Nov. Zool., xxii., p. 53 (1915). [*Sogeri dist. Brit. New Guinea*, type in Tring Mus.]
New Guinea Barred Goshawk.

Wing ♂ 230 mm. ; above slightly more

New Guinea, New Britain, New Ireland, D'Entrecasteaux Group, Waigiou I.

bluish; below more reddish and lighter, with narrow and nearly obsolete whitish bars.

98d. *Astur fasciatus insularis*, F. Sarasin, Novæ Caledonia Zool. Aves, p. 8 (1913). [*New Caledonia.*] New Caledonia Goshawk. — New Caledonia, New Hebrides, Loyalty Is.

Wing 225-230 mm.; under wing-coverts reddish isabelline, barred with blackish brown.

Gen. XXVI. NISOIDES Pollen (1866).
Type *N. moreli* Poll.

Hinder aspect of tarsus scaled; commissure of bill perfectly straight.

99. *Nisoides moreli* Pollen, Bull. Soc. Sc. Rèun., 1866, p. 62. [*Madagascar*, type in Leyden Mus.] Morell's Goshawk. — W. Coast of Madagascar.

Wing ♂ 152 mm.; above slaty black; nape and base of scapulars mottled with white and upper tail-coverts tipped with same; tail with about 8 darker bands; below white barred with rufous brown; throat streaked with black.

Gen. XXVII. ACCIPITER Briss. (1760).
Type by taut. *Accipiter accipiter* Briss. [= *A. nisus.*]

Bill with distinct festoon to cutting margin of upper mandible; nostrils oval; tarsus long, slender and smooth; toes long and slender, particularly the middle one, which is more than twice ridge of bill (without cere). Maximum size ♂, 15.8; ♀, 18 in. Minimum ♂, 8.8; ♀, 10.5 in.

KEY TO THE NATURAL GROUPS AND SPECIES (ADULTS).

A. Thighs banded ; no collar round neck.

†*100.	*Accipiter nisus nisus* (Linn.), S.N., i., p. 92 (1758). [*Europe = Sweden*, apud Hartert]. Common Sparrow-Hawk. Wing ♂ 190-208, ♀ 230-242 mm. ; above bluish slate ; nape more or less mottled with white ; tail with about 4 darker bands; below white, breast barred with rufous or brown ; flanks rufous.	Europe[1] and W. Asia ; in winter to Algeria, N.E. Africa, India, China.
100a.	*Accipiter nisus wolterstorffi* Kleinschm., Orn. MB., ix., p. 168 (1901). [*Sardinia*, type in Kleinschmidt's Coll.] Sardinian Sparrow-Hawk. Smaller ; wing ♂ 183, ♀ 215-223 mm. ; darker above, more closely and thickly barred below.	Sardinia.
100b.	*Accipiter nisus punicus* Erlanger, Orn. MB., v., p. 187 (1897). [*Ain-bou-Dries, Tunisia*]. North African Sparrow-Hawk. Larger ; wing ♂ 203-213, ♀ 243-255 mm. ; above bluer.	Tunis, Algeria, Marocco.
*100c.	*Accipiter nisus nisosimilis* Tickell, Jnl. As. Soc. Beng. ii., p. 571 (1833-34). [*Borabhum, India.*] Indian Sparrow-Hawk. Larger form of *A. n. nisus* ; wing ♂ 205-215, ♀ 240-257 mm.	N. and Central Asia, from Turkestan to Japan; in winter to India, Kashmir, Assam, Burma.

[1] Kleinschmidt (Falco xiii., p. 24, 1918) has separated the French race as *A. nisus gallicæ*.

100d. *Accipiter nisus pallens* Stejn., Pr. U.S. Nat. Mus., xvi., p. 625 (1893). [*Prov. of Hitachi, Japan*, type in Sci. Coll. Mus., Tokyo.] Kamtschatkan Sparrow-Hawk.

Above lighter and greyer, with dark shaft stripes; dark tail bands nearly obsolete; below barred with greyish.

Kamschatka, Japan.

*100e. *Accipiter nisus teneriffæ* Laubmann, Verhandl. Orn. Ges., xi., p. 164 (1912). [*Teneriffe*, type in Laubmann's Coll.] Teneriffe Sparrow-Hawk.

Insular race [with light and dark phases.] wing ♂ 197, ♀ 231 mm.

Teneriffe.

100f. *Accipiter nisus melanoschistus* Hume, Ibis, 1869, p. 356. [*Kotgarh, Simla.*] Himalayan Sparrow-Hawk.

Larger; wing ♂ 203-213, ♀ 245-259 mm.; blackish slaty above, darkest on head and nape; bars on tail broad and pronounced; below with bars broad and decided.

Himalayas, from Kashmir to Assam, Thibet,[1] Kansu, Burma.

100g. *Accipiter nisus granti* Sharpe, Ann. & Mag. N.H. (6), v., p. 483 (1890). [*Madeira*, type in B. M.] Madeiran Sparrow-Hawk.

Smaller; wing ♂ 188-198, ♀ 221-231 mm.; above blackish brown; below white, barred with greyish black.

Madeira.

[1] *A. n. ladygini* Bianchi (Ann. Mus. St. Petersb. viii., p. 11, 1903) seems to be identical with *melanoschistus*.

†*101. *Accipiter fuscus fuscus* (Gmel.), S.N., i., p. 280 (1788). [*America* : *North America.*] Sharp-shinned Hawk. N. America, in winter S. to Guatemala.

Wing ♂ 167-180, ♀ 205-210 mm. ; above slaty blue ; below white, barred with pale rufous ; the flanks barred like breast.

101a. *Accipiter fuscus fringilloides* (Vig.), Zool. Jnl., iii., p. 434 (1828). [*Cuba.*] Cuban Sparrow-Hawk. Cuba.

Smaller and more slender ; wing ♂ 158 mm. ; cheeks rufous ; below nearly white, especially the thighs ; no white spots on outer tertials.

101b. *Accipiter fuscus striatus* Vieill. Oiseaux Amèr. Sept. i., p. 42, pl. 14 (1807). [*Malfini, Saint Domingue.*] St. Domingo Sparrow-Hawk. St. Domingo.

Wing ad. 149-181 mm. ; darker grey above; centre of abdomen and thighs white ; sides barred with brown ; a large concealed white spot on 3 outer tertials.

101c *Accipiter fuscus venator* Vetomre, Pr. Biol. Soc. Wash., xxvii., p. 119 (1914). [*Maricao,* type in U.S. Nat. Mus.] Porto Rico Sparrow-Hawk. Porto Rico.

Wing ♂ 145 mm. ; similar to *A. fuscus striatus,* but much darker above and more deeply coloured below ; upper side of tail with sharply defined black bars.

†102. *Accipiter cooperi cooperi* (Bp.), Am. Orn., i., pl. 10, f. 1 (1828). [*Near Bordentown, New Jersey.*]
Cooper's Hawk.

Larger; wing ♂ 230-238, ♀ 260-273 mm.; below rufous, the feathers spotted on both webs or barred with white; upper breast more or less uniform rufous.

N. America (Middle and Southern U.S.).

102a. *Accipiter cooperi mexicanus* Swains., Faun. Bor. Am., ii., p. 45, footnote (1831). [*Mexico.*]
Mexican Sparrow-Hawk.

Wing ♂ 224-230, ♀ 255-262 mm.; female with markings of lower parts denser and rather deeper in colour; more rufous on thighs. Male scarcely differs from typical form.

W. United States to C. America.

102b. *Accipiter cooperi gundlachi* (Lawr.), Ann. Lyc. N.Y., vii., p. 252 (1862). [*Cuba.*]
Gundlach's Sparrow-Hawk.

Wing ♂ 218, ♀ 265 mm.; sides of neck, a band running to hind neck, and upper part of breast greyish ash.

Cuba.

103. *Accipiter superciliosus* (Linn.), S.N., i., p. 128 (1766). [*Surinam.*]
[=*A. tinus*, auct. plur.]
Eyebrowed Sparrow-Hawk.

Wing ♂ 140-145, ♀ 160-167 mm.; above slaty grey; below white, throat unspotted, rest minutely banded or vermiculated with greyish brown.

Tropical S. America, N. to Panama.

*104.	*Accipiter minullus minullus* (Daud.), Traité, ii., p. 88 (1800). [ex. Levaillant—*Rives du Gamtoos.*] Little Sparrow-Hawk. Wing ♂ 147, ♀ 168 mm. ; above slaty black ; upper tail-coverts tipped with white ; tail with 2 faint paler bands, and 2 large spots of white on inner webs ; below white (sides bright chestnut), narrowly barred with rufous.	S. Africa, to Brit. E. Africa on E. and Angola on W.[1]
104a.	*Accipiter minullus intermedius* Erlang., J. f. Orn., p. 173 (1904). [*Abela, S. Abyssinia.*] Abyssinian Sparrow-Hawk. Sides paler ; bars darker and broader.	N.E. Africa, from Egyptian Soudan and Abyssinia to Uganda.
104b.	*Accipiter minullus erythropus* (Hartl.), J.f.O., 1855, p. 354. [*Gold Coast,* type in Leyden Mus.] Red-legged Sparrow-Hawk. Wing ♂ 152 mm. ; upper tail-coverts conspicuously white ; barrings below blackish brown with very little rufous.	W. Africa, Gold Coast to Cameroons.
105.	*Accipiter ovampensis* Gurney, Ibis, 1875, p. 367, pl. vi. [*Okavango River,* type in Norwich Mus.] Gurney's Sparrow-Hawk. Wing ♂ 232, ♀ 264 mm. ; above dark ashy grey ; tail with 4 darker bars, alternated with paler bands, in centre of each of which is a white spot ; below white with narrow grey bands.	Ovampo Land, S.W. Africa, to Zambesi, Nyasaland, S. Abyssinia, Gambaga (Gold Coast).

[1] *A. minullus tropicalis* Reich. (J. f. O. p. 139, 1908) from E. Africa does not after careful comparison appear to be separable.

*106. *Acicpiter madagascariensis* Verr., S. Afr. Q. Jnl., ii., p. 282 (1834). [*Madagascar*, type in Brit. Mus.] Madagascar.
Madagascar Sparrow-Hawk.

Wing ♂ 181, ♀ 205 mm.; above blackish brown; tail uniform above, with paler bands beneath; below white, thickly barred with greyish black.

B. Thighs barred; red collar on hind neck.

*107. *Accipiter cirrocephalus cirrocephalus* (Vieill.) N. Dict., x., p. 329 (1817). [*N.S.Wales.*] E. Australia[1]
Collared Sparrow-Hawk.

Wing ♂ 210, ♀ 253 mm.; above bluish ash; tail almost uniform above, but with numerous darker bars below on inner webs; below broadly barred with vinous red and greyish white.

107a. *Accipiter cirrocephalus broomei* (Math.), Nov. Zool., xviii., p. 247 (1912). [*Broome Hill, S.W. Australia.*] W. Australia, Northern Territory.
Broome's Sparrow-Hawk.

Doubtfully distinct; slightly smaller, wing ♂ 204-206, ♀ 240 mm.; said to be darker above.

107b. *Accipiter cirrocephalus papuanus* Rothsch. & Hart., Nov. Zool., xx., p. 482 (1913). [*Snow Mtns.*, type in Tring Mus.] Dutch New Guinea.
Papuan Sparrow-Hawk.

[1] After a careful examination of the type and series at Tring I am unable to detect any character by which *A. c. hæsitata* Mathews from Cape York may be separated.

Above clearer bluish slate ; below brighter rufescent with less distinct whitish bars ; thighs with bare indications of bars.

C. Thighs uniform ashy grey ; red collar on hind neck.

108. *Accipiter rubricollis* Wall., P.Z.S., 1863, pp. 19, 21, pl. iv. [*Bouru*, type in B. M.] Red-collared Sparrow-Hawk. — Moluccas (Morotai, Bouru).

Wing ♀ 215 mm. ; above blackish slate ; red collar extending to upper interscapulary region ; tail with 10 or 11 darker bands, obsolete on outermost feathers ; below pale ashy grey, sides of neck chestnut.

109. *Accipiter brachyurus* (Ramsay), Pr. Linn. Soc. N.S.W., iv., p. 465 (1879) [New Guinea err. = *New Britain*, vide errata, p. 494.] Short-tailed Sparrow-Hawk. — New Britain.

Above " dark blue slaty grey " ; rufous collar round hind neck.

110. *Accipiter erythrauchen erythrauchen* Gray, P.Z.S., 1860, p. 344. [*E. Gilolo*, type in B. M.] Grey-throated Sparrow-Hawk. — N. Moluccas (Halmahéra Batchian, Obi Is.).

Wing ♂ 170, ♀ 208 mm. ; bars on tail nearly obsolete ; below uniform clear vinous, paler on thighs ; lower abdomen white.

110a. *Accipiter erythrauchen ceramensis*, Schl., Mus. P.B. Astures, p. 39 (1862). [*Ceram*, type in Leyden Mus.]
Ceram Sparrow-Hawk.

S. Moluccas, Ceram and Bouru.

Smaller ; wing ♀ 201 mm.

D. Thighs greyish white ; no nuchal collar.

111. *Accipiter rhodogaster rhodogaster* (Schl.), Mus. P.B. Astures, p. 32 (1862). [*Gorontalo*, type in Leyden Mus.]
Red-bellied Sparrow-Hawk.

Celebes, Banggai I.

Wing ad. 165 mm. ; above bluish grey ; sides of face and neck very pale ; below clear vinous red ; tail blackish slate above, with 4 or 5 dark bars beneath.

111a. *Accipiter rhodogaster sulaensis* (Schl.)., Vog. Ned. Ind. Valke, pp. 26, 64, pl. 16, f. 3, 4 (1866). [*Sula Is.*, type in Leyden Mus.]
Sula Is. Sparrow-Hawk.

Sula Islands.

Wing ♀ 175 mm. ; above darker slate grey ; sides of face and neck vinous like under parts.

E. Thighs rufous or ochraceous ; no nuchal collar.

112. *Accipiter erythronemius* Gray, List Accipitr. B.M., p. 70 (1848), nom. nud ; Kaup Contr. Orn. iii., p. 64 (1850). [*Bolivia.*]
Grey-backed Sparrow-hawk.

S. America, S.E. Brazil to E. Bolivia and N.W. Argentina.

Wing ♂ 157-160, ♀ 187 mm. ; above slaty grey ; tail brown with about 5 ashy brown bars ; cheeks and under surface white, with a few dusky shaft lines and bars on breast and flanks ; thighs chestnut.

*112a. *Accipiter ethronemius salvini* (Ridgw.), Bull. U.S. Geol. Surv., ii., p. 121 (1876). [*Mérida, Venez.*]
Salvin's Sparrow-Hawk.

Larger ; wing ♂ 168, ♀ 190-200 mm. ; above plumbeous, with a shade of brown ; head blacker ; below with bars on breast and flanks obsolete or absent ; thighs cinnamon rufous.

Venezuela.

113. *Accipiter chionogaster chionogaster* (Kaup), P.Z.S., 1851, p. 41. [*Coban, Guatemala.*]
White-bellied Sparrow-Hawk.

Wing ♂ 178, ♀ 203-213 mm. ; above dark slate ; head blackish ; below white, with fine black shaft lines on chest ; thighs pale ochre.

Central America. (Guatemala, Nicaragua).

*113a. *Accipiter chionogaster venezuelensis* subsp. nov. [♀ *Escorial, Mérida,* Feb. 17, 1911, type in coll. H. Kirke Swann.]
Mérida Sparrow-Hawk.

Wing ♀ 196-198 mm. ; above much paler slate grey ; thighs pale whitish rusty, instead of pale ochre.

Venezuela.

*114. *Accipiter ventralis ventralis* Sclat., P.Z.S., 1866, p. 303. [*Interior of Colombia.*]
Chestnut-bellied Sparrow-Hawk.

Wing ♂ 167-171, ♀ 198 mm. ; above deep slaty grey, including sides of face ; below chestnut, barred with rufous and greyish white ; thighs chestnut.

Venezuela to Colombia, Ecuador, Peru and N.W. Bolivia.

114a. *Accipiter ventralis nigriplumbeus* Lawr., Ann. Lyc. N.Y., ix., p. 270 (1869). [*Quito Valley, Ecuador.*]
Plumbeous Sparrow-Hawk.

Wing ♂ 172 mm.; above and below plumbeous; abdomen mixed with ferruginous rufous.

Ecuador and Peru.

*115. *Accipiter rufiventris rufiventris* Smith, S. Afr. Q. Jnl., i., p. 231 (1830). [*Baviaan's River.*]
African Sparrow-Hawk.

Wing ♂ 203, ♀ 238 mm.; above deep slate; nape mottled with white; side of face and under surface tawny rufous.

S. Africa, N. to Katanga (Belg. Congo); Togoland.

115a. *Accipiter rufiventris perspicillaris* Rüpp., Neue Wirb. Vog., p. 41, pl. 18, f. 2 (1836). [*Gondar, Abyssinia.*]
Abyssinian Sparrow-Hawk.

Wing ♂ 195-200, ♀ 230 mm.; slightly darker below.

Abyssinia.

116. *Accipiter sharpei sharpei*[1] Reich., Vög. Afrikas, i., p. 564, pl. 2 (1901). [*Gaboon?*]
Sharpe's Sparrow-Hawk.

Aboce slaty black, lower upper tail-coverts white; tail with 2 bars of white on inner webs; below chestnut.

W. Africa, Cameroon to Benguela.

[1] *Accipiter batesi* Sharpe (Bull. B. O. C., xiii., p. 50, 1902) from Cameroon is said by W. Sclater to be the ♀ of this form, but see *Ibis* 1921, p. 105

116a. *Accipiter sharpei beniensis* Lönnberg Ark. f. Zool., x., No. 24, p. 13 (1917). [*Beni, Belgian Congo.*]
Congo Sparrow-Hawk.

Larger ; wing ♂ 162 mm. ; tail 146 mm. ; tail with 3 instead of 2 transverse white spots.

E. Congo.

F. Thighs greyish, with traces of bars ; no nuchal collar.

117. *Accipiter hartlaubi* (Verr.), in Hartl., Orn. W. Afr., p. 15 (1857). [*Casamanze*, type in Gurney Coll. (?)]
Hartlaub's Sparrow-Hawk.

Wing ad. 152 mm. ; like *A. sharpei* above, but no white spots on centre tail feathers ; below, rufous colour paler on sides.

W. Africa (Senegambia to Togoland.)

G. Thighs very pale rufous or ashy to chestnut ; no nuchal collar.

118. *Accipiter virgatus virgatus*[1] (Temm.), Pl. Col., i., pl. 109 (1823). [*Java*, type in Leyden Mus.]
Java Sparrow-Hawk.

Wing ♂ 162, ♀ 188 mm. ; above blackish slate ; nape mottled with white ; sides of neck washed with rufous ; tail with 3 blackish bars ; below chestnut, paler on thighs and more or less barred below breast.

Greater Sunda Is., Java, N. Borneo, Sarawak.

118a. *Accipiter virgatus besra* Jerd., Madras Jnl. Lit. Sci., x., p. 84 (1839). [*Soonda Jungles.*]
Besra Sparrow-Hawk.

S. India, Ceylon.

[1] *A. virgatus rufotibialis* Sharpe is a synonym.

Wing ♂ 165-167, ♀ 188-203 mm.; below more vinous chestnut, without bars.

118b. *Accipiter virgatus confusus*, Hart., Nov. Zool., xvii., p. 209 (1910). [*Luzon.*] Philippine Sparrow-Hawk. — Philippine Islands.

Below nearly uniform light red in ad. ♀; the ad. ♂ like typical race. Wing ♂ 152-174 ♀ 175-185 mm.

119. *Accipiter affinis* (Hodgs. No. 35), Gray's Zool. Misc., p. 81 (1844). [*Nepal.*] Larger Besra Sparrow-Hawk. — Himalayas, Andamans, Siam. Formosa, Hainan.

Larger; wing ♂ 165-180, ♀ 210 mm.; below with markings much browner.

*120. *Accipiter gularis* (Temm. & Schl.), Faun. Jap. Aves, p. 5, pl. 2 (1844-5). [*Japan.*] Japanese Sparrow-Hawk. — Japan, N. China Formosa, Malay Archipelago, Philippine Is.

Wing ♂ 163-170, ♂ 184-194 mm.; female barred below, up to throat, with rufous or brown like *A. nisus nisus*.

121. *Accipiter guttifer* Hellmayr, Verhandl. Orn. Ges. Bayern, xiii., p. 200 (1917). [*Bolivia.*] [Nom. nov.: *A. guttatus* Vieill.] White-throated Sparrow-Hawk. — S. America (Paraguay and Bolivia).

Wing ♂ 215, ♀ 265 mm.; tail with 4 darker bars; below pale fawn rufous, the breast mottled with white spots and half bars.

122. *Accipiter pileatus* (Temm.), Pl. Col., i., pl. 205 (1824). [*Brazil.*] Black-capped Sparrow-Hawk. — S. America (Brazil, Paraguay).

Wing ♂ 205-213, ♀ 253-264 mm. ; tail with 5 black bands ; head black ; sides of face and under surface slaty blue, with blackish shaft stripes ; thighs and under wing-coverts rufous.

*123. *Accipiter bicolor bicolor* (Vieill.), N. Dict., x., p. 325 (1817). [*Cayenne.*] Four-banded Sparrow-Hawk.

Central America to Colombia, Venezuela and Guiana.

Wing ♂ 215, ♀ 250-254 mm. ; under wing-coverts white, rufous along carpal bend ; thighs rufous ; tail with 4 dark bars.

123a. *Accipiter bicolor schistochlamys* Hellmayr, Bull. B.O.C., xvi., p. 82 (1906). [*Nanegal, W. Ecuador,* type in Tring Mus.] Hellmayr's Sparrow-Hawk.

W. Ecuador.

Wing ♂ 200 mm. ; below much darker schistaceous ; axillaries and under wing-coverts cinereous edged with white, instead of white.

123b. *Accipiter bicolor fidens* Bangs & Noble, Auk., xxxv., p. 444 (1918). [*Vera Cruz.*] Mexican Sparrow-Hawk.

Mexico.

Larger and darker than *A. b. bicolor* ; wing ♀ 260 mm.

*124. *Accipiter chilensis* Phil. & Landb., Arch. f. Naturg., 1864, p. 43. [*Chile.*] Chilian Sparrow-Hawk.

Chile to Str. Magellan, Patagonia.

Wing ♂ 210-216, ♀ 246-250 mm. ; below ashy grey, with large white spots and bars, margined with brownish ; thighs rufous ; under wing-coverts rufous.

H. Thighs black; no nuchal collar.

125. *Accipiter melanoleucus* Smith, S. Afr. Q. Jnl., i., p. 229 (1830). [*Baviaan's River, Cape Colony.*]
Black-and-White Sparrow-Hawk.

Wing ♂ 278-290, ♀ 345-352 mm.; above black; tail brown with 5 blackish bands; below black, most of feathers with concealed white bases or spots.

S. Africa, W. Africa, Cape Verde Is., Abyssinia, Uganda, and Egyptian Sudan.

A

SYNOPSIS

OF THE

ACCIPITRES

(DIURNAL BIRDS OF PREY)

PART II.

Sub-Fam. III. BUTEONINÆ.

Bill moderate, bending from base, with a slight projection on cutting edge of upper mandible; outer toe connected to middle toe by an interdigital membrane; tibia much longer than tarsus.

Gen. XXVIII. ERYTHROTRIORCHIS Sharpe (1875).

Type by monotypy *Falco radiatus* Lath.

Wing about equal to tail, the latter moderately graduated; ridge of bill (without cere) less than half length of middle toe (without claw). Size of *Buteo*.

126. *Erythrotriorchis radiatus radiatus*[1] (Lath.), Ind. Orn. Suppl., p. xii. (1801) [*N.S.Wales.*] Red Buzzard. — E.C., N. and N.W. Australia.

Wing ♂ 355-366, ♀ 405-422 mm.; plumage above and below bright rufous, with black centres; tail ashy, tipped with pale rufous,

1 *E. radiatus rufotibia* is a synonym, and *E. r. queenslandicus* appears to be indistinguishable.

and irregularly barred with dark brown ; under surface of tail and tips of primaries whitish.

Gen. XXIX. MEGATRIORCHIS Salvad. & D'Alb. (1875).
Type by orig. desig. *M. doriæ* Salvad. & D'Alb.

Wings short, slightly longer than tail ; tail long, rounded ; inner toe shorter than outer.

127. *Megatriorchis doriæ* Salvad. & D'Alb., Ann. Mus. Civ. Genov. vii., p. 805 (1875). [*Yule Island.*]
Doria's Buzzard-Hawk.

S.E. New Guinea.

Wing ad. (sexes ?), 290-325 mm. ; plumage above brownish black, with rufescent margins ; below white, spotted longitudinally with brown ; wings and tail above banded alternately with brownish-black and pale greyish-brown.

Gen XXX. HETEROSPIZIAS Sharpe (1874).
Type by monotypy *Falco meridionalis* Lath.

Nostrils round, with large tubercular process ; wings reaching up to or beyond tail ; tail about twice equal to tarsus.

*128. *Heterospizias meridionalis meridionalis* (Lath.), Ind. Orn., 1., p. 36 (1790). [*Cayenne.*]
Red-winged Hawk.

S. America (Panama and Colombia to S.E. Brazil, Bolivia and Paraguay).

Size of *Buteo* ; wing ♂ 386-404, ♀ 393-417 mm. ; head and shoulders rufous ; mantle and scapulars pale slate grey with rufous margins ; rump and tail purplish black, tail with a medium white bar and white tips ; below rufous with narrow nearly obsolete black bars.

*†128a. *Heterospizias meridionalis australis* Swann, Auk, xxxviii., p. 359 (1921) [*Laguna de Malima, Tucuman, Arg.*, type in coll. H. Kirke Swann].
Southern Red-winged Hawk.

Larger ; wing ♂ 415-417, ♀ 430 mm. ; much darker above ; mantle and scapulars blackish brown with rufous margins ; below averaging darker, with the black bars more pronounced.

Argentina.

Gen. XXXI. GERANOAETUS Kaup (1844).
Type *Spizaëtus melanoleucus* Vieill.

Size much larger than *Buteo* ; tail proportionately shorter, and wings proportionately longer.

129. *Geranoaetus melanoleucus melanoleucus* (Vieill.), N. Dict. d'Hist. Nat., xxxii., p. 57 (1819). [*Paraguay*—ex. Azara.]
Paraguayan Buzzard-Eagle.

Wing ♂ 497, ♀ 541 ; above and chest dusky-slate (oldest) to black (less mature) ; wing coverts grey, finely barred with blackish brown ; tail uniform black ; below snowy white, outer under wing coverts and longer under tail coverts barred with blackish.

Paraguay, S. Brazil (Rio Grande), Uruguay and Buenos Ayres.

129a. *Geranoaetus melanoleucus australis*, subsp. nov. [♀ *Valle del Lago Blanco, Chubut, Patag.*, Aug. 12, 1901, J. Koslowsky, type in Brit. Mus., reg. no. 1903, 12, 8, 115.]
Patagonian Buzzard-Eagle.

Size similar ; wing ♂ 480-485, ♀ 531-565 mm. ; above and chest as before ; below finely barred all over with blackish (lightly in oldest birds and more heavily in less mature).

N.W. Argentina to Patagonia, and Straits of Magellan ; also Southern and Central Chile ?

*129b. *Geranoaetus melanoleucus meridensis* subsp. nov. [♂ *Nevada, Mérida, Venez.*, Oct. 20, 1911, alt. 3,000 metres, type in coll. H. Kirke Swann.]
Northern Buzzard-Eagle. — Venezuela, Colombia; Ecuador.

Much smaller; wing ♂ 455-468, ♀ 480-520 mm.; plumage similar to last form.

Gen. XXXII. BUTEO Lacep. (1799).
Type by tautonomy *Falco buteo* L.

Cere large; nostrils oval with no tubercle; wings moderately long, the 3rd to 5th quills longest, the first 3 to 5 emarginate or notched on inner webs; tarsus short, strong, usually scaled, and feathered in front for a varying distance. Length usually under 24 in.

KEY TO THE NATURAL GROUPS AND SPECIES (ADULTS).

A. Tail usually brown, sometimes washed with rufous, with a varying number of transverse bars, generally from 6 to 12, often indistinct.

130. *Buteo galapagensis* (Gould), P.Z.S., 1837, p. 9. [*Galapagos Is.*, type in Brit. Mus.]
Galapagos Buzzard. — Galapagos Is.

Wing ♂ 383, ♀ 425 mm.; general plumage sooty-black, shaded with brown; tail greyish-brown with 12 or 13 blackish bars. Immature: resembling young of *B. erythronotus* in a general way.

†131. *Buteo solitarius* Peale, Zool. U.S. Expl. Exped. Birds, p. 62 (1848). [*Karakaloa Bay, Hawaii*, type in Mus. Phil. Acad.]
Solitary Buzzard. — Hawaiian Archipelago

Aberrant species ; size small ; wing ♂ 272, ♀ 300-308 mm. ; very short and rounded ; inner webs of first 4 primaries emarginate ; tips of primaries reaching to about middle of tail ; tail with 8 or 9 faint darker bars ; plumage blackish-brown (dark phase), or brown above and buffy white below and on head (light phase).

132. *Buteo brachypterus* Hartl., J. f. O. 1860, p. 11 (ex. Pelzeln MS.). [*Madagascar.*] Short-winged Buzzard. — Madagascar.

Size small ; wing ad. 300-325 mm. ; above pale brown ; tail with 6 or 7 bands of darker brown ; below white, throat narrowly and breast broadly streaked with pale brown ; belly and thighs uniform pale brown.

†133. *Buteo hemilasius* Temm. et Schl., in Siebold's Faun. Japon. Aves p. 16 (1844), pl. vii. (1845). [*Japan.*] [*Buteo leucocephalus* and *Archibuteo strophiatus* (Hodgs.) are synonyms.] Upland Buzzard. — Mongolia to Tibet, Nepal and L. Baikal ; cas. Japan ; winters China, Turkestan, N. India.

Size large ; wing ♀ 480 mm. ; head and neck white, with broad streaks of pale brown ; above dull brown ; tail with indistinct darker cross-bars, the base and inner webs white ; below white, barred on throat and streaked on breast with dark brown ; flanks dark brown.

*†134. *Buteo japonicus* (Temm. et Schl.) in Siebold's Fauna Jap. Aves., p. 16 (1844), [pl. vi., vi[a]], (1845). [*Japan.*] [=*B. plumipes* (Hodgs.)] Japanese Buzzard. — Japan, Corea, China, Manchuria, Turkestan, Himalayas ? ; S. to Punjab and Burma.

Wing ♂ 355-60, ♀ 390-405 mm.; tarsus feathered about half-way down in front; plumage above purplish brown, with rufescent margins; tail with 4 or 5 almost obsolete darker bars; below rufous, abdomen buffy-white, barred with rufous. (Young: above with whitish edgings; below pale buff, finely streaked on breast and blotched on abdomen with dark brown, usually with a zone resembling that of *lagopus*).

*†135. *Buteo swainsoni* Bonap. [ex. Aud. pl. 372] Geogr. and Comp. List, p. 3 (1838). [*Near the Columbia River.*]
Swainson's Hawk.

N. and S. America, from Alaska to Chile.

Wing (N. American average), ♂ 371, ♀ 399 mm.; wing (S. American average), ♂ 378, ♀ 412 mm.; first 3 primaries notched; above dark-brown to slate-brown with paler edgings; tail with 10 or 12 darker cross-bars, the sub-terminal broad; throat white, chest light rufous to deep chestnut or brownish black; lower parts buffy-white more or less barred with rufous (sometimes closely and entirely covered); uniform sooty-brown or blackish varieties occur.

136. *Buteo oreophilus* Hart. and Neum., Orn. M.B. xxii., p. 31 (1914). [*Koritscha, Djam-Djam, S. Abyssinia.*]
E. African Buzzard.

Mountains of E. Africa; Abyssinia and Uganda to the Cape.

Wing ♂ 330, ♀ 340 mm.; tail pale brown with about 8 darker bars; below whitish, spotted and blotched lengthwise with dark brown; thighs buffish, barred with dark brown.

*†137. *Buteo buteo buteo* (Linn.) S.N. ed. X. i. p. 90 (1758). [*Europe* = *Savoy*, ex. Gesner.]
Common Buzzard.

First 4 primaries notched (all notches usually recurved); wing ♂ 375-380; tail 222-228, tarsus 79 mm.; ♀ wing 385-410 mm.; plumage variable; adult in breeding plumage (*Brit. Isles*) brown to dark brown above, sometimes with rusty edges to scapulars; lower parts whitish, heavily blotched on breast and barred on belly with dark brown (occasionally rufous brown), the upper breast, flanks and thighs nearly uniform; tail with 12 or 13 darker bars, the subterminal one broad[1]; a sooty-brown phase, also a " white " variety are met with.

W., N. and C. Europe, S. to Spain and Italy, N. to Brit. Isles, Sweden, W. Finland and Esthonia, E. to Germany, Poland, Carpathians, Greece and W. Asia Minor.

137a. *Buteo buteo arrigonii* Picchi, Avicula, vii., p. 40 (1903). [*Sardinia.*]
Sardinian Buzzard.

Smaller insular race; wing ♂ 346-50, ♀ 380 mm.; darker and more rufous; more heavily marked below; tail tinged rufous.

Sardinia, Corsica.

137b. *Buteo buteo harterti* Swann, Syn. List Accip. p. 43 (1919). [*Madeira*, type in Tring Mus.]
Madeiran Buzzard.

Wing ♂ 392-405, ♀ 411-430 mm.; large and dark insular race; more similar to *B. v. intermedius* than to *B. b. buteo* in plumage; darker than latter generally is and nearly

Madeira.

1 Adults among the Buzzards usually have the tail much less numerously barred than is the case with young birds and often have a broad sub-terminal band, lacking in young birds; the latter also have the under parts of the body as a rule lighter, often with the arrow-head, circular or elongated dark markings characteristic of the young birds of other groups of the *Accipitres*, and have only first 3 primaries notched in some cases. Individuals of all the species of *Buteo* vary greatly in plumage.

uniform below, blackish-brown to rufous-brown, the abdomen barred; tail with 10 or 12 darker bars and with or without rufous tinge.

137c. *Buteo buteo rothschildi*, Swann, Syn. List Accip., p. 43 (1919). [*Terceira, Azores*, type in Brit. Mus.] Azores. Azores Buzzard.

Smaller; wing ♂ 340-357; ♀ 372-386 mm.; rufous form, but tail generally light ashy, with 7-9 bars, the sub-terminal broad, more or less tinged with rufous; below with belly either uniform deep rufous or barred and mottled with buffish-white.

137d. *Buteo buteo insularum* Floericke, Mitteil. Oesterr. Reichsb., iii., p. 64 (1903). [*Gran Canaria.*] Canary Isles. Canary Isles Buzzard.

Wing ♀ 390-398, ♂ (juv.) 350 mm.; rufous form; chest and abdomen rufous brown; tail brown slightly tinged with rufous and with the darker bars nearly obsolete in very old bird, about 5 being apparent; younger birds have about 10 distinct bars.

137e. *Buteo buteo bannermani*, Swann, Syn. List Accip., p. 44 (1919). [♀ Near *Mindello Bay, St. Vincent, Cape Verd Is.*, type in Coll. B. M.] Cape Verd Islands. Cape Verd Buzzard.

Wing ♂ 342, ♀ 370-380 mm.; paler and less rufous than three preceding forms; above ashy-brown, with paler margins to the feathers; tail with 9 darker bars; below: throat white, streaked with dusky-brown;

chest brown, mottled with buffy-white; centre of breast whiter; belly barred with brown; thighs dark brown, slightly barred with rufous; feet smaller and slighter.

B. Tail more definitely red in old birds, with most or all of the bars obsolete (except in *intermedius*).

*†138. *Buteo vulpinus vulpinus*[1] Gloger, Das Abändern der Vogel, p. 141 (1833). [*Africa.*] [=*B. desertorum* Daud. and *B. rufiventer* Jerd.] Desert Buzzard. Smaller: wing ♂ 340-380, ♀ 360-390 mm.; tarsus 75 mm., wing with first 3 primaries strongly notched, 4th less so (lacking the recurved notch); above brown, with conspicuous rufous margins and blackish shafts; tail bright rufous, with subterminal black band and remains of other bars; head, neck and under parts tawny	W. Asia (Turkestan); S.E. Europe[1] (S. Russia to (Caucasus) and Asia Minor; S. to India, Arabia and Africa in winter; cas. to Germany and Brit. Isles.

1 Confusion has long existed regarding the East European Buzzards, and three years of hard work on the group brings me to the conclusion that the only way to overcome this confusion is to regard *B. vulpinus* as a species and "*zimmermannæ*" [= *intermedius* Menzb.—this name claiming priority] as a form of this species and not of *B. buteo*. There is no doubt that *B. v. intermedius* is intermediate between *B. vulpinus* and *B. buteo*, but there is also no doubt that *intermedius* is the representative form in E. Europe and breeds there along with typical *B. buteo buteo*. Witherby admits this difficulty (Pract. Handbook Br. Birds, ii., p. 145, note) but follows Hartert in making *vulpinus* a form of *B. buteo*, and even goes further in doubting if "*zimmermannæ*" is separable. Col. Meiklejohn tells me also that the typical *B. buteo* and *B. v. intermedius* nest *together* in Esthonia and do not interbreed. The inference is obvious that they must be different species, and as I have always been convinced that *vulpinus* is a valid species, differing widely from *B. buteo* in adult plumage, in plumage changes, in size, and in habits as observed in the field, I feel that all difficulties are overcome by regarding *intermedius* as a form of that species. intermediate between it and *B. buteo*. One point that links the two latter forms is that both are not truly migratory, although they move in winter. *B. vulpinus vulpinus* on the other hand is a true migrant, going right down through Africa. This is unfortunate in one sense, because African migrants are always assigned to *vulpinus*, while European birds, especially the young with brown-barred tails, are as often as not confused with *intermedius* or *B. buteo*. The differences are given above. *B. menetriesi* Bogd. is a synonym of *B. vulpinus vulpinus*, as it is based on old birds which have lost most of the tail bands. Mr. W. Sclater (MS.) states that in Socotra *B. vulpinus* or an allied form breeds.

rufous, breast varied with creamy buff and throat streaked with brown; belly not obviously barred in adult. Immature whitish below, streaked on chest and barred or blotched on belly with rufous to dark brown; tail ashy-brown, more or less washed with rufous and with 9 or 10 blackish bars.

†138a. *Buteo vulpinus intermedius* Menzbier, Orn. Turkestan, p. 197 (1888). [*West of Russia.*] Rufous Buzzard.
[= *B. zimmermannæ* Ehmeke.]

Size similar to *B. vulpinus vulpinus* but always smaller than *B. buteo buteo*; wing ♂ 350-82, ♀ 366-93; first 4 primaries notched exactly as in *B. vulpinus*; above similar, but tail always barred (8-9 bars), the interspaces either bright ferruginous red, or strongly washed with the same; below more heavily marked than in *B. buteo buteo*; breast, abdomen and under tail coverts heavily barred transversely with rufous brown. Young: less rufous; tail ashy grey, more or less washed with rufous and with dark bars; below more striped and blotched instead of barred (scarcely distinguishable from young of *B. vulpinus vulpinus*).

E. Prussia to Esthonia, and Finland (except N. & W.), Russia, N. to Archangel, S. to Central and S.W. Russia, W. to Roumania and Bulgaria; cas. in W. Europe.

*†139. *Buteo ferox ferox* (S. G. Gmel.), N. Comm. Acad. Petrop. xv., 1770, p. 442, pl. x. (1771). [*Astrakan.*]
Long-legged Buzzard.

Much larger: wing ♂ 410-445, tail 265, tarsus 96 mm., ♀ wing 455-482 mm.; breast buffish to pale rufous with dark shaft streaks; abdomen, flanks and thighs rufous to chocolate brown, unbarred; tail pale

S.E. Europe (cas. S. & W. Europe), Egypt, Arabia, Asia Minor, W. & C. Asia and Himalayas; in winter S. to N.W. India and Sudan.

rufous, whitish at base and shafts white, with 2 or 3 definite bars towards tip and remains of others; uniform dark under parts of some birds probably a dark phase or erythrism rather than age; also subject to melanism; immature buffish white below blotched and streaked with dark rufous brown; tail ashy with darker bars.

†139a. *Buteo ferox cirtensis* (Levaill., jun.). Expl. Sci. de l'Alger., pl. 3 [not text], (1850). [*Algeria.*]
Algerian Buzzard.

N. Africa, (Marocco, Algeria, Tunisia); S. in winter.

Much smaller; wing ♂ 365.75, tail 208, tarsus 68 mm.; wing ♀ 380-400 mm.; above brown with rufous or pale edgings; below buff with shaftlines of dark brown; belly and flanks washed with rufous; thighs rufous; tail pale rufous, without terminal or other bars.

†140. *Buteo rufofuscus rufofuscus* (Forst.) Naturgesch. African. Vogel, p. 59, pl. 16 (1798). [*S. Africa*, ex Levaillant.]
[= *B. jakal* (Daud.)]
Jackal Buzzard.

S. Africa, S. of the Limpopo.

Wing ♂ 400-430, tail 180-204, tarsus 85 mm.; wing ♀ 455 mm.; above and throat and chest brownish black; interscapulary feathers mostly white, varied with pale rufous; primaries externally ashy, secondaries whitish, both barred with black; tail chestnut red, with or without black subterminal band; breast chestnut; abdomen black, more or less barred with white and chestnut; younger birds have under parts rufous, excepting throat, which is blackish.

140a. *Buteo rufofuscus archeri* (W. Sclat.), Bull. B.O.C., xxxix., p. 17 (1918). [*Waghar, Somaliland*, type in Brit. Mus.] Archer's Buzzard.

Smaller; wing ♂ 400, tail 195, tarsus 85 mm.; "White on scapulars and back replaced by reddish; below from lower breast to under tail-coverts rich rufous instead of white."

Somaliland.[1]

141. *Buteo augur* (Rüpp.), Neue Wirb. Vög., p. 38, pl. 16 (1836). [*Abyssinia.*] Augur Buzzard.

Wing ♂ 400-428, ♀ 450-475 mm.; tail chestnut, with more or less obsolete black terminal bar; old birds above black; the wings much as in *rufofuscus*; below pure white, excepting the throat which is more or less black; melanistic phase black above and below, with chestnut tail. Immature above brown; tail brown with about 10 dark bars; below white, blotched with dark brown, especially on throat and flanks.

N.E. Africa (Abyssinia and Erythræa), Equatorial and Central Africa, S. to Rhodesia.

142. *Buteo auguralis* Salvad., Att. Soc. Ital. Sc. Nat., viii., p. 276 (1865). [*Abyssinia.*] Salvadori's Buzzard.

Wing ♂ 340, ♀ 356 mm.; general plumage dusky blackish, the feathers of back and wings margined with brown; sides of head and cervical collar varied with rufous; forehead, nape spot and throat white; chest either blotched with brown, or uniform dark brown; abdomen and flanks white spotted and streaked with black; tail rufous with subterminal black band.

S. Abyssinia to W. Africa (Gold Coast and Gaboon).

[1] The bird described appears to be in intermediate plumage, not fully adult, and is doubtfully separable except as a *northern race* of *B. rufofuscus*.

†143. *Buteo borealis borealis* (Gmel.), S.N., 1, p. 266 (1788). [*Carolina.*]
Red-tailed Hawk.

Size variable; wing ♂ 390-400, ♀ 440-450 mm.; above blackish-brown with more or less of lighter variegation; tail chestnut with one sub-terminal darker band and often remains of others; below buffy-white, flanks barred or mottled and abdomen heavily streaked with blackish-brown.

E. North America, N. to Canada and Newfoundland, W. to Gt. Plains.

†143a. *Buteo borealis krideri* Hoopes, Pr. Ac. Nat. Soc. Philad., 1873, p. 238, pl. 5. [*Winnebago Co., Iowa,* type in Phil. Ac. Mus.]
Krider's Hawk.

Wing ♂ 370, ♀ 400 mm.; light form, pure white below with few or no markings; tail pale rufous to grey or white, with blackish bars more or less obsolete and sub-terminal bar reduced or obliterated.

Gt. Plains from Missouri and Minnesota to Rocky Mountains, N. to S. Manitoba; S. in winter to Mexico and Georgia.

143b. *Buteo borealis lucasanus* Ridgw. Hist. N. Am. Birds, iii., p. 285 (1874). [*Cape St. Lucas.*]
St. Lucas Red-tail.

Like *B. b. calurus* but lighter and smaller; wing ♂ 370-398, ♀ 395-420; sub-terminal tail band reduced.

Peninsula of Lower California.

*†143c. *Buteo borealis calurus* Cassin, Proc. Ac. Nat. Sci. Philad., vii., p. 281 (1855). [*Near Fort Webster, New Mexico,* type in Phil. Ac. Mus.]
Western Red-tail.

Wing ♂ 386, ♀ 412-430 mm.; strongly developed form of *B. borealis borealis,* more

W. North America, beyond W. edge of Gt. Plains, E. to Middle Yukon, S. to Guatemala; Guadeloupe Is.

strongly marked and rufous below, especially on thighs, and with more bars than the sub-terminal one on tail; melanisms are frequent, but they usually retain the rufous tail.[1]

†143d. *Buteo borealis harlani*[2] (Aud.), Bds. Am., i., pl. 86 (1830). [*Near St. Francisville, Louisiana*, type in Brit. Mus.]
Harlan's Hawk.

Dark phase: resembling a melanism of *B. borealis krideri*; wing ♂ 380, ♀ 400-408 mm.; nearly uniform sooty-brownish-black, with much less of concealed white; tail mottled with greyish, dusky and rufous, with sub-terminal black band. Light phase: resembling a small darker example of *B. b. borealis*.

Lower Mississippi Valley & Gulf States, from Texas and Louisiana to Florida.

143e. *Buteo borealis alascensis* Grinnell, Univ. Cal. Pub. Zool., v., No. 2, p. 211 (1909). [*Glacier Bay and Chichagof I.*]
Alaska Red-tail.

Resembling *B. borealis calurus*, but smaller throughout; wing ♂ 344-355 mm.; ♀ 365-370 mm.; dark areas blacker and more extended.

S.E. Alaska.

143f. *Buteo borealis costaricensis* Ridg., Hist. N. Am. Bds., iii., p. 285 (1874). [*Costa Rica.*]
Central American Red-tail.

Guatemala and Costa Rica to Panama.

[1] I have examined the type of *B. cooperi* Cassin in the U.S. Nat. Mus. and am obliged to conclude it is an aberrant example of this form.

[2] Even after examination of a number of available specimens in the United States I am unable to discard this form as a melanism, since it seems to cover a definite geographical area and to be smaller than *B. b. borealis*. Light birds, such as those from Florida, with the rufous tail of *B. borealis borealis*, undoubtedly occur in its area, but they equal it in size. Melanistic birds referrable to *harlani* occur in Canada, Mr. Taverner assures me, within the range of *krideri*; yet it is impossible to throw the range of *harlani* into that of *krideri*.

Wing ♀ 392 mm.; tail uniform rufous, with one very narrow sub-terminal band; flanks and thighs light rufous; juv., tail barred, and flanks and thighs sparsely barred with rufous.

143g. *Buteo borealis umbrinus* Bangs, Pr. New Engl. Zool. Cl. ii., p. 67 (1901). [*Myakka, Manatee Co., Florida*, type in M.C.Z., Harvard.]
Florida Red-tail.

S. Florida, Bahamas, Cuba.

Size of *B. borealis borealis* (wing ♂ 376-392, ♀ 420-430 mm.), but darker above; throat and middle of belly with broad conspicuous striping and banding of deep chocolate brown; tail feathers rufous, with broad sub-terminal black band and dark brown markings (remains of bands) near shaft.

143h. *Buteo borealis jamaicensis* (Gmel.), S.N., i., p. 266 (1788). [*Jamaica.*]
Jamaica Red-tail.

Jamaica.
San Domingo.[1]
Porto Rico?

Wing ♂ 330-345, ♀ 352-373 mm.; above sooty brownish with purplish gloss and ferruginous edgings; tail ferruginous red, with sub-terminal black band; wing quills rich brown, barred with black; below white tinged buff; throat streaked with dusky, chest more thickly with ferruginous; a dusky zone across abdomen; thighs barred ferruginous.

[1] *B. tropicalis* Verrill is a synonym, described from an immature San Domingo bird.

143i. *Buteo borealis socorroensis* Ridgw., Pr. U.S.N. Mus., iii., 1880, p. 220 (1881). [*Socorro I.*, type in U.S. Nat. Mus.] [*nom. nudem.*] Idem in Biol. Centr. Amer. Aves iii., p. 64, 1900.
Socorro Island Red-tail.

Small form : wing ♂ 378-390, ♀ 418 mm. ; Similar to *B. b. calurus* but with much larger and stouter feet ; under parts more uniformly pale cinnamomeus ; thighs deep vinaceous cinnamon, indistinctly barred with paler.

Socorro Island, off W. coast of Mexico.

†143k. *Buteo borealis fumosus* Nelson, Pr. Biol. Soc. Wash., xii., p. 7 (1898). [*Tres Marias Is.*]
Tres Marias Red-tail.

More rufous on sides of breast and belly ; thighs heavily barred with brown.

Tres Marias Islands, off W. coast of Mexico.

143l. *Buteo borealis ventralis* Gould, P.Z.S., 1837, p. 10. [*Santa Cruz, Patag.*, type in Brit. Mus.]
Patagonian Buzzard.

Wing ♀ 363-375 mm. ; exactly like immature *Buteo borealis borealis* ; tail with 8 to 10 dark bars[1].

Patagonia ; S. Chile.

C. Tail black.

*†144. *Buteo lineatus lineatus* (Gmel.), S.N., 1., p. 268 (1788). [*Long Is., N.Y.*]
Red-shouldered Hawk.

E. North America, N. to Canada, W. to edge of Great Plains.

1 A second example from Chile has 8 instead of 10 dark bands, wider than in the type : markings on belly are also blacker and it may be more mature. If this form does *not* get the red tail it may be a species.

Smaller than *B. borealis borealis* ; average wing ♂ 317 mm.; wing ♀ 356, tail 225 mm. ; plumage above reddish brown with darker centres ; lesser wing-coverts bright chestnut ; below pale brownish rufous, barred with white ; thighs paler and more buffy ; quills and tail black, barred with white, the tail with about 6 bars.

†144a. *Buteo lineatus elegans* Cassin, Pr. Ac. Nat. Sci. Philad., vii., p. 281 (1855). [*California*, type in Phil. Ac. Mus.]
Western Red-shouldered Hawk.

Much darker : " An erythrism of last form" (Coues) ; below generally much darker reddish, with much less white barring ; thighs rufous ; wing ♂ 327 mm.

W. North America from S. Brit. Colombia to N.W. Mexico and Lower California.

*144b. *Buteo lineatus alleni* Ridgw., Pr. U.S. Nat. Mus. vii., p. 514 (1885). [*Tampa, Fla.*, type in U.S. Nat. Mus.]
Florida Red-shouldered Hawk.

Much smaller than typical form ; wing ♂ 295-300, ♀ 310-325 mm.

S. Carolina to Florida.

144c. *Buteo lineatus extimus* Bangs, Pr. New Engl. Zool. Cl. VII., p. 35, Jan. 16, 1920. [*Cape Florida*, type in M.C.Z. Harvard.]
Bangs's Red-shouldered Buzzard.

Similar but slightly paler and smaller ; wing ♂ 270-75, tail 167-69 ; wing ♀ 295-305 mm.

Florida Keys.

144d. *Buteo lineatus texanus* Bishop, Auk., xxix., p. 232 (1912). [*Texas*, type in coll. L. B. Bishop, Corpus Christi, Tex.]
Texan Red-shouldered Hawk.

Texas, Mexico.

Wing ♂ 323, tail 218; wing ♀ 333 mm.; darker, approaching *B. l. elegans*; breast usually more spotted with buffy; dark shafts of chest more conspicuous; head and back more rufous.

*†145. *Buteo platypterus platypterus* (Vieill.), Tabl. Ency. Meth., iii., p. 1273 (1823). [*Near Philadelphia*, ex. Wilson, pl. 54, f. 1]
Broad-winged Hawk.

Considerably smaller; wing ♂ 280, ♀ 295 mm.; only 3 outer primaries emarginate; plumage above dark brown with lighter edges; nape much mottled with white; tail brownish-black with 2 bands of greyish-white (basal one narrow or obsolete); below rufous brown, cross-barred with white in the form of transverse oblong spots.

E. North America; Cuba, Porto Rico; in winter to Mexico, Central America and Northern S. America.

145a. *Buteo platypterus insulicola* Riley, Auk., xxv., p. 273 (1908). [*Antigua*, type in U.S. Nat. Mus.]
Antiguan Hawk.

Wing ♂ 227, ♀ 252 mm.; smaller and lighter than *antillarum* and bars below narrower and less sharply defined.

Antigua.

145b. *Buteo platypterus antillarum* Clark, Pr. Biol. Soc. Wash., xviii., p. 62 (1905). [*St. Vincent*, type in M.C.Z., Harvard.]
Antillean Hawk.

Wing ♂ 252-257, ♀ 265 mm.; larger and darker than last form, and smaller and much darker above and below than typical form.

St. Vincent, St. Lucia, Grenada, Dominica,[1] Tobago?

[1] *B. platypterus rivieri* Verrill (Add. to Avif. of Dom. n.d., [recd. for review in Auk., Oct. 24, 1905]), described from Dominica is inseparable from *antillarum*, which name, being published in Feb., 1905, predates Verrill's name.

†146. *Buteo albonotatus albonotatus*[1] Gray Cat. Accip. Brit. Mus., p. 7 (1844). [*Mexico*, type in B. M.] (*nom. nud.*): Kaup, Isis, 1847, cols. 329, 954.]
Zone-tailed Hawk.

Mexico, Arizona New Mexico, Texas.

Wing ♂ 400-435, ♀ 410-445 mm.; first 4 quills strongly notched in adult (in immature first three notched and 4th sinuate); above and below black, with more or less of a slaty shade on mantle and chest (immature only showing more or less concealed white spots); tail black with broad median band of grey (showing white below) and remains of a second band (in immature with from 4 to 6 light bands).

*146a. *Buteo albonotatus abbreviatus* Cab., in Schomb. Reis. Guiana, iii., p. 739 (1848). [*Pomeroon R., Brit. Guiana*, type in Berlin Mus.]
Southern Zone-tailed Hawk.

Surinam, Brit. Guiana, Venezuela, Panama (Pearl Is.), Brazil, Peru, Bolivia.[2]

Smaller; wing ♂ 380-385, mm.; plumage similar, but black without any shade of slate usually shown in Mexican birds.

1 Gray applied the name *albonotatus* to an immature bird, as the type in the Brit. Mus. proves, and without description, but Kaup's description, unsatisfactory as it is, undoubtedly predates Cabanis's name *abbreviatus*, so I have been obliged to use it. The latter name was also based on an immature bird, as I learn from Dr. Reichenow who examined the type in Berlin for me. The more or less concealed white spots on the plumage of some examples are a sign of immaturity, but are not confined to Mexican birds, and are of no value in determination. The actual sign of maturity lies in the tail, the oldest birds having one broad median grey band (showing white below) and remains of a second one, while the immature birds have from 6 to 4 narrower ashy bands above, according to age, all showing white below The slight difference in size is the only real distinction between N. American and S. American birds, but I have for several reasons thought it best to retain both names and so separate the former from the latter. Kaup's brief reference cited in the Isis, 1847, undoubtedly applies to Gray's Mexican bird, but in Jardine's Contrib. to Ornith., 1850, p. 75, Kaup uses the name *albonotatus* again for the S. American bird.

2 An example in Tring Mus. from Bolivia ♀ (?) has a wing measurement of 455 mm., and is therefore larger than Guianan birds, but I have been unable to see any other southern birds.

D. Tail white.

147. *Buteo poliosomus* (Quoy et Gaim.) Voy. de l'Uran. Ois., p. 92, pl. 14 (1824). ["*Iles Malouines.*"]
Falkland Island Buzzard.

Chile, Patagonia, Falkland Is., Tierra del Fuego.

Wing ♂ 375-385, ♀ 405-427 mm. ; general colour of ♂ bluish-slate ; tail white with about 9 narrow bars of slate grey and broad sub-terminal blackish band ; ♀ head, neck and upper breast and thighs slate ; mantle, scapulars and belly rufous.

148. *Buteo hypospodius* Gurney, Ibis, 1876, p. 73, pl. 3. [*Medellin, Colombia*, type B.M.]
Grey-bellied Buzzard.

Colombia, Venezuela, Amazonia Brazil.

Size larger ; wing ♂ 413-448 mm. ; adult ♂, general plumage slate, tail with 8 fine darker bars and broad black sub-terminal band ; abdomen and thighs slate, more or less barred with white ; ♀ wing coverts and belly more or less suffused with rufous ; thighs rufous barred with white.

149. *Buteo pœcilochrous* Gurney, Ibis, 1879, p. 176. [*Yauayacu, Ecuador*, Salvin-Godman Coll.] [= *B. melanosternus*. Berl. and Stolzm.]
Gurney's Red-backed Buzzard.

Ecuador, Peru, Bolivia, Chile.

Wing ♂ 420, ♀ 468 mm. ; ♂ similar to that of *B. hypospodius*, ♀ above and tail much as in ♀ of *B. e. erythronotus*, the whole mantle and scapulars rufous ; below slate barred with white, the throat and chest uniform and breast mixed with rufous. Immature : throat and chest blackish, below rufous ; thighs barred with white ; tail grey with numerous slaty bars and black sub-terminal band.

*†150. *Buteo erythronotus erythronotus* (King), Zool. Jnl. iii., p. 424 (1827). [*Port Famine, Tierra del Fuego.*]
Red-backed Buzzard.

Falkland Is., Tierra delFuego, Patagonia, Argentina (to Buenos Ayres), Chile.

Wing ♂ 368-380, ♀ 405-425 mm. ; ♂ above light slate grey, below white, usually with some fine verniculations of rufous brown on abdomen ; tail white with 8 or 10 narrow grey lines (except in very old birds) and sub-terminal blackish band ; ♀ back and scapulars brick red[1].

150a. *Buteo erythronotus simonsi* subsp. nov. [♀ *Challapata, Bolivia,* P. O. Simons, Oct. 14th 1901, type in Brit. Mus., reg. no. 1902, 3, 13, 1600.]
Bolivian Red-backed Buzzard.

Bolivia, N. Chile (Iquique), S. Peru (Andes), Ecuador (Andes) ?

Larger ; wing ♂ 407, ♀ 455-470[2] ; much darker than *B. e. erythronotus* ; upper parts and wings blackish slate instead of light slate grey (but mantle red in ♀) ; tail with the cross lines wider and blacker ; below white ; cross lines on belly (when present) blackish brown instead of rufous.

150b. *Buteo erythronotus peruviensis* subsp. nov. [♂ *Eten, prov. Lambayeque, Peru,* P. O. Simons, Sept. 21, 1899, type in Brit. Mus., reg. no. 1902, 3, 13, 1603.]
Northern Red-backed Buzzard.

N.W. Peru (W. of Andes).

[1] Males, until fully adult, often show a small amount of red on the inter-scapulary region, although the grey upper and white lower plumage have been acquired. Occasionally the red is so extensive as to make them resemble the females, although the red in these cases is generally mottled with grey feathers.

[2] The wing of the ♀ type measures 470 mm., and of two other females from Iquique, Chile, and " High Peru," 467 and 460 mm. respectively. Other Bolivian birds from prov. of Cochabamba and Oruro measure ♂ (?) 407, and ♀ (?) 405. All the Bolivian birds have the blackish upper parts, although there is a puzzling variation in size.

Smaller ; wing ♂ 364, ♀ 385-410 mm. ; dark form ; upper parts and wings blackish slate instead of light slate grey (but mantle red in ♀) ; below pure white in adult ; tail conspicuously barred with black in addition to black sub-terminal band.

150c. *Buteo erythronotus exsul*[1] Salvin, Ibis, 1875 p. 381. [*Masafuera*, type in Brit. Mus.] Masafuera Buzzard.

Masafuera I., off coast of Chile

Insular form ; ♂ wing 375 mm. ; darker blackish slate above ; ♀ back uniform like ♂ instead of red.

151. *Buteo albicaudatus albicaudatus* Vieill., N. Dict. d'Hist. Nat., iv., p. 477 (1816). ["*S. America*," type loc. sugg. : *Paraguay*.] White-tailed Hawk.

S. America, from Brazil (Bahia) to Uruguay, Paraguay, Argentina and Chile.

Wing ♂ 430, ♀ 445-475 mm. ; above and throat slaty-grey, darker on head and wings; shoulder ferruginous ; rump and upper tail-coverts white ; tail silvery grey, centre feathers white, with 8 or 9 fine slaty bars and sub-terminal black band ; below white, axillaries and flanks barred with blackish.

†151a. *Buteo albicaudatus sennetti* Allen, Bull. Am. Mus. N.H., v., p. 144 (1893). [*Lower Rio Grande, Texas*.] Sennett's White-tailed Hawk.

Middle Texas to Central America ; Colombia, Venezuela and Amazon Valley.

Smaller ; wing ♂ 408-412, ♀ 440-445 mm. ; cross bars on tail and lower parts finer and more broken (almost absent in oldest birds).

1 The following additional forms of *Buteo* have been described from Chile by Philippi (Arch. für Naturg., 1899, pp. 167-70) viz. ; *Buteo melanostethos, B. pœcilogaster, B. macronychus, B. ater, B. pictus, B. albigula, B.* [*Asturina ?*] *œthiops et elegans*, but what the respective value of these forms is I have been unable to judge, although I believe some are based on immature plumages and untenable.

*151b. *Buteo albicaudatus exiguus*, Chapm., Bull. Am. Mus. N.H., xxxiv., p. 637 (1915). [*Barrigon, Col.*]
Columbian White-tailed Hawk.

" Notably smaller [wing ♂ 388 mm.]; with the upper parts, particularly the head and sides of the neck, darker and more slaty."

Llanos of E. Columbia & E. into Venezuela.

151c. *Buteo albicaudatus colonus* Berl., J.f.O. 1892, p. 91. [*Curaçao.*]
Curaçao White-tailed Hawk.

Ad. plumage not seen; imm. black, abdomen somewhat barred with buff; tail with indistinct darker bars. [Tring Mus.]

Curaçao, Bonaire, and Aruba Is.

Gen. XXXIII. TRIORCHIS Kaup (1829).

[= *Archibuteo* Brehm (1828). (*nom. nud.*)]

Type *Falco lagopus* Gmel. (= *F. lagopus* Brünn.).

With general characters and appearance of *Buteo*, but tarsi feathered to the toes.

*†152. *Triorchis lagopus lagopus* (Brünn.), Orn. Bor., p. 4 (1764). [*Christiansoë*, near *Bornholm.*]
Rough-legged Buzzard.

Wing ♂ 420-450, ♀ 440-460 mm.; above deep brown with paler margins; head, neck, throat and chest white, streaked with dark brown; scapulars and least wing-coverts with white bases; upper tail-coverts banded with white; tail white, terminal portion ashy, with sub-terminal blackish band; centre of belly and flanks deep brown mottled with white; thighs and

N. Europe and N. Asia; in winter S. to Brit. Isles and Mediterranean.

tarsi buffish-white, barred with brown; much variation occurs, some birds being much darker, almost uniform below.

*152a. *Triorchis lagopus pallidus* (Menzb.), Orn. Turkest., i., p. 163 (1888). [*Siberia, Turkestan, etc.*]
Siberian Rough-legged Buzzard.

Wing ♂ 416-432, ♀ 436-450 mm.; much paler; plumage above with broad white margins; streaks on throat and breast and thighs much narrower and paler; upper tail-coverts white with a central streak of brown.

Siberia, E. of Obi Valley, Kamtschatka, Ussuri; in winter to Turkestan, Black Sea, Caspian and China.

†152b. *Triorchis lagopus sancti-johannis* (Gmel.), S.N., i., p. 273 (1788). [*Hudson Strait and Newfoundland.*]
American Rough-legged Buzzard.

Wing ♂ 405-420, ♀ 443-450 mm.; much darker and more ochraceous below normally than *A. l. lagopus* and varying in melanistic examples to nearly uniform black.

N. America, N. of Mexico, breeding N. of U.S.; migrating S. in winter.

†153. *Triorchis ferrugineus* (Licht.), Abh. K. Akad. Wiss. Berl. (Phys. Kl.), 1838, p. 428 (1839). [*Near Monterey, Cal.*]
Ferruginous Rough-leg.

Wing ♂ 424, ♀ 430-460 mm.; plumage above blackish with chestnut margins, especially on wing coverts; head streaked with black and white; tail silvery ashy, tinged with rufous, the base and tip white; below white, more or less washed with rufous, with rufous brown shaft lines on chest and arrow heads or bars on flanks; thighs bright chestnut barred with black.

W. North America, S. to California: in winter to Lower California and N. Mexico.

Gen. XXXIV. BUTEOLA Bp. 1855).

Type by orig. desig. *Buteo brachyurus* Vieill.

Nostrils round, with distinct central tubercle; wing with 3 outer primaries emarginate on inner webs, the fourth sinuate.

*†154. *Buteola brachyura* (Vieill.), N. Dict. d'Hist., Nat. iv., p. 477 (1816). [*Cayenne.*]
Short-tailed Buzzard.

Size moderate; wing ♂ 290-298, ♀ 316-335 mm.; above slaty-black; tail ashy-brown, tipped with whitish and with 4 broad bands of black; sides of face and under surface of body white, the sides of chest black (immature buff below and with 9 dark bars on tail); melanistic variety [*B. fuliginosa*, Scl.], general plumage sooty-black; tail brown with 8 blackish bands.

Brazil, Bolivia, Peru, Guiana, Venezuela, N. to Central America and Florida.

Gen. XXXV. ASTURINA Vieill. (1816).

Type by monotypy *A. cinerea* Vieill. = *Fulco nitidus* Lath.

Tibiæ long; feet large and powerful; nostrils round, with indistinct and concealed tubercle at base of upper margin. Size medium (length 16-18 in.).

*155. *Asturina nitida nitida* (Lath.), Ind. Orn., i., p. 41 (1790) [*Cayenne.*]
Shining Buzzard-Hawk.

Wing ♂ 242-245, ♀ 260-265 mm.; ♂ ♀ above ashy grey, barred with silvery white, most narrowly on the head and nape, bars becoming duller and broader on wings; upper tail-coverts blackish, tipped with white; tail blackish with a broad white band about one-third of distance from tip and a second

S.E. Brazil, Amazonia, Ecuador, Guiana, Colombia.

incomplete band on outer feathers; body below regularly banded with silvery white and slaty grey.

155a. *Asturina nitida pallida* Todd, Proc. Biol. Soc., Wash., xxviii., p. 170 (1915). [*Rio Surutu.*]
Bolivian Buzzard-Hawk.

E. Bolivia.

Above a shade lighter and purer bluish-grey; below with dark barring slightly narrower.

155b. *Asturina nitida costaricensis* subsp. nov. [♂ *Pozo del Rio Grande, Bornea, Costa Rica,* April 5, 1906, type in M.C.Z., Harvard.]

Central America (Costa Rica).

Wing ♂ 237, ♀ 250 mm.; above much duller, approaching *plagiata*, the paler bands nearly obsolete; below with slate bands duller and broader, white bands narrower.

156. *Asturina plagiata plagiata* (Licht.) Nom. Mus. Berol. p. 3 (1854). [*Nom. nud.*] Schl. Mus. Pays-Bas, i., Asturinæ, p. 1 (1862). [*Vera Cruz.*]
Mexican Goshawk.

Mexico, N. to S. Arizona and Lower Rio Grande Valley.

Wing ♂ 248-253, ♀ 270-278 mm.; above ashy-grey without white bars; head and nape lighter; tail with whitish band across middle with remains of another nearer base; longer upper tail-coverts pure white; below banded as *A. n. nitida*.

156a. *Asturina plagiata minor* Griscom, Am Mus. Novitates, Nov., 1921, (1921).[*Pigres, Costa Rica,* type in Am. Mus. N. H.]
Costa Rican Goshawk.

Costa Rica, Nicaragua.

Smaller, wing ♂ 230, ♀ 255 mm.; plumage paler grey.

Gen. XXXVI. RUPORNIS Kaup (1844).

Type by orig. desig. *Falco magnirostris* Gmel.

Feet and claws much smaller and weaker. Size rather smaller than *Asturina*.

*157. *Rupornis magnirostris magnirostris* (Gmel.), S.N., i., p. 282 (1788). [*Cayenne.*] Large-billed Hawk. — Guiana, E. Venezuela, Lesser Antilles.

Wing ♂ 208-220, ♀ 220-226 mm.; above and chest dark brownish slate, head darker; tail ashy with 3 broad bands of black; primaries rufous including outer webs, barred with black, the tips black; secondaries, except outermost ones, ashy barred with black; below white, barred with rufous or rufous ashy (♂ more rufous below than ♀).

157a. *Rupornis magnirostris ecuadoriensis* subsp. nov. [♀ *Vaqueroi, N. Ecuador*, Sept. 20th, 1901, in coll. H. Kirke Swann.] Ecuador Large-billed Hawk. — N. & W. Ecuador.

Wing ♂ 205, ♀ 220 mm.; nearest to *R. m. ruficauda*; above much paler and greyer than typical form, but upper tail-coverts with a tinge of buff and tail with interspaces darker and tinged with rufous; below more rufous and with a buffish tinge; quills more broadly banded with black, the secondaries more rufous on inner webs.

157b. *Rupornis magnirostris occidua* Bangs, Pr. Biol. Soc., Wash., xxiv., p. 187 (1911). [*Rio Tembopata, S.E.Peru,* type in M.C.Z., Harvard.]
Peruvian Large-billed Hawk.

Peru

Larger : wing ♂ 213-223 mm. ; above much browner grey than last, but paler than typical form ; no rufous on secondaries or tail ; no buff on upper or under tail-coverts ; chest cinnamon rufous to grey tinged with rufous.

157c. *Rupornis magnirostris insidiatrix* Bangs and Penard, Bull. M.C.Z., lii., p. 36. (1918). [*Sta. Marta, Col.,* type in M.C.Z., Harvard.]
Colombian Large-billed Hawk.

Colombia. Venezuela (Merida).

Wing ♂ 210-220, ♀ 230 mm. ; above and chest slate grey (paler) ; wings as in typical form ; below barred with dull rufous and white.

*157d. *Rupornis magnirostris griseicauda* Ridgw., Pr. Bos. Soc. N.H., xvi., p. 89, (1873). [*Rio Seco, Mexico,* type in M.C.Z., Harvard]
Mexican Large-billed Hawk.

Mexico to Guatemala and N. Nicaragua.

Wing ♂ 215-20, ♀ 240 mm. ; above much darker and browner, under parts and upper tail-coverts more rufous, the interspaces buff instead of white ; tail with interspaces ashy.

157e. *Rupornis magnirostris conspecta,* Peters, Auk., xxv., p. 370 (1913). [*San Ignacio.*]
Yucatan Large-billed Hawk.

Yucatan Peninsula, and Brit. Honduras.

Wing ♀ 220 mm.; much paler (brownish slate) above and on chest; inter-barring whiter, less buffy below.

157f. *Rupornis magnirostris ruficauda* (Scl. & Salv.) P.Z.S., 1869, p. 133 [Type loc. sugg. *David, W. Panama,* Chapm.].
Red-tailed Large-billed Hawk.

Wing ♂ 215, ♀ 220-35 mm.; tail with the interspaces rufous instead of ashy; below buff, banded with rufous, throat and chest ashy.

Central America (S. Nicaragua to Panama); Colombia (Cauca Valley).

157g. *Rupornis magnirostris gracilis* Ridgw., Pr. U.S.N. Mus., viii., p. 94 (1885). [*Cozumel I.*]
Cozumel Hawk.

Similar to *griseicanda* but smaller.

Cozumel I., Yucatan.

158h. *Rupornis magnirostris nattereri* (Scl. & Salv.) P.Z.S. 1869, p. 132. [*Sao Paulo et Mattogrosso.*]
Natterer's Hawk.

Wing ♂ 220, ♀ 233 mm.; above ashy brown, head much clearer; tail with the interspaces ashy-brown; throat ashy-grey; chest pale rufous, rest of under parts fulvous barred with pale rufous.

S.E. and C. Brazil.

157i. *Rupornis magnirostris superciliaris* (Vieill.) N. Dict., x., p. 328 (1817). [*Paraguay,* ex. Azara.]
Pucheran's Hawk.
[= *R. magnirostris pucherani* (J. & E. Verr.)]

Paraguay, S.E. Brazil, Argentina.

Wing ♀ 267 ; larger ; above brown, darker on head ; quills paler rufous than in *R. m. ruficauda*, and with bases pale rufous externally ; tail pale rufous banded with dark brown ; below buffy-white, narrowly barred with pale rufous.

157k. *Rupornis magnirostris saturata* Scl. & Salv. P.Z.S. 1876, p. 357. [*Apollo and Tilotilo, Bolivia.*] Bolivia.
Sclater's Hawk.

Tail much brighter cinnamon rufous, as well as basal part of wing quills ; chest distinctly rufous.

158. *Rupornis ridgwayi* Cory, Qtly. Jnl. Boston Zool. Soc., ii., p. 46 (1883). [*San Domingo.*] Haiti and San Domingo.
Ridgway's Hawk.

Wing ♂ 220-230, ♀ 253 mm. ; above brownish grey ; tail dark brown, with 3 faint imperfect bars of white and shaded with dull rufous ; lesser wing-coverts and upper tail-coverts rufous ; no rufous in wings ; below pale grey ; belly barred with rufous and white ; thighs dark rufous, narrowly banded with white.

*159. *Rupornis leucorrhoa* (Quoy et Gaim.), Voy. de l'Uran., p. 91, pl. 13 (1824). [*Brazil.*] Brazil to Peru, Colombia, Venezuela.
White-rumped Hawk.

Wing ♂ 242, ♀ 252 mm. ; uniform black, lower upper tail-coverts and base of tail white ; tail black, with a single band of ashy-brown (2 in immature) ; tibial plumes rufous ; under tail-coverts buffy-white.

Gen. XXXVII. BUSARELLUS Lafr. (1842).
Type by orig. desig. " *Le Buserai* " Levaill.
[= *Falco nigricollis* Lath.]

Size of *Buteo* ; sole of foot covered with rugose and thorny spicules (like that of *Pandion*) tip of upper mandible much curved.

160. *Busarellus nigricollis nigricollis* (Lath.), Ind. Orn. 1, p. 35 (1790). [*Cayenne.*]
Black-collared Hawk.

Wing ♂ 360-380, ♀ 385-398 mm. ; above bright chestnut, with narrow black shaft stripes ; outermost wing-coverts and quills black ; basal half of tail chestnut banded with black, apical half black with narrow white tip ; head and neck creamy buff, head washed with rufous and striped with black ; lower throat black ; below chestnut.

Guiana, Brazil, Peru, Venezuela, Central America (Panama to Nicaragua), and W. coast Mexico to Mazatlan.

160a. *Busarellus nigricollis macropus* subsp. nov. [♂ *Tally Pan, Manatee R., Br. Honduras,* G. B. Thomas, May 12, 1906, type in M.C.Z. Harvard.]
Northern Black-collared Hawk.

Larger ; wing ♂ 410, ♀ 410-420 mm. ; tarsi and feet much stouter and larger ; paler above and below ; head and neck whiter.

Guatemala and Brit. Honduras.

160b. *Busarellus nigricollis australis* subsp. nov. [♂ *Morovi, Arg.,* Sept. 3rd, 1915, S. Venturi Coll., No. 1015, type in Tring Mus.]
Argentine Black-collared Hawk.

Larger ; wing ♂ 415, ♀ 428 mm. ; paler generally ; head and neck whiter.

N. Argentina Paraguay.

Gen. XXXVIII. BUTEOGALLUS Less. (1831).

Type by monotypy *B. cathartoides* Less.
[= *Falco æquinoctialis* Gmel.].

Outer toe hardly longer than inner ; soles of feet smooth, wings short of tail by less than length of hind toe.

161. *Buteogallus æquinoctialis* (Gmel.), S.N. i. p. 265 (1788). [*Cayenne.*]
Equinoctial Buzzard.

Guiana, Colombia, Brazil Paraguay.

Wing ♂ 310-325, ♀ 340 mm. ; plumage above black, with rufous margins on mantle and wing-coverts ; quills bright chestnut, outer webs black ; tail black with white tip and indistinct median band of white ; throat blackish ; below rufous narrowly barred with black.

Gen. XXXIX. URUBITINGA Lafr. (1842).

[ex. Less. Rev. Zool., 1839, p. 132, *nom. nud.*]
Type "*Urubitinga*" = *Falco urubitinga* Gmel.

Size of *Buteo* ; tarsus long and stout, scutellated before and behind, reticulated laterally ; distance between tips of wing and tail greater than length of hind toe ; secondaries nearly as long as primaries ; general plumage black.

*162. *Urubitinga urubitinga urubitinga* (Gmel.), S.N., i., p. 265 (1788). [*Brazil.*]
Brazilian Eagle.

Chile and Argentina to Brazil, Guiana, E. Peru, Ecuador, Venezuela, Tobago.[1]

Wing ♂ 392-410, ♀ 405-450 mm. ; above and below black ; upper tail-coverts mostly white ; tail with base black, a central white band equal to a third length of tail, the apical third black, with white tip.

1 I have 2 immature birds collected by Kirk in my collection ; wing measurements 395 and 410 mm.

162a. *Urubitinga urubitinga occidentalis* subsp. nov. [♀ *Rio Bogota, W. Ecuador,* Type No. 11045 in M.C.Z. Harvard.]

W. Ecuador.

Smaller; wing ♀ 375 mm.; sub-terminal tail band 100 mm., white band narrower.

162b. *Urubitinga urubitinga ridgwayi* Gurney, List Diurn. Bds. Prey, p. 77, 148 (1884). [*Guatemala.*]
Ridgway's Black Hawk.

Mexico and Guatemala to Costa Rica.

Smaller; wing ♂ 380-395, ♀ 415-420 mm.; under wing-coverts and tibiæ with more white; tail with base white, black basal band much wider and central white bar less than one-fourth length of tail; black of plumage with a glaucous or slaty cast.

†163. *Urubitinga anthracina anthracina* (Licht.), Preis. Verz. Mexicanische Vogel, p. 3 (1830). [*Mexico.*]
Mexican Black Hawk.

Venezuela and Colombia to Guatemala, Mexico, Texas and S. Arizona.

Wing ♂ 355-375, ♀ 360-370 mm.; black above and below; upper and under tail-coverts only narrowly tipped with white; tail with a broad (40-60 mm.) white median band and white tip; base of primaries mottled black and white; inner webs of secondaries mottled with rufous and black.

163a. *Urubitinga anthracina cancrivora* Clark. Pr. Biol. Soc., Wash., xviii., p. 63 (1905). [*St. Vincent.*]
Antillean Black Hawk.

Lesser Antilles (St. Vincent, St. Lucia). Trinidad.[1]

[1] The Trinidad bird differs only in the narrower tail band (30 mm.) and slightly more rufous secondaries.

Wing ♀ 385-392 mm. ; plumage blacker ; hind neck mottled buff instead of white ; tail band narrower (40 mm.) ; bill rather more slender ; secondaries chiefly rufous, barred with black.

163b. *Urubitinga anthracina subtilis* Thayer and Bangs, Bull. Mus. Comp. Zool., xlvi., p. 94. (1905). [*Gorgona I.*, type in M.C.Z., Harvard.]
Gorgona Black Hawk. — Gorgona I., S.W. Colombia.

Wing ♂ 342 ; brownish black ; secondaries rufous, barred and tipped with black ; tail with white band 40 mm. and buff tips.

163c. *Urubitinga anthracina bangsi* subsp. nov. [♂ *San Miguel I., Pearl Is., Bay of Panama.* W. W. Brown, Jr., Mar. 30, 1904, type in M.C.Z., Harvard.]
Pearl Island Black Hawk. — Panama.

Wing ♂ 365 mm. ; sooty black, browner on wings ; primaries merely frosted with white at base ; inner webs of secondaries dull rufous, except at tips, barred and mottled with black ; tail band 30 mm. wide, the tip buffish.

164. *Urubitinga gundlachi* (Cab.), J. f. O., 1854, Suppl. p. lxxx. [*Cuba*, type in Berlin Mus.]
Cuban Black Hawk. — Cuba.

Wing ♂ 340-360 mm. ; dark chocolate brown ; the wing-coverts, scapulars and under parts narrowly edged with buffish white or pale rufous ; basal half of primaries slate grey on outer webs, the inner webs white, forming a conspicuous patch below ; secondaries uniform brownish

black; tail black with median white band (25-30 mm.) and white tips; in younger birds a second white band nearer base.

Gen. XL. LEUCOPTERNIS Kaup (1847).

Type by subs. desig. (Gray 1855) *Falco melanops* Lath.

Similar in structure to *Urubitinga*; nostril nearly circular; tarsus not more than twice as long as middle toe; plumage usually more white than black.

165. *Leucopternis schistacea schistacea* (Sundev.) Œfv. K. Vet. Akad. Förh. 1850, p. 142 (1851). [*Brazil.*]
Slate-coloured Hawk.

Wing ♂ 240, ♀ 303 mm.; plumage uniform slate colour; tail black, with a white median band and white tip.

E. Peru, C. and N.E. Brazil, Columbia?

*165a. *Leucopternis schistacea plumbea* Salv., Ibis., 1872, p. 240, pl. viii. [*Ecuador.*]
Plumbeous Hawk.

Wing ♂ 248-255 mm.; uniform leaden grey; wings and tail black, latter with a median bar of ashy-white; under wing-coverts white and tibial plumes more or less barred with same.

Ecuador, W. Colombia, Panama.

166. *Leucopternis albicollis albicollis* (Lath.) Ind. Orn. 1, p. 36 (1790). [*Cayenne.*]
White-collared Hawk.

Wing ♂ 320-337, ♀ 365 mm.; general plumage white; head streaked with black, interscapulary region spotted with black; scapulars and wing-coverts black spotted

French, Dutch and British Guiana, Trinidad, Venezuela and Amazonia to Ecuador and Peru.

with white ; quills black ; tail black with broad white tips (35 mm.) and white bases to outer feathers.

*166a. *Leucopternis albicollis occidentalis* Salv. Ibis, 1876, p. 496. [*Puna I.*]
Puna White-collared Hawk.

W. Ecuador, Colombia.

Wing ♀ 338 mm. ; similar, but rather smaller and with head plumbeous ; upper parts plumbeous instead of black ; tail white with 'narrow black sub-terminal band (70 mm.).

167. *Leucopternis ghiesbreghti ghiesbreghti* (Du Bus), Esq. Zool., pl. 1 (1848). [*Near Vera Cruz, Mexico.*]
Ghiesbreght's Hawk.

S. Mexico to Guatemala (Vera Paz) and Honduras.

Wing ♂ 320-330, ♀ 360-385 mm. ; larger ; above and below white ; tail with sub-terminal black band ; greater wing-coverts and outer secondaries black tipped with white, innermost (and sometimes all) secondaries white ; primaries chiefly black.

167a. *Leucopternis ghiesbreghti costaricensis* W. Sclat., Bull. B.O.C., xxxix., p. 76 (1919). [*Carillo, Costa Rica*, type in B.M.]

Pacific slopes of Guatemala to Nicaragua, Costa Rica and Panama.

Wing ♂ 350 mm. ; inner primaries and secondaries dusky black, crossed by narrow bars of dead black ; the tips and inner edges white ; black tail band wider.

168. *Leucopternis polionota* (G. R. Gray), Cat. Accip. Br. Mus., p. 17 (1844). [*Nom. nud.*]: Kaup, Isis, 1847, p. 212. [*S. America = Sao Paulo, Braz.*, type in Br. Mus.]
Mantled Hawk.

S. Brazil.

Wing ♂ 360-380, ♀ 390-410 mm. ; above blackish-slate, most of feathers tipped or barred with white ; head, neck and underparts white ; basal half of tail black, terminal white.

169. *Leucopternis lacernulata* (Temm.), Pl. Col. 1, pl. 437 (1827). [*Brazil.*]
White-headed Hawk.

S.E. Brazil.

Wing ♂ 295, ♀ 315 mm. ; above more slate coloured, with less white variegation : head and hind neck shaded with greyish ; tail with narrow sub-terminal black band on white apical half.

170. *Leucopternis kuhli* Bp., Consp. Av. 1, p. 19, 1849. [No loc. : *Para*, apud Chubb.]
White-browed Hawk.

Amazonia, from Para to E. Peru.

Wing ♂ 212, ♀ 220 mm. ; smaller ; above slate-black ; above eye a white stripe, and nape streaked and margined with same ; tail black, tipped with ashy-brown, with a median band of white ; below white narrowly streaked with black on sides of chest.

*171. *Leucopternis melanops* (Lath.), Ind.Orn.1., p. 37 (1790). [*Cayenne.*]
Black-faced Hawk.

Guiana ; N. Brazil to E. Ecuador.

Wing ♂ 210, ♀ 230 mm. ; head, neck and lower parts white ; lores and stripe behind eye black ; crown and nape streaked with black ; back and wings black with large spots of white, except on quills ; tail black with broad band of white about a third from end.

172. *Leucopternis semi-plumbea* Lawr. Ann. Lyc., N.Y., vii., p. 288 (1862). [*Panama.*] Semi-plumbeous Hawk. — N.W. Ecuador and Colombia to Costa Rica and Nicaragua.

Wing ♂ 190, ♀ 208 mm.; above uniform plumbeous; wings and tail black; latter with a narrow band of white near middle; below white with a few black shaft stripes on sides of breast.

173. *Leucopternis princeps* Sclat., P.Z.S. 1865, p. 429, pl. xxiv. [*Costa Rica.*] Barred Hawk. — Costa Rica to N. Ecuador.

Wing ♂ 360, ♀ 385 mm.; above, also throat and foreneck, slaty-black, below white narrowly barred with black; tail black with a median band of white, and a few anterior incomplete bars of same.

Gen. XLI. HARPYHALIAETUS Lafr. (1842).
Type by orig. desig. *Harpyia coronatus* Vieill.

Size large, length ad. 33 in.; head with a long occipital crest (95 mm.); tail short, not three times as long as tarsus.

174. *Harpyhaliaetus coronatus* (Vieill.) N. Dict. d'Hist. Nat., xiv., p. 237 (1817). [ex. Azara = *Paraguay.*] Crowned Harpy. — Paraguay, Bolivia, S. Brazil to Patagonia.

Wing ad. 553-560; tail 342 mm.; above ashy-brown, shaded with chocolate; below paler and more ashy; quills blackish; secondaries ashy-grey mottled with black and with a broad sub-terminal band of same; tail black, tipped with white, with broad white median band, and a second indistinct one nearer base.

Gen. XLII. URUBITORNIS Verr. (P.Z.S. 1856, p. 145).
Type by orig. desig. *Circaetus solitarius* Tsch.

Head with short crest (50 mm.).

175. *Urubitornis solitarius* (Tsch.), Arch. f. Naturg. 1844, p. 264. [*Chauchamayo, Peru.*]
Solitary Harpy.

Wing ad. 525, tail 240, culmen 65 mm.; much darker than *H. coronatus*; general colour bluish-black, shaded with chocolate; tail with median white band 35 mm. wide.

Chili, Peru, Ecuador, Colombia.

Gen. XLIII. MORPHNUS Dumont (Dict. Sci. Nat. i. Supp., p. 88, 1816).
Type by subs. desig. (Chubb 1916) *Falco guianensis* Daud.

Size similar, length about 36 in.; head crested; tail long, more than four times as long as tarsus; toes very short; claws large.

176. *Morphnus guianensis* (Daud.), Traité, ii., p. 78 (1800). [*Cayenne.*]
Guiana Crested Eagle.

Wing ♂ 445-460 mm.; wing ♀ 488-500, tail 430 mm.; above brownish black; head and neck greyish-brown; wings barred with lighter ashy-brown; tail black, tipped with whitish and with from 3 to 5 bands of ashy-brown; chest ashy-brown; below white barred with rufous or brown.

Honduras, Panama, Colombia, Guiana, E. Brazil, E. Peru, Paraguay.

177. *Morphnus tæniatus* Gurney, Ibis, 1879, p. 176, pl. iii. [*Sarayacu.*]
Ecuadorian Crested Eagle.

Ecuador.

Wing ad. 461, tail 395, crest (longest feather) 115 mm. ; crown and sides of head dark slate ; above blackish-brown ; wing-coverts more conspicuously barred with white ; tail with 4 bands of white, mottled and tinged with brownish grey ; throat and upper breast blackish ; below closely barred with black and white.

Gen. XLIV. HARPIA Vieill. (Anal. Nouv. Orn. 1816, p. 24).
Type by monotypy *Vultur harpyia L.*

Larger, length about 38 in. ; bill robust, culmen much curved ; feet very powerful ; tarsus almost entirely bare, the scutallæ rough and irregular ; claws very large and strong ; head with broad depressed crest, erectile.

178. *Harpia harpyja* (Linn.) S.N., i., p. 86 (1758). [Mexico.]
Great Harpy Eagle.

From Mexico S. to Paraguay, Bolivia, and Brazil.

Wing ♂ 530-565, ♀ 600 mm. ; ad. head, neck and throat ashy-grey ; above and chest brownish black ; below white ; tail black with 4 ashy bands ; thighs barred black ; Immature : above, also crest and chest patch, ashy-grey ; tail irregularly barred with black ; head, neck and under-parts white.

Gen. XLV. HARPYOPSIS Salvad. (1875).
Type by orig. desig. *H. novæ-guineæ* Salvad.

Size large, length about 34 in. ; head crested ; tail long and rounded.

179. *Harpyopsis novæ-guineæ* Salvad., Ann. Mus. Civ. Genov., vii., p. 682 (1875). [*Andai, Arfak Penins.*]
New Guinea Hawk-Eagle.

S.E. New Guinea.

Wing ad. 480 mm. ; above dusky brown ; below dirty white ; chest greyish ; tail with 6 indistinct transverse bands.

Gen. XLVI. PITHECOPHAGA Ogilvie Grant (1896).
Type by orig. desig. *P. jefferyi* Ogilvie Grant.

Length about 33 in. ; bill deep, much compressed, ridge of culmen much curved ; nostrils a vertical slit ; lores and cheeks covered with bristles only ; head with crest of long lanceolate feathers ; feet powerful ; tarsi mostly naked, with a row of large scutes down front ; wings short and rounded ; tail very long.

180. *Pithecophaga jefferyi* Ogilvie Grant, Bull. B.O.C., vi., p. xvii. (Dec. 30, 1896) ; *id.*, Ibis, 1897, p. 214, pl. v. [*Samar, Philipp. Is.*]
Philippine Monkey-Eagle.

Philippine Islands. (Samar and Mindanao).

Wing ad. 520 ; tail 380 mm. ; above rich brown, with paler margins to the feathers, especially on head, where they are whitish buff ; tail dark brown with about 4 darker bands ; below creamy white, the thighs and flank feathers with reddish brown shaft stripes.

SUB. FAM. IV. GYPAËTINÆ.

Gen. XLVII. GYPAËTUS Storr (1784).
Type by monotypy *G. grandis* Storr.

Size large, length about 41 in. ; nostrils hidden by stiff bristles ; chin with a long tuft of black bristles ; tarsus more or less feathered.

*†181. *Gypaëtus barbatus grandis* Storr, Alpenreise vom Jahr 1781, p. 69 (1784). [*Switzerland.*]
Bearded Vulture.

Wing average (Alps) ♂ 825, ♀ 861 ; (Spain) 790-812, (Sardinia) 785-788, (Greece) 784-795, (Himalayas) 813-843 mm. ; head white, a line each side of crown and another below ear black ; general plumage above black with white shafts ; wings and tail brown and scapulars washed with ochraceous brown ; below rusty yellow ; tarsus feathered to the toes. Immature : head, neck and throat brownish-black ; above brown ; below pale brownish buff.

Spain, Mediterranean Islands, Alps and S.E. Europe Central Asia, Himalayas, N. China ; S. Arabia (Yemen) ?

181a. *Gypaëtus barbatus barbatus* (Linn.) S.N. 1, p. 87 (1758). [*Africa*, ex. Edwards = *Santa Cruz, near Oran*, apud Hartert.]
Atlas Bearded Vulture.

Smaller ; wing ♂ 740-760, ♀ 750-770 mm. ; below warmer tawny reddish.

Atlas Mtns., N. Africa (Marocco, Algeria, Tunisia).

181b. *Gypaëtus barbatus meridionalis*, Keys. and Blas., Wirbelt. Europ. p. xxviii. (1840). [*S. Africa.*]
Southern Bearded Vulture.

Wing 720-775 mm. ; cheeks white without the black markings ; tarsus bare towards lower part.

S. Africa ; Mountains of Abyssinia.

SUB. FAM. V. AQUILINÆ.

Outer toe connected to middle toe by membrane ; tibia much longer than tarsus, which is reticulated on hinder aspect and generally more or less clothed

with feathers; bill large, long and powerful; cutting edge of upper mandible festooned, but not toothed; wings long; tail moderate; sexes generally alike.

Gen. XLVIII. UROAËTUS Kaup (1844).

Type by orig. desig. *Aquila fucosa* Dumont = *Vultur audax* Lath.

Tail strongly graduated, wedge-shaped; tarsi clothed with feathers all round to base of toes; feet and claws very powerful.

*†182. *Uroaëtus audax* (Lath.) Ind. Orn. Suppl. p. ii. (1801). [*New Holland = New South Wales*, apud. Math.]
Wedge-tailed Eagle.

Australia, Tasmania.

Wing ♂ 582, ♀ 612-632 mm.; general colour above and below black, browner on wings; nape tawny chestnut; upper tail-coverts brown mottled with white; tail feathers white at base of inner web. Younger birds have much more pale chestnut on hind neck, wing-coverts and chest.

Gen. XLIX. AQUILA Briss. (1760).

Type by tautonomy *A. aquila* Briss = *Falco chrysaëtos* Linn.

Tail nearly square or moderately rounded; tarsi feathered all round; toes reticulated above, except last phalanx which is scaled; head without crest; claws powerful and curved.

183. *Aquila verreauxi* Less., Cent. Zool., p. 105, pl. 38 (1830). [*Interior of Cape of Good Hope.*]
Verreaux's Eagle

Mountains of S. Africa, N.E. Africa (Abyssinia and Somaliland); acc. Palestine.

Wing ♀ 660 mm. ; plumage black, with back, rump and some of the scapulars white ; immature fawn colour, tail uniform.

†184. *Aquila chrysaëtos chrysaëtos* (Linn.), S.N. i., p. 88 (1758). [*Europe = Sweden*, apud Hartert.]
Golden Eagle.

Europe, S. to Pyrenees ; Asia Minor.

Wing ♂ 590-625, ♀ 650-660 mm. ; general plumage above blackish-brown, with paler margins ; crown brown ; nape and hind neck tawny rufous ; tail blackish at apical fourth, browner towards base, middle irregularly banded with grey ; below blackish with brown bases to the feathers ; in younger birds basal half of tail white, centre mottled brown, apical third black ; nape paler.

†184a. *Aquila chrysaëtos occidentalis*, Olphe-Galliard, Faune Orn. Eur. Occ., ii., fasc. xviii., p. 23 (Mar. 1889). [*Spain.*]
Spanish Golden Eagle.

Spain and N. Africa (Marocco, Algeria, Tunisia).

Wing ♂ 580-600, ♀ 615-680 mm. ; averaging smaller ; plumage darker and duller.

†184b. *Aquila chrysaëtos daphanea*, Hodgs. in Gray's Zool. Misc. p. 81 (1844). [*Nom. nud.—Nepal.*] Menz. Orn. Turkest, 1, p. 75 (1888). [*Haute Asie.*]
Himalayan Golden Eagle.

High Central Asia : Himalayas to Tianschau and Altai.

Larger ; wing ♂ 640-660, ♀ 680-730 mm. ; colour generally brighter.

*†184c. *Aquila chrysaëtos canadensis* (Linn.) S.N. i., p. 88 (1758). [*Canada.*]
American Golden Eagle.

Adult rather larger and considerably blacker than typical race; wing ♀ 660-685 mm.; ♂ 615-630 mm.; immature birds darker than typical form, nearly black all over, except basal two-thirds of tail which are white; nape pale buff.

N. America, Arctic Regions S. to California, Central Mexico, and to Alleghenies in N. Carolina.

*†185. *Aquila heliaca* Savigny, Descr. Egypte, Ois., p. 82, pl. 12 (1809). [*Upper Egypt.*]
Imperial Eagle.

Smaller; wing ♂ 575-600, ♀ 610-640 mm.; feet and claws much weaker; head and neck above isabelline whitish, with darker centres; nape tinged with rufous; general plumage blackish-brown; some of the scapulars pure white; tail dark grey mottled with brown and with broad terminal blackish band. Immature brownish-yellow, striped with dark brown; tail uniform brown.

S.E. Europe (Hungary to S. Russia), and C. Asia to Mongolia; S. in winter to India and China.

186. *Aquila adalberti* Brehm, Ber Vers. deutsch. Orn. Ges. 1860, p. 60 (1861). [*Spain.*]
White-shouldered Eagle.

Size similar; wing ♀ 620 mm.; forehead and crown blackish brown; whole edge of wing and some of the scapulars white, forming a conspicuous shoulder patch; immature fawn colour, unstriped, tail uniform.

S. Spain; N.W. Africa (Marocco).

†187. *Aquila nipalensis nipalensis* (Hodgs.), Asiat. Res. xviii., pt. 2, pl. 1, p. 13 (1833). [*Nepal.*]
Eastern Steppe Eagle.

Rather smaller; wing ♂ 560-600, ♀ 590-620 mm.; plumage brown, paler below; head brown, nape patch fulvous; quills, larger

Central Asia, Mongolia, S.E. Siberia, N.W. India; Muscat; in winter to China, India and N.E. Africa.

scapulars and tail blackish-brown, latter with fulvous tip and obsolete ashy bars. Immature ashy-brown, tail darker, with terminal band of fawn ; wing with 2 light ochreous bars.

†187a. *Aquila nipalensis orientalis* Cab., J. f. O. 1854, p. 369, note. [*Sarepta, Volga.*]
Western Steppe Eagle.

Smaller ; wing ♂ 520-560, ♀ 580-610 mm.

Steppes of S.E Europe and W. Asia ; in winter to Palestine and Sudan.

†188. *Aquila rapax rapax* (Temm.) Pl. Col., livr. 76, pl. 455 (1828). [*Pte. merid. de l'Afrique.*]
Tawny Eagle.

Wing ♂ 508, ♀ 558 mm. ; general colour above and below tawny to rufous brown ; head and neck somewhat marked with darker brown ; scapulars and wing-coverts darker brown, blotched with pale brown ; quills and tail blackish-brown, with indications of greyish bars ; under parts streaked with darker brown. Immature tawny, tail brown tipped with fulvous.

Africa, from Cape Colony N. to C. and E. Africa and Angola.

†188a. *Aquila rapax albicans* (Rüpp.), Neue Wirbelt, p. 34, pl. 13 (1835). [*Prov. Simien, Abys.*]
Rüppell's Tawny Eagle.

Wing ♂ 490-520, ♀ 520-560 mm. ; adult rather darker brown ; immature general colour pale clay or ochraceous colour.

N.E. Africa (Abysinia, Erythræa, Somaliland, Kordofan) ; S.W. Arabia.

†188b. *Aquila rapax vindhiana* Frankl. P.Z.S., pt. 1, p. 114 (1831). [*Vindhya Mtns., Central India.*]
Indian Tawny Eagle.

Indian Peninsula and Himalayas ; Persian Baluchistan.

Wing ♂ 500-520, ♀ 520-560 mm. ; general colour fulvous brown, paler on head and neck and below, above with lighter margins to the feathers, especially on wing-coverts ; tail dark brown with fulvous tip and 8 or 9 indistinct greyish bars on centre feathers.

188c. *Aquila rapax belisarius* (Levaill. jun.) Expl. Sc. Alg. Ois. pl. 2 [not text], (1850) ; text by Loche, i., p.167 (1867). [*Guelma, N.E. Algeria.*]
Algerian Tawny Eagle.

Marocco, Algeria, Tunisia ; acc. Roumania, Sardinia and Spain ?

Wing ♂ 530-550, ♀ 540-580 mm. ; head, neck all round and inter-scapulary region chocolate brown.

*†189. *Aquila clanga* Pall., Zoogr. Rosso-Asiat., i., p. 351 (1827). [*In Rossia Sibiriaque universa.*]
Greater Spotted Eagle.

E. Europe, from Russia S.W. to Hungary and Balkans ? E. to Turkestan, S. Siberia, N. India and China ; in winter to N.E. Africa, India, Burma ; cas. Brit. Isles.

Wing ♂ 500-520, ♀ 550-560 mm. ; plumage above and below blackish-brown ; tail unbarred ; younger birds purplish brown, much spotted and streaked with buff above and striped below : tail blackish, barred dark brown.

†190. *Aquila pomarina pomarina* Brehm, Vög. Deutschl., p. 27 (1831). [*Pomerania.*]
Lesser Spotted Eagle.

C. Europe from E. Germany, Baltic States and Poland to Bessarabia and Balkans (S. to Greece), cas. W. Europe ; in winter to N.E. Africa.

Smaller ; wing ♂ 450-485, ♀ 490-520 mm. ; plumage browner ; crown and nape creamy brown ; tail feathers with obsolete lighter bars ; younger birds less spotted than those of *A. clanga* and tail unbarred ; nape patch ochraceous rufous.

*†190a. *Aquila pomarina hastata* (Less.), Voy. Ind. Or. Bélang., Zool., p. 217 (1834). [*Bengal.*]
Long-legged Eagle.

Wing ♂ 455-485, ♀ 495 mm.; bill more feeble, tarsi more slender; least wing-coverts with small spots of white in immature birds.

Indian Peninsula; Burmese countries.

Gen. L. HIERAAËTUS Kaup (1844).
Type by orig. desig. *Falco pennata* Gmel.

General characters of *Aquila*, but still more slender; with or without short occipital crest; tarsi feathered to the toes.

†191. *Hieraaëtus fasciatus fasciatus* (Vieill.), Mem. Soc. Linn. Paris, ii., pt. 2, p. 152 (1822). [*Montpellier.*]
Bonelli's Eagle.

Wing ♂ 460-490, ♀ 490-530 mm.; above deep brown, feathers mostly with paler margins; interscapulary space with extensive white bases to feathers; tail ashy, with broad sub-terminal dark brown band, and 5 or 6 indistinct bars; below white, with blackish-brown shaft stripes, the flanks and thighs buffish, barred with black.

S. Europe (S. France and Spain to S. Russia), N. Africa, Asia Minor, Palestine, Mesopotamia, Turkestan, India, China.

191a. *Hieraaëtus fasciatus spilogaster*[1] (Bp.), Rev. et Mag. Zool., 1850, p. 487. [*Abyssinia*, ex Du Bus. MS.].
African Little Eagle.

Wing ♂ 448, ♀ 462 mm.; head without crest; above blackish-brown, mottled with white; below purer white streaked with

Tropical Africa; N. to Abyssinia, Erythræa, and N. Nigeria, S. to Angola, also Cape Colony (rare); S. Arabia.

1 *H. fasciatus minor* Erlanger from S. Arabia and E. Africa can hardly be separable unless *spilogaster* is considered a different species.

black on breast, and with large spots on under tail-coverts; flanks and thighs white; under wing-coverts black.

*†192. *Hieraaëtus pennatus* (Gmel.), S.N., i., p. 272 (1788). [ex. *Brisson*, no loc., type loc. sugg. *France*.]
Booted Eagle.

Smaller; wing ♂ 350-370, ♀ 395-420 mm.; above brown, head and neck isabelline; tail with obsolete darker bars on outer feathers; below white, throat and breast washed with fawn and streaked with reddish brown or blackish; species subject to variation; immature birds dull brown below with black shaft-stripes, and often a white shoulder patch; a phase exists in adult birds with the dark under-parts.

S. Europe (Portugal and Spain to S. Russia); N. Africa (Marocco to Tunisia); C. Asia; Indian Peninsula.

193. *Hieraaëtus morphnoides* (Gould), P.Z.S., 1840, p. 161 (1841). [*Upper Hunter R., N.S.W.*]
Little Eagle.

Smaller, and with a short occipital crest; wing ad. 380 mm.; above brown, crown darker; crest, neck and under-surface rufous, with black shaft-streaks; tail mottled greyish-brown, with 7 or 8 dark brown bars.

E. and W. Australia.

194. *Hieraaëtus weiskei* (Reichenow), Orn. M.B., viii., p. 185 (1900). [*Astrolabe Mtns.*]
New Guinea Little Eagle.

Below heavily striped with dark brown.

British and Dutch New Guinea.

195. *Hieraaëtus ayresi* (Gurney), Ibis, 1862, p. 149, pl. iv. [*Natal.*]
Ayres's Little Eagle.
[= *Lophotriorchis lucani* Sharpe.]

Wing ♀ 405 mm.; head with crest of 45 mm., black; above sepia brown with white shoulder patch; below white, heavily marked with brownish-black; tail grey, with sub-terminal band and 4 narrow bars of black.

Tropical Africa, from Togoland and Somaliland, S. to Nyasaland, Delagoa Bay and Natal.

196. *Hieraaëtus wahlbergi* (Sundev.) Œfv. K. Vet. Akad. Stockh., 1850, p. 109 (1851). [*Caffraria superiori propre 25° lat.*]
Wahlberg's Eagle.

Wing ♀ 455 mm.; head with distinct occipital crest; plumage above brown, with paler margins; tail dark brown, tipped with whitish, with obsolete lighter bars on inner webs of feathers; below whity brown, varied with dark brown on throat and breast.

Tropical Africa, N. to Uganda and Erythræa on E. and Portug. Guinea on W.

Gen. LI. LOPHOTRIORCHIS Sharpe (1874).
Type *Astur kieneri* De Sparre.

Size moderate; head with a wedge-shaped crest.

197. *Lophotriorchis kieneri* (De Sparre), Mag. Zool., 1835, Aves, pl. 35. [*Himalaya*, type in Phil. Ac. Mus.]
Kiener's Crested Eagle.

Wing ad. 352-364 mm.; above black; cheeks, throat and breast white with black shaft stripes; below tawny rufous, with black shaft stripes; tail brownish with faint black bars.

Indian Peninsula, Ceylon, Indo-Chinese Prov., Malay Peninsula to Celebes and Lesser Sunda Islands.

Gen. LII. OROAËTUS Ridgw. (Smiths. Misc. Coll. lxxii., No. 4, p. 1, 1920).

Type *Falco isidori* Des Murs.

Size larger; with the crest longer.

*198. *Oroaëtus isidori* (Des Murs), Rev. Zool., 1845, p. 175 (bis.). [*Santa Fé de Bogota.*] Isidore's Crested Eagle.

Wing ♂ 488 mm.; wing ♀ 510-521, crest 83 mm.; above glossy black; tail ashy-grey, basal third black; throat black; below tawny rufous with black shaft-streaks; flanks black. Immature: below white with a few dark shaft-lines; tail with 4 black bands, interspaces marbled grey and brown.

Colombia, W. Venezuela and S. through Ecuador to Bolivia.

Gen. LIII. ICTINAËTUS Jerd. (Jnl. As. Soc. Bengal xii., p. 128. 1843).

Type *I. ovivorus* Jerd. =*Aquila perniger* Hodg.

Head crested; claws nearly straight, the circumference of inner claw exceeding the length of outer toe (which is very short).

199. *Ictinaëtus malayensis malayensis* (Temm.). Pl. Col. 1., livr. 20, pl. 117? (1824). [ex. Reinw. MS., *Java and Sumatra*, restr. type loc.: *Java.*] Malayan Crested Eagle.

Wing ad. 510-525 mm.; whole plumage black; the quills mottled with white near base; tail feathers barred with ashy above, mottled with white below.

Malay Archipelago (Java, Sumatra, Borneo, etc.).

199a. *Ictinaëtus malayensis perniger* (Hodgs.), Jnl. As. Soc. Bengal, v., 1836, p. 227. [*Nepal.*]
Indian Black Eagle.

India, Ceylon, Burma, Malay Peninsula.

Similar but larger ; wing ad. 550-600 mm.

Gen. LIV. SPIZIASTUR Gray (1841).

Type by orig. desig. *S. atricapillas* (Cuv.) = *Buteo melanoleucus* Vieill.

Size of *Buteo* ; head crested ; claws curved and powerful ; the circumference of inner claw about equal to length of outer toe and claw.

200. *Spiziastur melanoleucus* (Vieill.), N. Dict., iv., p. 482 (1816). [*Guiana.*]
Black and White Crested Eagle.

Central and S. America, from Yucatan to Brit. Guiana and Brazil.

Wing ♂ 380, ♀ 415 mm. ; above blackish, quills and tail ashy brown, slightly tipped with fulvous and banded with black ; head, neck and under surface white.

Gen. LV. SPIZAETUS Vieill. (1816).

Type " L'Autour Huppé " Levaill. = *Falco ornatus* Daud.

Size variable ; tarsi feathered as before ; crest sometimes fully developed, sometimes absent ; wings short, falling short of tail by more than length of crest.

*201. *Spizaetus ornatus* (Daud.), Traité, ii., p. 77 (1800). [*Cayenne*].
Manduyt's Hawk-Eagle.

Mexico (Oaxaca) to Panama and S. to Ecuador on W. and on E. from Guiana and Brazil to Paraguay.

Wing ♂ 340-375, ♀ 410 mm. ; occipital crest 75 mm. long ; sides and back of neck bright rufous ; a black moustachial band below

eyes ; above black, feathers brown at base ; wings brown, barred with blackish ; tail brown with 4 blackish bands ; below white, chest streaked and abdomen broadly banded with black ; sides of chest chestnut. Immature much browner and with 6 bands on tail. Black phase [*S. tyrannus* (Wied)] : above and below black, head mottled white ; below much spotted and banded with white, especially on tibiæ.

202. *Spizaetus bellicosus* (Daud.), Traité, ii., p. 38 (1800). [*Great Namaqualand.*]
Martial Hawk-Eagle.

S. Africa, E. Africa, N. to Shoa, Abyssinia and Bogosland ; Nigeria.

Larger ; wing ♀ 698 mm. ; above dark sepia brown ; feathers of head and neck with whitish brown margins and white bases ; wings barred with blackish ; tail with 6 bands of ashy grey ; fore neck and chest dark brown ; throat and under parts white, sparingly spotted with dark brown, especially on flanks. Immature paler above, more buffy white below, the spots nearly absent, and with about 11 bands on tail.

203. *Spizaetus africanus* (Cassin), Proc. Phil. Acad., 1865, p. 4. [*Ogobai R., Gaboon,* type in Philad. Acad. Mus.]
W. African Hawk-Eagle.
[= *Spizaetus batesi* W. Sclat.]

Cameroon, Gaboon.

Smaller ; wing ad. 320-340, tail 235 mm. ; above brownish black ; tail with 4 faint paler bands ; below white, thighs heavily spotted with blackish ; crest very slight.

204. *Spizaetus coronatus* (Linn.), S.N., ed. xii., i., p. 124 (1766). [*Guinea in W. Africa.*]
Crowned Hawk-Eagle.

S. and W.Africa (Gold Coast and Uganda to Cape Colony).

Wing ♀ 560 mm. ; above black ; wings brown ; quills shaded with pale ashy grey, and with broad sub-terminal band of black ; tail with 2 broad bands of ashy grey and remains of a third ; throat black ; below yellowish buff, broadly banded with back, chest almost uniform ; under wing-coverts chestnut. Immature above brown with indistinct darker bands and whitish margins ; tail with 3 lighter bands ; below white.

205. *Spizaetus nipalensis nipalensis* (Hodgs.) Jnl. As. Soc. Beng., v., p. 229 (1836). [*Nepal.*]
Himalayan Hawk-Eagle.

Himalayas, E. to Assam ; S. in winter to plains of India and Malay Peninsula.

Smaller ; Wing ♂ 450-460, ♀ 485-495 mm. ; crest 70 mm. ; above blackish brown, with paler margins, especially on head and hind neck ; wings paler, banded with dark brown ; tail ashy brown with 4 blackish brown bands ; throat white, with black central stripe ; chest fawn with black shaft-streaks ; below brown spotted and barred with white. Immature : head and neck white with dark centres to feathers ; tail with 6 darker bands ; below white, slightly streaked with dark brown ; flanks brown.

†205a. *Spizaetus nipalensis kelaarti* Legge, Ibis, 1878, p. 202. [*Ceylon.*]
Mountain Hawk-Eagle.

Ceylon.

Wing 468-473 mm. ; with the white bands below broader and more regular.

205b. *Spizaetus nipalensis orientalis* Temm. & Schleg. in Siebold's Faun. Jap. Aves, p. 7, pl. 3 (text 1844, pl. 1845). [*Japan.*]
Japanese Hawk-Eagle.

N. Japan (mountains of Yezo and Hondo).

Larger ; ♂ about equal to ♀ of typical race ; ♀ wing 510 mm.

205c. *Spizaetus nipalensis fokiensis* [W. Sclat. MS.], Swann, Syn. List Accip., p. 72 (Nov. 7, 1919), [*nom. nudem*][1] ; W. Sclat., Bull. B.O.C., xl., p. 37 (Dec. 8th, 1919). [*Fokien Prov.*, type in Br. Mus.]
Chinese Hawk-Eagle.

S. China, Hainan.

Smaller ; wing ♂ 419-425, ♀ 445 mm.

†206. *Spizaetus cirrhatus cirrhatus* (Gmel.), S.N., i., p. 274 (1788). [*India.*]
Indian Hawk-Eagle.

Indian Peninsula, N. to Rajputa and Central Provinces.

Wing ♂ 405, ♀ 450 mm. ; above brown ; feathers of hind neck and mantle with pale bases and black shaft streaks ; crest black, 95 mm. long ; wing quills rich brown, barred with blackish ; tail with broad blackish sub-terminal band and 3 narrower bands ; throat white with central black stripe and bordered by 2 black moustachial stripes ; below brown, more rufous and mottled with white on chest.

206a. *Spizaetus cirrhatus ceylonensis* (Gmel.), S.N. i., p. 275. [*Ceylon.*]
Ceylonese Hawk-Eagle.

Ceylon and Travancore.

Smaller ; wing 355-385 mm.

1 Published by an oversight without description or reference, owing to non-appearance of Nov. Bull. B.O.C. Mr. La Touche tells me the Chinese bird has the 2 long crest feathers when fully adult, and Mr. Sclater (MS.) says that a Hainan bird in the Brit. Mus. has them. I therefore omit this as a character and retain the form tentatively on size alone.

206b. *Spizaetus cirrhatus andamanensis* Tytler, Proc. As. Soc. Beng., 1865, p. 112. [*Port Blair, And. Is.*]
Andaman Hawk-Eagle.

Small insular race.

Andaman Islands.

206c. *Spizaetus cirrhatus limnaeetus* (Horsf.), Tr. Linn. Soc., xiii., p. 138 (1821). [Java.]
Javan Hawk-Eagle.

Size of *S. c. cirrhatus*, but with crest very slight; with dusky phase [*S. limnaeetus* Horsf.] nearly uniform chocolate brown, and pale phase [*S. caligatus* Raffles)] dark brown above, below white with large longitudinal brown markings; the thighs barred.

N. India (below Himalayas); Burma, Malay Peninsula, Java, Sumatra, Borneo, Philippine Is.

206d. *Spizaetus cirrhatus floris*, (Hart.), Nov. Zool., v., p. 46 (1898).
Flores Hawk-Eagle.

Larger: below white, without the dark markings.

Lesser Sunda Is. (Flores).

206e. *Spizaetus cirrhatus lanceolatus* Temm. & Schleg. in Siebold's Faun. Jap. Aves, p. 7 (1844). [*Celebes.*]
Celebes Hawk-Eagle.

Smaller; wing ♂ 350, ♀ 375 mm.; chest pale rufous with broad black central streaks; below white, thickly banded with dark brown.

Celebes.

207. *Spizaetus alboniger* (Blyth), Jnl. As. Soc. Beng., xiv., p. 173 (1845). [*Malacca*].
Malayan Hawk-Eagle.

Borneo, Greater Sunda Is., Malayan Peninsula, S. Tenasserim.

Smaller ; wing ♂ 280-305, ♀ 330 mm. ; above black with occipital crest, tipped with white, 70 mm. long ; quills brown, tipped white, barred with black and with broad black sub-terminal band ; tail ashy brown, with broad basal and sub-terminal bands of black ; below white, breast with large black spots and belly banded with black. Immature : above brown, below pale buff.

208. *Spizaetus philippinensis* Gurney, in Gould's Bds. Asia, pt. xv., text to pl. 10 (1863). [*Philippine Is.*, type loc. sugg. *Luzon.*] Philippine Hawk-Eagle. — Philippine Islands.

Rather larger, wing ad. 374 mm., crest 63 mm. ; above dark umber brown ; crest with base of feathers white ; tail paler brown with 7 darker bands ; throat as in *S. c. cirrhatus* ; below yellowish rufous ; chest heavily marked with dark brown lanceolate spots ; thighs and under tail-coverts barred with brown and white.

209. *Spizaetus gurneyi* (Gray), P.Z.S., 1860, p. 342, pl. 169. [*Batchian*, type in Norwich Mus.] Gurney's Hawk-Eagle. — Molucca Is., Aru Is., Waigiou, New Guinea.

Larger ; wing ♂ 500, ♀ 530 mm. ; blackish brown ; blacker on head, lighter and greyer on wings and tail ; tail with 6 or 7 obsolete bars.

Gen. LVI. LOPHOAËTUS Kaup (1847).

Type by monotypy *Falco occipitalis* Daud.

Size moderate ; crest feathers very long and pendant ; tarsi feathered as in preceding genera.

*210. *Lophoaëtus occipitalis* (Daud.), Traité, ii., p. 40 (1800). [*Anteniquoi country.*] Black Crested Eagle.

S. Africa to Senegal on W. and Egyptian Sudan on E.

Wing ♂ 385-390, ♀ 396 mm.; crest 120 mm.; ♂ plumage glossy black, with a brown shade on wings; quills white at base, forming a conspicuous patch, and banded with white on inner webs below; tail with 3 greyish bands on middle feathers, becoming broader and whitish on outer ones; ♀ much browner; juv. deep chocolate brown.

A

SYNOPSIS

OF THE

ACCIPITRES

(DIURNAL BIRDS OF PREY)

PART III.

Gen. LVII. HERPETOTHERES Vieill. (1817).

Type by subs. desig. (Gray 1840) *Falco cachinnans* L.

Tarsus bare on lower portion, reticulated in front; bill with upper mandible slightly festooned; nostrils circular with osseous margins; wings short; size moderate (length about 16-18 in.).

***211.** *Herpetotheres cachinnans cachinnans* (Linn.) S.N., i., p. 90 (1758). ["*America meridionalis*": type loc. subst. *Surinam* Berlepsch.] Guiana Laughing Hawk.

Wing ♂ 260-265, ♀ 270-285 mm.; above brown; head crested, crown buff with brown shaft streaks; whole face and nuchal band black; sides of neck, collar round hind neck and entire under parts whitish buff; upper tail-coverts creamy buff; tail dark brown, with 4 creamy buff bands in the form of pairs of oval spots not extending quite across webs.

Guianas, Venezuela, E. Colombia N. & E. Ecuador (E. of Andes).

211a. *Herpetotheres cachinnans queribundus* Bangs and Penard, Bull. Mus. Comp. Zool., lxiii., p. 23 (1919). [*Pernambuco*, type in M.C.Z. Harvard.]
Brazilian Laughing Hawk.

Size of typical form (wing ♂ 258-67), but very pale in colouration.

Brazil (Pernambuco) to Paraguay.

211b. *Herpetotheres cachinnans mæstus* Bangs & Penard, Auk. xxxv., p. 444 (1918). [*Bellavista, Peru*, type in M.C.Z. Harvard.]
Peruvian Laughing Hawk.

Small pale form; wing ♀ 235 mm.; head and under parts much whiter.

N.W. Peru.

*211c. *Herpetotheres cachinnans fulvescens* Chapm., Bull. Am. Mus. N.H., xxxiv., p. 638 (1915). [*Alto Bonito, R. Sucio, W. Colomb.*, type in Amer. Mus. N.H.]
Western Laughing Hawk.

Wing ♂ 253-258, ♀ 270 mm.; smaller and more richly coloured; below nearly uniform deeper buff; head deeper buff.

W. Ecuador and W. Colombia (Pacific side of Andes), N. to Panama; also S. Nicaragua (W. Sclat.).

211d. *Herpetotheres cachinnans chapmani* Bangs & Penard, Bull. M.C.Z., lxii., p. 37 (1918). [*Quintana Roo, Mexico*, type in M.C.Z. Harvard].

Wing ♂ 270-275, ♀ 300 mm.; large pale form; upper parts paler; head and under parts whiter; tail with the bands extending across feathers.

Mexico, from Tepic and Talasco, S. to N. Nicaragua.

[1] A Paraguayan ♂ in Brit. Mus. has a wing measurement of 298 mm.

Gen. LVIII. DRYOTRIORCHIS Shelley (1874).

Type by orig. desig. *Astur spectabilis* Schl.

Tarsus bare on lower portion ; nostrils perpendicular ovals ; head with a short crest of lanceolate feathers ; wings short ; size larger, length about 22.5 in.

212. *Dryotriorchis spectabilis spectabilis* (Schl.), Nederl. Tijdschr. Dierk., i., p. 131, pl. 6 (1863). [*St. George Elmina, Gold Coast,* type in Leyd. Mus.]
Beautiful Wood-Hawk.

W. Africa (Gold Coast to Cameroon).

Wing 300 mm. ; above dark brown ; nape and scapulars with white bases to feathers ; quills brown, barred with darker brown, the inner webs white ; tail with 6 blackish bands ; below white ; fawn colour on throat and chest, former with black central stripe ; chest and breast with black spot on tip of each feather, becoming bars on flanks and thighs ; vent and under tail-coverts with spots of rufous.

212a. *Dryotriorchis spectabilis batesi* Sharpe, Ibis, 1904, p. 601. [*Efulen, Cameroon,* type in Brit. Mus.]
Bates's Wood-Hawk.

Cameroon, Gaboon, and E. to Aruwhimi R., Belgian Congo.

Wing ♂ 290 mm. ; chest uniform creamy white, without the large black spots (except in immature birds).

Gen. LIX. EUTRIORCHIS Sharpe (1875).

Type by orig. desig. *Eutriorchis astur* Sharpe.

Wings remarkably short, not extending much beyond base of tail ; tail elongated ; head with a short crest.

213. *Eutriorchis astur* Sharpe, P.Z.S., 1875, p. 73 pl. xiii. [*S. Madagascar*, type in Brit. Mus.] Madagascar Serpent-Eagle. — Madagascar.

Above brown, tail with about 8 blackish bars; below white, narrowly banded with black; throat and chest ashy; wing 341 mm.

Gen. LX. CIRCAËTUS Vieill. (1816).

Type by monotypy "Jean-le-Blanc" Buff = *Falco gallicus* Gm.

Tarsus reticulated; head with a short crest as in *Dryotriorchis*; wings long; size large, length 25-32 in.

†*214. *Circaëtus gallicus* (Gmel.), S.N., i., p. 259 (1788). [*France.*] Short-toed Eagle. — S. Europe N. to France, Germany, C. Russia; N. Africa (Marocco to Egypt), C. Asia to India and N. China.

Wing ♂ 500-530, ♀ 540-560 mm.; above dark brown, with a purplish gloss, head and wing-coverts paler; forehead and face whitish, with lines of black; secondaries barred with darker brown and with broad subterminal band; quills black; tail tipped with white and with 3 blackish bands; below white, throat and chest heavily striped and flanks and abdomen barred with brown; juv. below pale earthy brown, abdomen white, spotted and barred with brown; tail with 4 darker bands.

215. *Circaëtus pectoralis*[1] Smith, S. Afr. Q.J., Ser. 1, 1830, p. 109. [*S. Africa.*] Black-breasted Snake-Eagle. — S. Africa to to E. Tropical Africa and Abyssinia.

Wing ♀ 563-570 mm.; above brownish black; secondaries and wing-coverts barred

[1] *Circaëtus rufulus* Reichenow, Orn. M.B., xiii., pp. 179-80 (1905). [*Songea, Tanganyika Territory*] appears to be based on an immature bird. Mr. W. Sclater thinks it is referrable to this species.

with ashy grey ; upper tail-coverts tipped and barred with white ; tail ashy brown with 4 blackish bands ; chest blackish ; throat white, streaked with blackish ; below white ; juv. tawny below.

*216. *Circaëtus cinereus* Vieill., N.D., xxiii., p. 445 (1818). [*Senegal*, type in Paris Mus.]
Black-bellied Snake-Eagle.

E. & W. Tropical Africa from Senegal and Sudan S. to Cape Colony.

Size nearly the same ; wing ♀ 558 mm. ; bill much deeper, upper mandible from ridge to gonys, measured through anterior edge of nostril, 23 mm. as against 19 mm. in *C. pectoralis* ; tarsi also much stouter ; whole under parts uniform blackish brown ; immature brown below with white markings, not white with brown markings as in *C. pectoralis*.

217. *Circaëtus beaudouini* Verr. et Des Murs, Ibis, 1862, p. 212, pl. vii. [*Bissao, Portug. Guinea*, type in Norw. Mus.]
Beaudouin's Snake-Eagle.

Portuguese Guinea, Senegambia, Kordofan.

Size nearly the same ; wing ♀ 520 mm. ; above paler ; throat and chest ashy brown, the throat varied with white bases to the feathers ; below white broadly banded with ashy brown.

218. *Circaëtus fasciolatus* Gray, Cat. Acciptr. B.M., p. 18 (1848) (*nom. nud.*) ; Gurney, Ibis 1861, p. 130. [*Natal*, type in Brit. Mus.]
Banded Snake-Eagle.

Natal, N. to Tanganyika Territory.

Smaller ; wing ad. 370 mm. ; above blackish, browner on head, with pale whitish margins to all the feathers, including wing

quills, which are barred with blackish, the secondaries also with broad subterminal band ; tail ashy brown, tipped with white, and with 4 black bands ; throat and chest fulvous brown ; below white, barred with dark brown.

219. *Circaëtus cinerascens* J. V. von Müll., Naum. 1851, heft iv., p. 27. [*Sennar, Egypt. Sudan.*]
Cinereous Snake-Eagle.

Tropical Africa from Sudan and Portug. Guinea to the Zambesi.

Size similar, wing ♂ 380, ♀ 407 mm. ; above grey ; tail whitish, shaded and tipped with pale brown, and with broad blackish subterminal band and 2 narrower bands near base ; below ashy brown, shaded with grey, the abdomen and thighs barred with white.

Gen. LXI. SPILORNIS Gray (1840).

Type by orig. desig. *Falco bacha* Daud. [err.] = *S. cheela malayensis* Swann.

Crest feathers of head rounded, not lanceolate ; face bare with only a few short bristles ; size variable, length 30 in. to 18 in.

*220. *Spilornis cheela cheela* (Lath.), Ind. Orn., i., p. 14 (1790). [" *India* " = Lucknow, *apud* W. L. Sclat.]
Crested Serpent Eagle.

Himalayas (Kashmir to Nepal) ; in winter to N. India.

Wing ♀ (Himalayas), 495-532, ♂ 500-510 mm. ; wings reaching beyond median pale band on tail ; above purplish brown ; head and crest black with white bases ; wing-coverts with small spots of white ; secondaries broadly and upper tail-coverts narrowly tipped with white ; tail black with very broad median band of brownish

white ; throat, hind cheeks and ear-coverts blackish brown ; below pale ochraceous brown ; chest with transverse vermiculations of dark brown ; breast and belly with spots of white (bordered with dark brown), becoming bars on thighs and under tail-coverts ; under wing-coverts pale rufous ; ourer primaries white below with terminal black band about 100 mm. wide and one median blackish band, also slight remains of second band near base.

†*220a. *Spilornis cheela albidus* (Temm.), Pl. Col., i., livr. iv., pl. 19 (1824). [Ex Cuv., *Pondicherry*, type in Paris Mus.]
Lesser Serpent-Eagle.

E., C. & S. India, from Assam to Travancore.

Smaller, tarsi more slender and feet smaller; wing ♂ (S. India) 405 mm. ; (Centr. Prov.) 436 mm. ; (Assam) 430-443 mm. ; wing ♀ (Assam) 430 mm. ; (Centr. Prov.) 462-474 mm. ; above darker ; throat less blackish, much browner, but with blackish shaft stripes ; much darker below ; chest darker and warmer brown, uniform in oldest birds[1] ; white spots below similar ; tail more often with median pale band nearer apical end and narrower, with remains of a second basal one, the terminal black band about 50 mm. wide ; primaries below

[1] Vermiculated in less old birds, which are much lighter below. In considering this difficult group it should always be remembered that these birds certainly darken with age. Temminck described *albidus* from a quite juvenile bird, buffish white below with streaks and spots of dark brown. The dark uniform chest is a sign of age like the single pale tail band, but the typical *S. c. cheela* is a pale race and does not *usually* acquire the uniform chest ; although it always gets the single tail band. As we get away from the typical race these characters vary, *albidus generally* getting the uniform chest, but not often being found with the purely black tail and single band. The northern forms are the largest and the southern smallest and more variable in the characters mentioned ; also often, but not always, the darkest. The moult is from the pale juvenile plumage straight into the brown under parts with vermiculated chest and white spotted under parts, although the brown comes out in the form of bars towards the vent gradually dividing the white interspaces first into partial bars and then rounding them off into spots. The vermiculations in some forms are lost later as the chest darkens and becomes uniform.

usually showing 2 distinct black median bands, the terminal one narrower and often broken ; under wing-coverts rufous brown spotted with white, the greater ones ashy.

*220b. *Spilornis cheela spilogaster* (Blyth), Jnl. As. Soc. Beng., xxi., p. 351 (1852). [*Ceylon.*] Ceylon Serpent-Eagle. — Ceylon.

Slightly smaller, and wings shorter ; wing ♂ 370-375 mm. ; throat and cheeks and ear-coverts ashy brown ; tail as in *S. c. albidus* ; chest and upper breast always uniform darker brown in adults ; primaries below with only one blackish median band.

*220c. *Spilornis cheela burmanicus* Swann, Syn. List. Accipitr., p. 81 (1920). [*Jobin, Thayetmyo, Burma*, type in coll. H. Kirke Swann ; and examples in coll. Brit. Mus.] Burmese Serpent-Eagle. — Burma, N. to Upper Burma and Shan States S. to Tavoy, at least, in Tenasserim ; Siam (Gyldenstolpe)

Wing ♂ 430-455, ♀ 436-462 mm. ; larger and much paler above and below ; with the hind cheeks and ear-coverts ashy ; throat as pale as chest, but tinged with ashy and, like chest, finely vermiculated ; white spots below rounded and less distinct, the darker margins much paler ; primaries below as in *S. c. cheela*, but black terminal band not more than 75 mm. wide ; under wing-coverts rufous with white spots, the outer edge white.

220d. *Spilornis cheela rutherfordi* Swinh., Ibis, 1870, p. 85. [*Central Hainan.*] Hainan Serpent-Eagle. — Hainan I. ; French Indo China.

Smaller ; wing (ex. from Hainan, Tring Mus.) 405-430, ♀ 393-411 mm. ; throat slaty brown to dusky.

220e. *Spilornis cheela floweri* Swann, Syn. List Accipitr., p. 81 (1920). [*Tahkaman, Siam,* type in Brit. Mus.] Siamese Serpent-Eagle. — Siam.

Wing (ad. unsexed) 411-424 mm.; much paler above and below; wings strongly shaded with grey; sides of head slate grey; throat uniform with chest which is pale ashy brown, slightly vermiculated; *chest also sparingly spotted with white* like lower parts; tail brownish black, with brownish white median band and remains of a basal one; primaries with one black median band below, besides terminal one; under wing-coverts rufous, with white spots, outer edges white.

220f. *Spilornis cheela ricketti* W. Sclat., Bull. B.O.C., xl., p. 37 (1919). [*Yamakan, Fokien Prov.,* type in Brit. Mus. coll.] Chinese Serpent-Eagle. — S. China to Upper Burma (Chindwin dist.)

" Resembling *S. c. cheela,* but with upper parts somewhat paler ashy brown, with a purplish gloss, below dusty ashy; transverse banding on breast indistinct, often not noticeable; throat never black, but like the breast, cheeks and ear-coverts grey, not black; slightly smaller wings, measuring from 430 to 470 mm."—W. Sclat.

220g. *Spilornis cheela hoya* Swinhoe, Ibis, 1866, p. 304. [*Formosa.*] Formosan Serpent-Eagle. — Formosa.

Nearly as large as *S. cheela cheela,* wing 470-481 mm.; darker above and below; tail with the central pale band narrower; throat and ear-coverts blackish brown; chest nearly uniform brown, but showing

vermiculations in some (less old) birds; below darker and more cinnamon brown; wing coverts darker and browner; primaries below with black areas much increased and little white.

*220h. *Spilornis cheela malayensis*[1] Swann, Syn. List. Accipitr., p. 83 (1920). [*Raub, Pahang*, type in coll. H. Kirke Swann.] [=*S. bacha*, auct. plur.] Malayan Serpent-Eagle.

Malay Peninsula; Sumatra; Siam.[2]

Smaller; wing (Brit. Mus. ex.) ♂ 348-380 mm. (northern largest), ♀ 368-380 mm.; ♀ (type Pahang) 370 mm.; above dark brown; head and crest black, wing-coverts sparingly marked with minute spots of white; secondaries not visibly tipped with white; tail with median brownish white band about 50 mm. wide and irregular narrow basal one [in oldest birds base only brownish], the 2 black bands about 38 mm. wide; throat and cheeks and ear-coverts slate brown[3]; below darker, browner and duller than *S. c. rutherfordi*; fore neck and chest nearly uniform with only slight traces of vermiculations; white spots on breast

[1] The name *bacha* cannot stand for Malayan birds It was described from Le Vaillant who claimed it as a S. African bird erroneously and it is now impossible to say to what race it properly applies. Gurney thought Le Vaillant's plate more like the Malaccan bird, but considered the name would be best discarded (*Ibis*, 1878, p. 100); W. Sclater (MS.) considers Sumatra the type locality based on Le Vaillant's plate. In any case *bacha* is predated by *bassus* Forster (1798), an equally doubtful name.

[2] Count Gyldenstolpe (*Ibis*, 1920, p. 745) says this form has been recorded from peninsular and S.W. Siam, but is rare.

[3] Malacca birds usually have the subterminal tail band whiter, throat and hind cheeks greyer, and are lighter below; chest fulvous to brown, either uniform or slightly vermiculated (less old birds). Although examples from various parts of the Malayan peninsula vary I think it best to make one race for the whole peninsula, and I have united with it the Sumatran birds, which occur not only in the lighter plumage described, but in a much darker plumage, approaching the Javan form (*S. c. bido*), although a trifle smaller and with the throat paler and greyer; the tail, under wing-coverts and under surface of primaries are similar to those of *S. c. bido* however. Had it not been for the occurrence of this dark race in Perak and of the lighter Malay race in Sumatra it would be necessary to separate the Sumatran form.

and abdomen broader, larger and more regular, in the form of remains of transverse bars; under wing-covert rufous brown, with very large spots of white, edge of wing white; primaries below with the median black markings concentric on inner webs instead of forming bands, the terminal black and subterminal white bands about 58 mm. wide.

220i. *Spilornis cheela bido* Horsf., Tr. Linn. Soc., xiii., p. 137 (1822). [*Java*, type in Brit. Mus.] Java.
Javan Serpent-Eagle.

Slightly larger; wing ♀ 392 mm.; darker generally (clove brown); wing-coverts heavily spotted with white, secondaries scarcely tipped; tail black with one broad pale median band, the base dark brown; throat, cheeks and ear-coverts blackish; chest uniform clove brown, without vermiculations; under wing-coverts usually blackish slate with white spots; white spots below irregular and only forming bars on under tail-coverts; primaries below with 2 black bands besides terminal one, coalescing on inner primaries, the white areas much reduced.

220k. *Spilornis cheela baweanus* Oberholser, Pr. U.S. Nat. Mus., lii., p. 185 (1917). [*Bawean I.*, type in U.S. Nat. Mus.] Bawean I., N. of Java.

Smaller than *S. c. malayensis*; wing ♀ 342 mm.; white tail band narrower (30 mm.), wide basal one brown; primaries with 3 regular bands of black below, the subterminal white band 30 mm. wide and ter-

minal black band 60 mm. wide ; throat and chest uniform brown ; below dark brown, with rounded spots of white ; under wing-coverts dark brown with white spots.

220l. *Spilornis cheela kinabaluensis* W. Sclat., Bull. B.O.C., xl., p. 37 (1919). [*Mt. Kinabalu*, type in Brit. Mus.] — Borneo (Mts. Kinabalu & Dulit).

Wing 370 mm. ; " resembling *S. c. bido* of Java, but with more white on underside of wing quills and the black not so well defined ; a rich umber brown nape band, formed by tips of black crest feathers on lower edge of crest having conspicuous tips of that colour ; tail band broader and purer white, not merely pale brown as in *S. c. bido* ; throat quite black."—W. Sclat.

220m. *Spilornis cheela pallidus* Walden, Ibis, 1872, p. 363. [*Sarawak*, type in Brit. Mus.] Sarawak Serpent-Eagle. — Borneo (low country, Sarawak to Sandakan) ; Siam.[1]

Smaller ; wing ♂ 355 mm. ; much paler brown above, especially on wing-coverts, but bastard wing conspicuously black ; head and crest jet black, mottled with white bases ; tail black, with median band brownish white ; upper wing-coverts with spots of white ; under wing-coverts rufous spotted with white ; cheeks, ear-coverts, chin and throat grey ; chest uniform brown ; primaries below with white subterminal band about 75 mm. wide ; below tawny with white spots.

[1] Count Gyldenstolpe (*Ibis*, 1920, p. 745), who clearly recognises the forms of *Spilornis* occurring in Siam, states that *pallidus* has been obtained at Kan Kok Klap peninsula, Siam, and on the island of Koh Samui, but I have not seen specimens.

220n. *Spilornis cheela richmondi* subsp. nov. [♂ (?) *Kendawangan R., S.W. Borneo*, Dr. W. L. Abbott, ca. Aug. 1908, type in U.S. Nat. Mus., No. 181625.] S.W. Borneo.
Richmond's Serpent-Eagle.

Wing ♂ (type) 330, tail 230; wing ♀ 340 mm.; smaller than *S.c. pallidus*, but similar in colouration, except that under parts are darker and browner, the median tail band narrower (30-35 mm.), and primaries below with more black, the subterminal white band only 40-45 mm. wide; lesser wing-coverts above black with white spots; bastard wing black.

220o. *Spilornis cheela perplexus* subsp. nov. [♂ *Triomate, Yayeyema, S. Loo Choo Is.*, June 16, in coll. Tring Mus.] [=*S. pallidus* Ogawa, Annot. Zool. Japon., v. 4, p. 213, 1905; *S. cheela* subsp. (?) Swann Syn. List Accipitr. p. 84 (1920). Loo Choo Is., S. of Japan.
Loo Choo Serpent-Eagle.

Larger; wing ♂ 360 mm.; similar to *S. c. salvadorii*, but larger and very pale below; much paler than *S. c. pallidus* of Borneo. (Only type seen).

220p. *Spilornis cheela salvadorii* Berl., Nov. Zool., ii., p. 73 (1895). [*Nias Is*, co-type in Tring Mus.] Nias I. (W. Sumatra; Bunguran or Great Natuna I., N.W. Borneo.
Salvadori's Serpent Eagle.

Smaller and much paler (especially on wing-coverts) than *S. c. pallidus*; tail shorter and light band usually narrower; wing ♂ 290-294, ♀ 303, tail 190 mm.; chest uniform light drab; below as in *minimus*; head and bands on wings and tail black, not brownish as in *S. c. minimus*.

220q. *Spilornis cheela davisoni* Hume, Stray Feath., i., p. 307 (1873). [*S. Andaman I.*, type in Brit. Mus.]
Andaman Serpent-Eagle.

Andaman Islands.

Larger; wing ♀ 385-410 mm.; throat ashy; chest pale ashy brown finely vermiculated; below tawny, the white spots rounded, becoming bars on thighs; tail with the pale band, but a distinct basal one brown.

220r. *Spilornis cheela palawanensis* W. Sclat., Bull. B.O.C., xl., p. 38 (1919). [♀ *Palawan*, type in Brit. Mus.]
Palawan Serpent-Eagle.

Palawan I. (Philippines), Balabac I.

Wing 380-410 mm. " Perhaps closest to the Andaman race (*S. c. davisoni*) but distinguished by the richness of its colouring and its breast being marked with narrow transverse bands of dusky and rufous brown—these bands often extending on to the throat. . . . The spots on lower breast and abdomen are large, conspicuous, and white."

221. *Spilornis minimus* Hume, Stray Feath., i., p. 464 (1873). [*Kamorta, Nicobar Is.*, type in Brit. Mus.]
Nicobar Serpent-Eagle.

Nicobar Is. (Kamorta, Trinkut, Katchal, Little Nicobar).

Very small and pale form; wing ♂ 288-291 ♀ 295-300 mm.; head and crest (shorter) brownish black with paler edgings; tail with the terminal and median bands dusky brown instead of black, the subterminal and basal bands light brown; throat and chest pale fulvous brown without vermiculations; bands on primaries below as well as tips dusky brown instead of black.

222. *Spilornis klossi* Richm., Pr. U.S. N. Mus., xxv., p. 304 (1902). [*Gt. Nicobar I.*] Kloss's Serpent-Eagle. — Great Nicobar Island.

Wing ♂ 258-260, ♀ 263-275 mm.; above paler drab colour, with a slight coppery sheen; ear-coverts and cheeks pale grey; some of wing-feathers with narrow white tips and top of head and occipital feathers black; tail with 2 light bars, the terminal dark band blacker; throat buffy white with indistinct grey median stripe; chest light cinnamon drab, becoming buffish white below, unspotted, or occasionally with faint obsolete spots.

223. *Spilornis elgini* (Tytler and Blyth), J. As. Soc. Beng., xxxii., p. 87 (1863). [*S. Andaman I.*] Elgin's Serpent Eagle. — Andaman Is. Nicobar Is.

Wing ad. 395 mm.; very dark form; above and below dark clove brown; wing-coverts and wings with minute white spots; tail with subterminal band brown and narrow, the basal one brown but indistinct, the terminal and median bands black; below with white spots distinct, rounded, and continued up to throat.

224. *Spilornis abbotti* Richm., Pr. U.S. N. Mus., xxvi., p. 492 (1903). [*Simalur I.*, type in U.S. Nat. Mus.] Abbott's Serpent-Eagle. — Simalur Island, W. Sumatra.

Wing ♂ 330-345, ♀ 345-362 mm.; above deep clove brown, with a strong purplish shade; head and nape black; hind neck, mantle and scapulars with pale rusty edgings; secondaries tipped with white;

whole tail black with median brownish white band (17-25 mm.); cheeks, throat and chest blackish brown, the latter barred with rufous; below rufous brown with rounded white spots and indistinct black bars; under wing-coverts rufous brown, spotted with white; primaries above and below black, with one greyish median band (20-30 mm. wide).[1]

*225. *Spilornis rufipectus rufipectus* Gould, P.Z.S., 1857, p. 222. [*Macassar*, type in Brit. Mus.] Celebes.
Celebes Serpent-Eagle.

Wing ♂ 335-340, ♀ 345-355 mm.; head black; above purplish brown, upper tail-coverts tipped with white; wing quills with broad subterminal band of purplish brown and banded with dark brown below; tail tipped with white and with broad blackish subterminal band and 2 less distinct ones nearer base, the basal pale bands brown and apical whitish; face and throat slaty black; chest uniform dull rufous; below deeper brown with large spots and bars of white.

225a. *Spilornis rufipectus raja* Sharpe, Bull. B.O.C., i., p. lv. (1893). [*Kuching*, type in Brit. Mus.] Borneo (Sarawak).
Sharpe's Serpent-Eagle.

Smaller; wing (nearly ad.) 309 mm.; more closely banded and spotted below.

[1] One other form of *Spilornis*, *S. asturinus* Meyer (S. B. Nat. Ges., Isis, Dresden, p. 13, 1884, *Palr. ign.*) I do not know the relations or distribution of, and so cannot place it.

225b. *Spilornis rufipectus sulaensis* (Schl.) Vög. Ned., Valkvög., p. 38, pl. 23, figs. 4-6 (1866). [*Sula Is.*, type in Leyd. Mus.]
Sula Serpent-Eagle.

Sula Islands.

Wing ♀ 306, ♂ 309 mm.; rufous of chest paler.

226. *Spilornis holospilus holospilus* (Vigors), P.Z.S., 1831, p. 96. [Near *Manila.*]
Philippine Serpent-Eagle.

Philippine Is. (Luzon, Cebu, Mindanao, Basilan.)

Larger; wing ♀ 341-367 mm.; above pale brown, with a purplish gloss, the feathers irregularly spotted with white at tips; interscapulary region with pale rufous tips and large rounded white spots; head and crest ashy black, spotted with white, and with rufous margins; tail with broad median and subterminal blackish bands; face and throat ashy grey; rest of under parts pale tawny rufous, ocellated with spots and half bars of white.

226a. *Spilornis holospilus panayensis* Steere, List Birds, etc., Philipp., p. 7 (1890). [*Panay, Philipp. Is.*, type in Brit. Mus.]
Steere's Serpent-Eagle.

Philippine Is. (Panay, Guimaras, Negros.)

Wing ♀ 317 mm.; very much paler, especially below, without the rufous shade on breast and belly.

Gen. LXII. TERATHOPIUS Less. (Traité, livr. i., Febr., 1830).
Type by monotypy *Falco ecaudatus* Shaw = *F. ecaudatus* Daud.
[=Helotarsus, auct. plur.]

Head with a crest of rounded feathers; tail extremely short; wings exceeding tip of tail by more than length of tarsus; size large.

*227. *Terathopius ecaudatus* (Daud.), Traité, ii., p. 54 (1800). [*Anteniquoi country, S. Africa.*] Bataleur Eagle.
[*T. leuconotus* (Rüpp.) is a synonym.]

Wing ♀ 545, tail 122 mm.; ♂ wing 532, tail 116 mm.; head and under parts glossy black; hind neck, mantle and tail rich maroon chestnut, lower back paler; scapulars and quills black; wing-coverts pale bronze brown, whitish on shoulder; under wing-coverts white; axillaries black; bill black, feet coral red.

Africa (Cape Colony to Egyptian Sudan and E. Africa; Senegal).

Gen. LXIII. HALIÆËTUS Savigny (1809).
Type *H. nisus* = *Falco albicilla* L.

Size of, and with general characters of *Aquila*, but tarsus not feathered more than half way down; the front scutellated, sides and back reticulated; no membrane between the toes; head not crested, but feathers of neck long and lanceolate; tail with 12 feathers.

†*228. *Haliæëtus albicilla albicilla* (Linn.), S.N., i., p. 89 (1758). ["*Europa, America*"—latter errore—type loc. *Sweden* apud Hartert.]
White-tailed Eagle.

Wing ♂ 600-630, ♀ 650-690 mm.; general plumage brown, with paler greyish margins to many of the feathers above; head and neck much paler, nearly white in very old birds, with ashy brown streaks; quills black, shaded with grey externally; longer upper tail-coverts and tail pure white; bill and feet yellow. Immature: head and neck blackish brown; general plumage fulvous brown, mottled with dark brown; tail brown.

Europe, S. to Mediterranean on E. side; Iceland; Asia Minor, Mesopotamia, N. and E. Asia; in winter S. to India; cas. Alaska?

†228a. *Haliæëtus albicilla groenlandicus* Brehm, Handb. Naturg. Vög. Deutschl., p. 16 (1831). [*Greenland.*]
Greenland White-tailed Eagle.

Larger; wing ♂ 615, ♀ ad. 720 mm. (juv. 685-710 mm.) (cf. Hartert, Vögel d. paläarkt Fauna, p. 1178).

Greenland.

†*229. *Haliæëtus leucocephalus leucocephalus* (Linn.), S.N., ed. xii., i., p. 124 (1766). [ex Catesby—*Carolina.*]
Bald Eagle.

Wing ad. 585-625 mm.; head and neck all round, rump, upper tail-coverts and tail pure white. Immature: head and neck black and tail mingled white and black at first.

Canada and United States, S. to Lower California and N. Mexico.

†229a. *Haliæëtus leucocephalus alascanus* C. H. Townsend, Proc. Biol. Soc. Wash., xi., p. 145 (1897). [*Unalaska*, type in U.S. Nat. Mus.]
Alaskan Bald Eagle.

Rather larger; wing ♂ 625-635, ♀ 600-642 mm.

N.W. Alaska, Bering I., N.W. Mackenzie and N. Ungava S. to Brit. Columbia and Great Lakes.

Gen. LXIV. THALASSOAËTUS Kaup (1844).

Type by monotypy *Aquila pelagica* Pall.

Tail strongly graduated, with 14 feathers, instead of 12; bill larger and more powerful, height greater but variable.

230. *Thalassoaëtus pelagicus pelagicus*[1] (Pall.), Zoogr. Rosso-Asiat., i., p. 343 (1827). [*Islands between Kamtschatka and America*: *Bering I.*]
Steller's Sea-Eagle.

Wing ad. ♂ 560-580, ♀ 600-620 mm. (juv. ♂ 645, juv. ♀ 680 mm.) ; tail ad. ♂ 330-350, ♀ 340-360 (juv ♂ 385, juv., ♀ 390 mm.) ; general plumage blackish brown, with buffy white streaks to head and neck and chest ; wing-coverts, rump, upper and under tail-coverts, tail and thighs white ; immature has these latter parts only mottled with white, and no white on shoulders.

N.E. Siberia, Kamtschatka, Bering I., Sakhalin ; in winter S. to Koreo, Japan, Amur region & Loo Choo Is., also Alaska.

230a. *Thalassoaëtus pelagicus niger* Heude, Naturaliste, 1887, p. 95. [*Korea.*] [= *H. branickii*, Tacz.]
Black Sea-Eagle.

Wing ♂ 550, ♀ 608 mm. ; differs from *T p. pelagicus* in the great height of its bill and also in having only the tail and under tail-coverts pure white ; rest of plumage black, the feathers on crown and neck with a fine central greyish line ; bill and feet orange-yellow.

Korea.

Gen. LXV. CUNCUMA Hodg. (1857).

Type by orig. desig. *Haliaetus albipes* Hodgs. = *Aquila leucorypha* Pall.

Tail of 12 feathers, graduated ; bill weaker, the height much reduced.

[1] *T. macrurus* (Menzb.) from Yakutsk, E. Siberia, is a synonym, based on an immature bird, which appears to me generally to have longer primaries and longer and more graduated tail feathers than in the adult bird.

†*231. *Cuncuma leucogaster* (Gmel.), S.N., i., p. 257 (1788). [ex. Lath.—type loc. *N.S. Wales, apud* Math.]
White-bellied Sea-Eagle.

Wing ♂ 565, ♀ 590 mm. ; entire under parts as well as head and neck, white ; above ashy grey, shaded with brownish ; primaries blackish ; tail black for basal two-thirds, terminal third white. Immature : whole plumage brown with whitish shaft-streaks ; quills and tail barred with darker brown.

Indian Peninsula, Ceylon, Indo-Chinese Provs., S.E. China, Malay Pen. & Archipelago, Australia, Oceania.

†232. *Cuncuma leucorypha* (Pall.), Reise d. v. Prov. Russ. Reichs, i., p. 454 (1771). ["*Iaikum in Australioribus*" = *Lower Ural River, apud* W. L. Sclat.]
Pallas's Sea-Eagle.

Wing ♂ 563-573, ♀ 600-618 mm. ; above dark brown, more tawny on hind neck and sandy on head ; rump purplish brown ; tail white, with base and broad terminal band black ; face and throat buffish white ; below fulvous brown, with pale centres to chest feathers.

S.E. Russia, Asia Minor, Caspian, and Central Asia to Mongolia ; India, Burma ; Malay Pen., Borneo.

*233. *Cuncuma vocifer* (Daud.), Traité, ii., p. 65 (1800). [ex. Levaill.—*Keurboom R., Cape Col.*]
Vociferous Sea-Eagle

Wing ♂ 485-500, ♀ 520-545 mm. ; head, neck, breast, interscapulary region and tail pure white ; least wing-coverts rufous ; primaries black ; rest of surface upper blackish brown, and of lower surface deep chestnut.

Tropical Africa, from Senegal and Sudan, S. to Cape Colony.

234. *Cuncuma vociferoides* (Des Murs), Rev. Zool., 1845, p. 175 *bis*. [*Madagascar*, type in Brit. Mus.]
Madagascar Sea-Eagle.

Madagascar; Mauritius (?).

Size similar; wing ad. 515 mm.; general plumage blackish brown; tail buffy white; feathers of head, hind neck and throat with buffy margins; cheeks and sides of neck white; chest and under parts like upper parts, but with rufous stripes on chest.

Gen. LXVI. POLIOAËTUS Kaup (1850).

Type by subs. desig. (Gray 1855) *Falco ichthyaëtus* Horsf.

Foot resembling that of *Pandion*.

†*235. *Polioaëtus ichthyaëtus* (Horsf.), Tr. Linn. Soc., xiii., p. 136 (1821). [*Java*.]
White-tailed Fishing Eagle.

Indian Peninsula; Ceylon; Burma; Malay Peninsula and Archipelago

Wing ♂ 455, ♀ 518 mm.; above brown, darker on wings, the primaries blackish; head and neck all round ashy grey; tail white, with broad terminal bar of brown; breast brown; belly white; under side of wing leaden brown, with a white spot at base of primaries; feet yellowish white.

*236. *Polioaëtus humilis humilis* (Müll. and Schl.), Verhandel. Nat. Gesch. Zool. Aves, p. 47, pl. 6 (1840). [*Sumatra*].
Malayan Fishing Eagle.

Burma; Malay Peninsula; Sumatra; Borneo; Java; Celebes.

Smaller; wing ♂ 370, ♀ 410 mm.; above ashy brown, back and wings darker; tail pale brown at base, blackish brown subterminally, the tip white; throat, breast and under wing-coverts ashy brown; belly white; feet bluish white.

236a. *Polioaëtus humilis plumbeus* [ex. Hodg. *nom. nud.*] Jerdon, Ibis, 1871, p. 336. [*N.W. Himalayas.*]
Plumbeous Fishing Eagle.

Larger; wing ♂ 420 mm.; tail entirely brown above, with narrow white tips.

Himalayas, from Kashmir to Assam; Upper Burma.

Gen. LXVII. GYPOHIERAX Rüpp. (1855).

Type by orig. desig. *Falco angolensis* Gmel.

Space above and around eye bare, as well as a line on either side of throat; front of tarsus reticulated; claws with a groove below as in *Haliæëtus*; head slightly crested; size moderate (length ♂ 23 in.)

237. *Gypohierax angolensis* (Gmel.), S.N., i., p. 252 (1788). [*Angola.*]
Angola Vulture.

Wing ♂ 435 mm.; general plumage white; scapulars and secondaries black; primaries white with the tips black and outer webs mottled with black; tail black with broad terminal band of white; bare skin of face and feet flesh colour; cere bluish grey.

Tropical W. Africa, Angola to Senegambia; E. Africa.

Gen. LXVIII. HALIASTUR Selby (1840).

Type by subs. desig. (Gray 1841) *Falco indus* Bodd.

Nostrils circular, with bony margin all round; presents affinities both with *Aquilinæ* and *Milvinæ*; size moderate (length ad. 20-22 m.).

†*238. *Haliastur indus indus* (Bodd.), Tabl. Pl. Enlum., p. 25 (1783). [ex. Buff.—*Pondicherry.*]
Brahminy Kite.

Indian Peninsula, Ceylon, Burmese Provs., Siam; S. China.

Wing ad. 369-396 mm. ; tail 190-215 mm. ; head, neck, throat and breast white with distinct blackish brown shaft-stripes, narrowest and blackest in old birds ; rest of plumage maroon chestnut, paler on tail, which is whitish at tip ; primaries brownish black ; bill yellowish, the base blackish ; feet light greenish yellow.

*238a. *Haliastur indus intermedius* Gurney and Blyth, Ibis, 1865, p. 28. [*Java.*] Malay Brahminy Kite.

Indo-Chinese Provinces, Malay Pen., Sunda Is., Philippine Is., Babber I.

Wing ♂ 375-398, ♀ 405-425 mm. ; tail 215 mm. ; the black shaft-streaks on head, hind neck and breast reduced to hair-lines and much less distinct.

†*238b. *Haliastur indus leucosternus* (Gould), P.Z.S., 1837, p. 138. [*Australia = Moreton Bay, Queensl., apud* Math., type in Philad. Acad.] White-headed " Sea-Eagle." [= *H. i. girrenera* (Vieill. et Oud.)]

Australia, New Guinea, Moluccas, Tenimber, Ceram, Aru Is., Celebes,[1] Solomon Is., New Britain.

Size similar ; wing ♂ 360-375, ♀ 387 mm. ; head, neck, interscapulary region and throat and breast snowy white without any sign of black streaks ; rest of plumage bright maroon ; tail with a broad terminal bar of white ; cere and bill pale yellow, latter darker at tip and bluish at base ; feet whitish yellow.

†*239. *Haliastur sphenurus sphenurus* (Vieill.). N. Dict. d'Hist. Nat., xx., p. 564 (1818). ["*Australia*" = *N.S. Wales, apud* Math., type in Paris Mus.] Whistling Eagle.

Australia ; New Guinea.

[1] Celebes examples approach *intermedius*, showing a few faint indications of shaft-lines on chest, but in size agree with *leucosternus*.

Rather larger ; wing 410-420 mm. ; above ashy brown, more rufous on head and darker and more chocolate on scapulars and wing-coverts ; primaries brownish black ; tail greyish-brown ; throat fulvous ; breast dull ochraceous, the feathers bordered with brown and streaked with white ; flanks with black shaft-streaks.

239a. *Haliastur sphenurus johannæ* Brasil, Rev. Franc. d'Orn., Jan. 7, 1916, p. 201 (1916). [*New Caledonia.*]
New Caledonian Whistling Eagle.
[=*H. sphenurus sarasini* Math., Feb. 29, 1916.]

New Caledonia.

Smaller ; wing 370-410 mm. ; " of a much lighter colour, especially on the upper portion of the head, neck and scapulars."—North.

Gen. LXIX. BUTASTUR Hodgs. (1843).

Type by orig. desig. *Buteo teesa* auct. =*Circus teesa* Frankl.

Head not crested ; nostrils oval, with a superior membrane ; size small (length under 20 in.).

†*240. *Butastur teesa* (Frankl.), P.Z.S., 1831, pt. 1, p. 115 (1832). [*India, between Ganges and Nerbudda.*]
White-eyed Buzzard-Hawk.

Baluchistan, Kashmir, Indian Peninsula, Burmese Provinces.

Wing ♂ 297, ♀ 310 mm. ; above pale rufous brown (with darker shaft-stripes), darker on head ; nape mostly white ; wing-coverts paler and varied with white ; tail tipped with buffy white, and with 6 or 7 nearly obsolete blackish bars, the subterminal broadest ; throat yellowish white with a line of black each side and down centre ;

breast pale rufous brown with yellowish white bars ; abdomen nearly uniform buffy white.

241. *Butastur liventer* (Temm.), Pl. Col., i., livr. 74, pl. 438 (1827). [*Java*, type in Leyd. Mus.]
Ashy Buzzard-Hawk.

Size almost similar ; above brownish ashy ; clearer on head, hind neck and wing-coverts ; quills rufous, externally ashy grey, barred with dark brown ; tail rufous with 6 blackish bars ; below ashy, with blackish shaft-stripes and a few whitish bars on flanks.

Indo-Chinese Provinces, Greater Sunda Is., Celebes.

*242. *Butastur indicus* (Gmel.), S.N., i., p. 264 (1788). [ex. Lath.—*Java*.]
Eastern Buzzard-Hawk.

Larger ; wing ♂ 332, ♀ 345 mm. ; above rufous brown, more ashy on head and mantle, and rufous on wings, rump and upper tail-coverts, which latter are barred and tipped with white ; tail with 4 bands of blackish brown ; forehead and throat white, latter with mesial brown stripe ; feathers of hind neck with white bases ; below barred with white and rufous brown.

Ussuri-land, Japan and E. China ; in winter to S. China, Malay Peninsula, Philippine Is., Celebes, Borneo, etc.

243. *Butastur rufipennis* (Sund.), Œfv. Vet. Akad. Förh. Stockh., 1850, p. 131 (1851). [*near Khartoum*, type in Stockh. Mus.]
African Buzzard-Hawk.

E. Africa, (Egypt, Sudan, Abyssinia, Kenya Colony, Tanganyika Territory).

Wing ad. 310 mm. ; above cinereous brown with black shaft-stripes, and rufous margins to the feathers ; head and neck darker ; least wing-coverts and quills rufous ; tail with 3 or 4 blackish bands, except on centre feathers ; throat creamy buff ; below pale rufous, with narrow shaft streaks.

Gen. LXX. KAUPIFALCO Bp. (1854).

Type by monotypy *Falco monogrammicus* Temm.
[=*Asturinula*, auct. plur.]

Size small ; head not crested ; nostrils circular ; tarsi unfeathered, transversely plated in front. Size small.

***244.** *Kaupifalco monogrammicus monogrammicus* (Temm.),Pl. Col., i., livr. 53, pl., 314 (1824). [*Senegal.*]
One-lined Hawk.

Wing ♂ 225, ♀ 240 mm. ; above slate grey, lighter on head ; primaries blackish, tipped with white ; rump black ; longer upper tail-coverts white ; tail black, tipped with white and with a median band of white ; throat white with central stripe of blackish ; chest ashy grey ; below white, finely barred with ashy brown.

Tropical Africa, from Senegal to Cameroon on W., and Sudan to Kilimanjaro on E.

***244a.** *Kaupifalco monogrammicus meridionalis* Hartl., P.Z.S., 1860, p. 109. [*Ambriz, Angola*, type in Brit. Mus.]
Southern One-lined Hawk.

Smaller ; wing ♀ 215 mm. ; bands below much broader and darker, especially on the

S. Africa ; Natal & Damaraland to Angola on W. and to Nyasaland.

thigh feathers; white band on tail much narrower; white of throat more extensive and dark throat stripe narrower.

Sub-Fam. VI. *MILVINÆ*.

Head usually closely feathered; loral bristles scanty or wanting; cere contracted; nostrils oval, oblique, generally closed in with a superior membrane; bill usually rather weak, straight at base, curved from cere to point, the cutting edge at most slightly festooned, but in two or three genera either toothed or serrated; wings usually long, more or less pointed; tail variable; feet small and weak; tarsi feathered for a variable distance.

Gen. LXXI. ELANOIDES Vieill. (1818).

Type by monotypy "Milans de la Caroline et du Paraguay" = *Falco forficatus* L.

Tail very long and deeply forked, outer feather much the longest; wings very long and pointed, but not reaching beyond next outermost pair of tail-feathers.

†245. *Elanoides forficatus forficatus* (Linn.), S.N., i., p. 89 (1758). ["*America*," ex. Catesby = *Carolina*.]
Swallow-tailed Kite.

Wing ♂ 418-447, ♀ 426-435 mm.; head, neck all round, rump and entire under parts snowy white; back, wings and tail glossy black with purplish and green reflections, the former especially on the scapulars and wings; secondaries white on inner webs, except at tips.

N. America, (breeds in S. United States but winters S. of them); Mexico.

*245a. *Elanoides forficatus yetapa* Bonn. et Vieill., Ency. Meth., iii., p. 1205 (1823). [*Paraguay.*]
Southern Swallow-tailed Kite.

Smaller; wing ♂ (Venez. and Colombia) 405-410, ♀ 410-420, ♂ (Paraguay, S. Brazil, Bolivia) 395-445 mm.; outer tail-feathers 320-330 mm. "Differs from N. American specimens in having [reflections on] the scapulars and to a lesser extent interscapulars rich bottle green instead of dark purplish maroon."—CHAPMAN.

Central America (N. to Costa Rica and Brit. Honduras), S. America (Colombia and Venezuela, S. to Paraguay, S. Brazil, Bolivia).[1]

Gen. LXXII. CHELICTINIA Lesson (1843).

Type by monotypy *Elanoides riocouri* Vieill.
[= *Nauclerus* Vig.]

Tail much shorter; wings long, but not greatly exceeding length of tail. Size small (length 14.50 in.).

246. *Chelictinia riocouri* (Vieill. et Oud.), Gal. Ois., i., p. 43, pl. 16 (1823). [*Senegal*, type in Brit. Mus.]
Cinereous Kite.

Wing ad. 252, tail 198 mm.; above cinereous, darker on interscapulary region; wing and tail quills ashy grey, the secondaries white at tips; forehead and indistinct eyebrow whitish; cheeks and under parts pure white.

N.E. Africa; W. Africa (Senegambia to Hausaland), to Kordofan, Nile Valley and Shoa.

[1] Mr. W. Sclater (MS.) thinks the southern examples are "more dull and neutral," and that the northern ones are therefore separable. The latter form a resident race in Venezuela, Colombia, etc., and have no connection with North American birds. As is the case with so many other species the tropical zone birds are small and resident, and the temperate North American and S. American races larger and migratory. It does not, however, seem possible to separate the S. American races from one another.

Gen. LXXIII. MILVUS Lacep. (1799).

Type by tautonomy *Falco milvus* L.

Tail forked, but difference between longest and shortest feather less than difference between tips of primaries and tips of secondaries. Size moderate (length 24-25 mm.)

†247. *Milvus milvus milvus* (Linn.), S.N., i., p. 89 (1758). [*Europe, Asia, Africa*—type loc. *S. Sweden, apud* Hartert.]
Common Kite.

Wing ad. 480-525, tail 350-380 mm.; plumage above brown with rufous margins, the wing-coverts paler; primaries black; rump dark brown; upper tail-coverts rufous; tail rufous, tipped with fulvous, the outer feathers partly barred with dark brown on inner webs; head, face and throat whitish streaked with dark brown; chest pale rufous, with dark central streaks and paler edges; below bright rufous, with dark central streaks; bill horn colour; cere and feet yellow.

Europe, breeding from S. Sweden, S. to Spain, also Marocco, Algeria Tunisia, Asia Minor, Canary Is.; in Brit. Is. confined now to Wales.

247a. *Milvus milvus fasciicauda* Hart., Bull. B.O.C., p. 89 (1914). [♂ *Santo Antao*, Cape Verd Is., in Tring Mus.]
Cape Verd Kite.

Wing ♂ 445-460, ♀ 475-490 mm.; tail 285-320 mm.; tail less forked, depth of fork only about half as great; all the feathers, including central pair, barred.

Cape Verd Is. (resident).

†*248. *Milvus migrans migrans* (Bodd.), Tabl. Pl. Enl., p. 28 (1783). [ex. Daub., pl. 472 Buffon, etc., type loc. *France, apud* Hart.]
Black Kite.

Wing ♂ 430-440, ♀ 460-475; tail ♂ 260, ♀ 270 mm.; above dark brown, much paler and greyer on head and hind neck and throat, which are much streaked with dark

E., C. & S. Europe, N. to Finland, S. to Mediterranean and N.W. Africa; Asia Minor, Persia, C. Asia; cas. Brit. Is.

brown ; tail with very indistinct darker bars ; below dull rufous brown, brighter on abdomen, with blackish shaft-lines ; cere orange, bill black, feet yellow.

†248a. *Milvus migrans ægyptius* (Gmel.), S.N., i., p. 261 (1788). [*Egypt.*]
Yellow-billed Kite.

N. & E. Africa, Palestine, Arabia ; cas. in S.E. Europe.

Size nearly the same ; wing ♂ 430, ♀ 450-460, tail ♀ 290 mm. ; tail more rufous brown, with 7 or 8 more distinct blackish bands ; head and hind neck browner ; ear-coverts darker ; below rather more rufous, especially on abdomen, thighs and under wing- and tail-coverts ; bill, as well as cere and feet, bright yellow. Immature birds have bill blackish.

†248b. *Milvus migrans arabicus* subsp. nov. [♂ *Lahy, S. Arabia,* Aug. 25th, 1899, W. Dodson coll., type in Tring Mus.]
Arabian Kite.

S. Arabia ; Erythræa (?) Brit. Somaliland (?)[1]

Smaller ; wing ♂ (Arabia) 400-418, tail 254 mm. ; paler than *M. m. ægyptius* and more resembling *M. m. govinda* ; head and hind neck more rufescent as in latter form ; tail with about 8 obsolete darker bands ; below with broad tawny fulvous centres to the feathers, black shaft-lines and darker brownish edges ; bill generally slate to blackish, seldom yellow ; cere and feet yellow. Immature birds have stripes below as pale and conspicuous as in *M. m. govinda.*

[1] Mr. W. Sclater (MS.), following Dr. Hartert, thinks the birds from these districts are intermediate between *M. m. ægyptius* and *M. m. parasitus.* I, however, regard the Arabian birds at least as clearly intermediate between *M. m. ægyptius* and *M. m. govinda.* The S. Arabian kites form a distinct colony of very small birds, but whether the birds from Erythræa and Brit. Somaliland can be fairly linked with them is a matter for consideration.

*248c. *Milvus migrans parasitus* (Daud.), Traité ii., p. 150 (1800). [Ex Levaill.—*South Africa*] Parasitic Kite.

Slightly smaller ; wing ♂ 415-425, ♀ 425-450 mm. ; less rufous, more cinnamon-brown below, with indistinct black shaft-lines ; tail with fairly distinct darker bars ; bill yellow.

Africa, S. of Sahara to Cape Colony ; Madagascar, Comoro Is. (?)

†248d. *Milvus migrans govinda* Sykes, P.Z.S., 1832, p. 81. [*Deccan*, type in Brit. Mus.] Indian Kite.

Larger ; wing ♂ 430-450, ♀ 460-480 mm. ; head and hind neck slightly rufescent, with distinct central stripes of black ; scapulars and wing-coverts edged with buff ; tail distinctly barred with blackish ; below dull rufous brown ; the breast feathers with pale fulvous stripes next the dark shaft-streaks ; vent and under tail-coverts more buffish ; cere and feet yellow, bill blackish.

India ; Ceylon ; Burma ; Malay Penins., Siam ; Russian Turkestan (?) (Laubmann) ; Cochin China, Formosa, Hainan (?).

248e. *Milvus migrans affinis* Gould, P.Z.S., 1837, p. 140 (1838). [*Australia* = New S. Wales, *apud* Math.] Allied Kite.

Rather smaller ; wing ad. 420 mm. ; above blackish brown, paler on wing-coverts, with blackish shaft-stripes ; tail dark brown, with remains of dark bars on centre feathers ; head and hind neck pale brown, washed with rufous and with blackish shaft-streaks ; below dull rufous brown, more dusky on chest and flanks, with distinct black shaft-streaks ; cere and feet yellow, bill blackish.

Australia, New Guinea, Celebes, Timor, Lesser Sunda Is.

†249. *Milvus lineatus* (Gray) in Hardw. Ill. Ind. Zool., i., p. 1, pl. 18 (1832). [*China.*] [=*M. melanotis*, auct. plur.]
Black-eared Kite.

Larger; wing ♂ 475-485, ♀ 500-530, tail 300-335 mm.; above dark chocolate brown; head, hind neck and wing-coverts more rufous and with black shaft-streaks; tail paler brown, more rufous on central feathers and barred with darker brown; lores, forehead and cheeks white with black shaft-lines; ear-coverts brownish black; below deep rufous brown, with broad black central stripes, especially on chest; cere and feet greenish yellow; bill black.

Japan, N. China Mongolia, to Cent. Asia and Himalayas, W. to Ural; in winter S. to Burma, N. India and Hainan.

Gen. LXXIV. LOPHOICTINIA Kaup (1847).

Type by monotypy *Milvus isurus* Gould.

Head crested; bill moderate, the tip not prolonged; tail even; size moderate (length 19 mm.).

250. *Lophoictinia isura* (Gould), Syn. Bds. Austr., pt. iii., pl. 47 (1838). [*New S. Wales.*]
Square-tailed Kite.

Wing ♂ 455-465, ♀ 470-480 mm.; above blackish brown, wing-coverts paler and edges slightly rufous; quills and tail dark brown, externally greyish, banded with black, the subterminal tail band very broad, the 5 other other bands narrow and incomplete; head dull rufous, and forehead, cheeks and throat whitish, with black centre streaks; below rufous; chest with broad black centres to all the feathers, becoming narrow shaft-streaks below; cere and feet greyish white; tip of bill blackish.

Australia, E. and W.

Gen. LXXV. ROSTRHAMUS Less. (1830).

Type by monotypy *R. niger* Less. =*Herpetotheres sociabilis* Vieill.

Head not crested; bill long and slender, the upper mandible hooked, the cutting edges not festooned; nostrils narrow ovals, horizontal; tail about half as long as wing, nearly even. Size moderate.

251. *Rostrhamus sociabilis sociabilis* (Vieill.), N.D., xviii., p. 318 (1817). [*S. America*: *Corrientes et Rio de la Plata.*] Southern Everglade Kite. [=*R. leucopygus* (Spix.)]. S. America from Argentina and Peru to Colombia.

Wing ad. 325-345 mm.; entirely slaty black, with a brownish shade on wings; base of tail and upper and under coverts white; rest of tail black, with subterminal and subbasal brown borders, the tips white; bill black; cere and feet yellow.

†251a. *Rostrhamus sociabilis plumbeus* Ridgway, in Baird, Brewer & Ridgway, Hist. N. Amer. Birds, iii., p. 209 (1874). [*Everglades, Florida.*] Northern Everglade Kite. Florida, Cuba, E. Mexico Central America.

Larger; wing ad. 348-368 mm.; above paler; head and throat more plumbeous; vent paler, more brownish.

Gen. LXXVI. HELICOLESTES Bangs & Penard (Bull. M.C.Z., lxii., p. 38, 1918).

Type by orig. desig. *Falco hamatus* Illig.

Bill longer and more slender; upper mandible hooked almost to a sickle shape.

252. *Helicolestes hamatus* (Illiger) in Temm., Pl. Col., i., livr. 2, pl. 61, 231 (June, 1821). [*Brazil*, type in Leyden Mus.] Slender-billed Kite. [*R. tæniurus* Cab. =juv.] N. Brazil, Colombia, Dutch Guiana.

Wing ad. 296 mm.; general colour lead grey, the primaries blackish; tail black in adult, in younger birds with 2 or more bands of white; cere, lores, gape and feet orange yellow; bill black; iris red.

Gen. LXXVII. CHONDROHIERAX Less. (1843).

Type by monotypy *Dædalion erythropus* Less. = *Falco uncinatus* Illiger.
[= *Regerhinus* Kaup.]

Tail rounded, outer feather shorter than middle one; loral space bare; upper mandible without a tooth. Size moderate, length under 18 in.

*253. *Chondohierax uncinatus* (Illiger) in Temm., Pl. Col., i., livr. 18, pl. 103, 104, 115 (1824). [*Brazil = Rio Janeiro, apud* Chubb, type in Leyd. Mus.]
Hook-billed Kite.

Guiana, Venezuela, Ecuador, Brazil, Bolivia; Trinidad, Grenada; Centr. Amer. to Yucatan.

Wing ♂ 272-276, ♀ 290, tail 190 mm.; above and below bluish slate, with narrow irregular bars of white below in less mature birds; primaries blackish shaded with slate grey; secondaries whitish below, barred and tipped with black; tail ashy grey with 2 bands of black; under tail-coverts buff; bill black. First mature plumage generally browner, with a rufous collar round hind neck; below banded with tawny rufous and ochraceous buff.

254. *Chondrohierax megarhynchus* (Des Murs), in Casteln., Voy., Ois., p. 9, pl. i. (1855). [*Sarayacu*, type in Paris Mus.]
Large-billed Kite.

E. Peru, Andes of Venezuela; Bolivia.

Larger (wing ♂ 285, ♀ 304-318 mm.) and with a larger bill (culmen 50-64 mm. against 40-43 mm. in typical form.)

255. *Chondrohierax wilsoni* (Cass.), Jnl. Acad. Philad., i., p. 21, pl. 7 (1847). [*Near Gibara, Cuba,* type in Mus. Phil. Ac. Sc.] Wilson's Kite. — Cuba.

Wing ♂ 244, ♀ 250-262 mm. ; tail 195 mm. ; with the bill of *megarhynchus* (culmen 53 mm.) ; above slate ; tail black with tips and subterminal band ashy grey, and narrow whitish band nearer base ; below banded with slaty brown and white. Older birds are probably slate below and uniform (?). Younger birds are banded with rufous below like *uncinatus* ; tail brown with 5 whitish bands.

Gen. LXXVIII. ODONTRIORCHIS Kaup (Class. Säugeth. u. Vög. 1844).

Type by monotypy *Falco cayennensis* Gmel. = *Falco palliatus* Wied.

The upper mandible with a single more or less pronounced tooth. Size moderate.

256. *Odontriorchis palliatus palliatus* (Wied) in Temm. Pl. Col., i., livr. 35, pl. 204 (1823). [*Brazil,* type loc. subst. *Matto Grosso,* type in Leyden Mus.] [= *Leptodon cayennensis* Gmel. et auct.] Brazilian Kite. — Brazil (Rio Grande do Sul, N. to Bahia and Matto Grosso) ; Bolivia.

Wing ♂ 320-340, ♀ 335-365 mm. ; above slaty black ; upper tail coverts barred and tipped with greyish white ; head and hind neck pale slaty grey ; wing quills black, banded with slate ; tail black with 2 narrow bands of ashy grey (3 in less mature) and tipped with white ; below white ; under wing coverts mingled black and white, the edge of wing pure white ; bill

blackish; feet yellow. Less mature: head and hind neck white, the occiput mottled with blackish brown,

*256a. *Odontriorchis palliatus guianensis* subsp. nov. [♂ *near Paramaribo, Surinam*, June 11, 1905, B. Chunkoo coll., type in Tring Mus.].
Cayenne Kite.

Smaller, wing ♂ 285-295, ♀ 312-322 mm.; above deep black, head and hind neck much darker, blackish slate; upper tail coverts with no visible bars, only concealed spots of white; under wing-coverts jet black, but edges of wing white.

Surinam, Guiana, Trinidad, Venezuela, Colombia, W. Eucador, Brazil (N. of Amazon).

256b. *Odontriorchis palliatus mexicanus* subsp. nov. [♂ *Tampico, Mex.*, June 1888, W. B. Richardson, Reg. No. 89, 4, 4, 46, type in Brit. Mus.]
Mexican Kite.

Wing ♂ 307-315, ♀ 320-340 mm.; head and hind neck slate grey; above more slaty black; under wing coverts black; upper tail coverts barred greyish white.

Mexico and CentralAmerica to Panama.

256c. *Odontriorchis forbesi* sp. nov. [*Pernambuco, Braz.*, W. A. Forbes, 1882, type in Brit. Mus., No. 87, 5, 1, 723.]
Forbes's Kite.

Wing ad. 331, tail 245 mm.; above black; mantle spotted and secondaries broadly tipped with white; wing quills barred with slate; tail black, with very broad ashy white median band (70-80 mm.) and broadly tipped with same; head pale slaty grey, hind neck whiter; below (including under wing-coverts) white.

E. Brazil.

Gen. LXXIX. GYPOICTINIA Kaup (1847).

Type by monotypy *Buteo melanosternon* Gould.

Bill not toothed; head crested; loral space feathered; wings reaching to end of tail; greater part of tarsus bare in front. Size large (length 24 in.).

257. *Gypoictinia melanosterna* (Gould), P.Z.S., 1840, p. 162 (1841). [*N.S. Wales*, type in Mus. Philad. Acad.]
Blackbreasted Kite.

Wing ♂ 445-460, ♀ 465-470, tail 215 mm.; general plumage above blackish, margined with rufous especially on rump; crest and nape tawny rufous with black centres to the feathers; below pale tawny rufous, with black shaft-lines; tail ashy brown above, whitish near base below; primaries white on inner webs. Dark phase [old or melanistic ?] above much blacker; breast black.

Interior of N.S. Wales, S. Australia, W. Australia, Northern Territory.

Gen. LXXX. ELANUS Savigny (1809).

Type by monotypy *E. cæsius* Sav. = *Falco cæruleus* Desf.

Tarsus feathered for nearly two-thirds of its length in front; claws without groove on under surface. Size small (length 12-14 in.); sexes nearly similar in size.

†*258. *Elanus cæruleus cæruleus* (Desf.) Mém. Acad. R. des Sciences, 1787, p. 503, pl. xv. (1789). [*Near Algiers.*]
African Black-winged Kite.

Wing ad. 272-285, tail 130 mm.; above ashy grey, lighter on head; forehead, eyebrow, and face white; feathers round eye black; lesser and median wing-coverts and

Africa, from Mediterranean to the Cape and Madagascar; Palestine, S.W. Asia (?)

a patch on outer edge of wing black ; tail whitish, the 2 centre feathers pale ashy grey ; below silky white ; sides of breast pale silvery grey ; primaries black below up to base usually ; cere and feet yellow ; bill blackish ; iris carmine. Immature browner above and streaked with rufous on chest and flanks.

†*258a. *Elanus cæruleus vociferus* (Latham), Ind. Orn. i., p. 46 (1790). [*India.*] Indian Black-winged Kite. — India, Ceylon, Burma, Yunnan Assam.

Smaller ; wing ♂ 255-260, ♀ 272 mm. ; primaries paler below, dark slate colour, the base more or less whitish.

*258b. *Elanus cæruleus hypoleucus* Gould, P.Z.S., 1859, p. 127. [*Macassar*, type in Norwich Mus.] White-breasted Kite. — Philippine Is., Java, Sumatra, Borneo, Celebes, Sula Is.

Slightly larger ; wing ♀ 293-303, tail 152 mm. ; wing ♂ 297 mm. ; above ashy grey ; primaries slate ; wing-coverts black, the shoulder white on edge ; black patch on outer edge of wing nearly absent ; 2 centre tail-feathers paler grey, rest white ; forepart of head and entire under parts silky white, including under wing-coverts ; wing quills white on basal half below. Immature : head and nape white, streaked with brown ; above browner, with white margins to all the feathers, including wing-coverts and quills.

259. *Elanus notatus* Gould, Syn. Bds. Austr., pt. iv., Appdx. p. 1 (1838). [*New S. Wales.*] Black-shouldered Kite. [=*E. axillaris* (Lath.)]. — Australia (excluding Tasmania).

Size similar ; wing ad. 292-310 mm. ; tail 146-160 mm. ; above paler, more silvery grey ; tail whitish ; primaries darker below nearly blackish ; outer under wing-coverts black, forming a conspicuous patch below ; axillaries white.

*260. *Elanus leucurus leucurus* (Vieill.), N.D., xx., p. 563 [err. 566] (1818). [*Paraguay*, ex Azara.]
Southern White-tailed Kite.

S. America (except extreme S.).

Rather larger, with longer tail ; wing ad. 294-304 mm. ; tail 158-175 mm. ; above darker bluish ash, inner webs of secondaries paler, nearly white ; black shoulder patch above variable, but not generally so large ; black patch below smaller and confined to the outer greater under wing-coverts.

†260a. *Elanus leucurus majusculus* Bangs & Penard, Pr. New Engl. Zool. Cl. vii., p. 46 (1920). [*San Rafael, Cal.*, type in M.C.Z., Harvard]
White-tailed Kite.

Southern United States and Central America.

Larger ; wing ad. 305-322 mm. ; tail 180-185 mm. ; rather darker above, and with usually a larger wing patch.

261. *Elanus scriptus* Gould, P.Z.S., 1842, p. 80. [*S. Australia.*]
Letter-winged Kite.

N.S. Wales, Victoria, S. Australia.

Wing 292 mm. ; above paler, ashy white, with the black patches on wing-coverts and edge of wing ; axillaries as well as under wing-coverts black, except bend of wing which is white.

Gen. LXXXI. GAMPSONYX Vigors (1825).

Type by monotypy *G. swainsoni* Vig.

Wings falling nearly an inch short of end of tail; tail feathers rounded, nearly even; tarsus short, feathered about half way down in front. Size small, length under 10 in.

*262. *Gampsonyx swainsoni swainsoni* Vigors, Zool. Jnl., ii., p. 69 (1825). [*Near Bahia.*] Swainson's Pearl-Kite.

Wing ♂ 142-145, tail 100 mm.; ♀ wing 156 mm.; above leaden black with a brownish shade on back; secondaries broadly tipped with white; tail below much paler; forehead and sides of face orange buff; sides of neck and a collar encircling latter white, below which is an interscapulary patch of vinous red; below white, with small patch of black on each side of upper breast; the thighs pale buffish rufous, as also inner under wing-coverts, but not breast or flanks.

Brazil, S. to Matto Grosso, N. to Amazonia, W. to Paraguay, E. Peru, E. Ecuador.

*262a. *Gampsonyx swainsoni meridensis* Swann, Syn. List Accip., p. 104 (1920). [♂ *Nevada, Mérida,* Nov. 15, 1903, alt. 3,000 metres, in coll. H. Kirke Swann and Mérida and Guiana examples in Tring Mus. and Brit. Mus.]
Northern Pearl-Kite.

Size nearly similar; wing ♂ (Mérida) 152; tail 95 mm.; ♀ wing 159, tail 102 mm.; wing ♂ (Guiana) 150-153 mm.; ♀ wing 159-163 mm.; below with the sides of breast and flanks chestnut rufous [pure white in

Venezuela[1] (S. to Orinoco), British Guiana.

[1] Birds from Margarita Island (Harvard Mus.) are smaller. Wing ♂ 145, ♀ 150 mm., but I do not consider they are separable.

Bahia birds]; thighs darker rufous in Venezuelan birds [but hardly more so in Guianan birds].

262b. *Gampsonyx swainsoni leonæ* Chubb, Bull. B.O.C., xxxix., p. 22 (1918). [*Leon, Nicaragua*, W. B. Richardson, Dec. 1892, type in Brit. Mus.]
Nicaraguan Pearl Kite. — Nicaragua.

" Upper surface darker and more strongly shaded with slaty grey ; forehead and sides of face straw colour instead of orange buff"; wing 158, tail 95 mm.

262c. *Gampsonyx swainsoni magnus* Chubb, Bull. B.O.C., xxxix., p. 21 (1918). [*Amotape, Peru*, July 22, 1899, P. O. Simons, type in Brit. Mus.]
Western Pearl Kite. — W. Peru and W. Ecuador; Bolivia (?)[1]

Largest ; " differing from *G. s. swainsoni* only in the larger wing and tail measurements " ; ♂ wing 177, tail 104 mm. ; ♀ wing 176 mm.

Gen. LXXXII. ICTINIA Vieill. (1816).

Type " Milan Cresserelle " Vieill. = *Milvus cenchris* Vieill. = *Falco plumbeus* Gmel.

Upper mandible with the cutting edge lobed, but without a true tooth ; bill short and deep, and strongly arched, resembling that of *Falco* ; cere short ; tail square ; wings reaching about 1.25 in. beyond end of tail. Size small.

[1] An example in Tring Museum from Prov. of Sara, Bolivia, ♂ has wing measurement of 170 mm. and presumably belongs to this form ; another ♀,, from Calama River, Rio Madeira, has the wing 165 mm., and is intermediate.

*263. *Ictinia plumbea* (Gmel.), S.N., i., p. 283 (1788). [ex. Lath.—*Cayenne.*]
Plumbeous Kite.

Wing ad. 275-318, tail 140-145 mm. ; above leaden black ; wings and tail blacker ; head lighter grey, hind neck a little darker ; primaries pale chestnut on inner webs, conspicuous below ; under parts slate grey ; tail with 3 bars of white on inner webs below, the basal one concealed and sometimes wanting.

S. Amer. to Bolivia, Brazil and Paraguay ; Cent. Amer. to Mexico.

†*264. *Ictinia misisippiensis* (Wils.) Amer. Orn., iii., p. 80, pl. 25, fig. 1 (1811). [*Natchez, Mississippi.*]
Mississippi Kite.

Wing ♂ 266-290, ♀ 278-317 mm. ; above leaden black, paler on secondaries and blacker on primaries and tail, but latter without white bars below ; head, neck, and under parts clear grey ; base of primaries chestnut on inner webs ; bill black, feet orange red.

Southern United States ; S. in winter to Mexico and cas Guatemala.

Gen. LXXXIII. HARPAGUS Vigors (1824).
Type by subs. desig. (Gray 1840) *Falco bidentatus* Lath.

Head not crested ; nostrils oval with central tubercle ; bill with 2 distinct teeth ; tarsus slender with broad transverse scales ; feet small and weak ; wings very short, hardly reaching to middle of tail ; size small.

265. *Hargagus diodon* (Temm.), Pl. Col., i., livr. 34, pl. 198, 1823. [*Brazil.*]
Red-thighed Hawk.

South Brazil (Rio Grande do Sul to Bahia).

Wing ad. 206, tail 153 mm. ; above slaty grey, head darker and wings browner ; tail dark brown, with narrow bands of greyish white ; below pale grey, the throat and under tail-coverts white ; thighs bright ferruginous.

*266. *Harpagus bidentatus bidentatus* (Lath.), Ind. Orn., i., p. 38, 1790. [*Cayenne.*] Double-toothed Hawk.

Size similar ; wing ♀ 200 mm. ; above [oldest dress] much darker, slaty black ; tail with 2 brownish white bands ; throat white, with median black streak ; upper chest greyish, below banded with grey and white ; less old birds have tail browner, with 3 narrow whitish bands and another across upper tail-coverts ; below chestnut rufous, irregularly barred, except on chest, with whitish and indistinct darker bars.

Guiana, Trinidad. Venezuela, Colombia, Peru, E. Bolivia, and W. Matto Grosso.

266a. *Harpagus bidentatus fasciatus* Lawr., Pr. Phil. Acad., 1868, p. 429 (1869). [*Guatemala.*]

Slightly larger, wing ad. 223 mm. ; above browner ; below banded as in less old stage of last form.

Central America (S. Mexico and Guatemala to Panama).

Gen. LXXXIV. BAZA Hodgs. (Jan. 1837).

Type by orig. desig. *B. syama* Hodgs. = *Falco leuphotes* Dumont.

Head with long occipital crest ; loral feathers very compact ; bill with 2 teeth (sometimes appearing as serrations) ; nostrils linear ovals, without tubercles ; 2 outer primaries with inner webs sinuated ; size very small.

*267. *Baza leuphotes* (Dumont), Dict. Sci. Nat. (Levrault) xvii., July 1820, p. 217. [*Pondicherry.*]
Crested Cuckoo-Falcon.

Wing ad. 240-250, tail 145 mm.; crest long; above glossy greenish black, browner on sides of head and throat; secondaries white, except at edges and tips, chestnut subterminally [except in very old birds]; chest white, followed by a band of black across upper breast, more or less mixed with chestnut; lower breast and flanks creamy white, banded with chestnut; vent, thighs, and under wing- and tail-coverts greenish black. Immature: much more chestnut in secondaries and less barred below.

India (sub-Himalayan dist. to S. India and Ceylon); Assam, Burma, Tenasserim; N. Malay Pen.; Siam, Indo-China.[1]

Gen. LXXXV. AVICEDA Swains. (Oct. 1836).

Type by monotypy *A. cuculoides* Swains.

Occipital crest rudimentary or slight; lores less compactly feathered; primaries considerably longer than secondaries. Size moderate.

268. *Aviceda madagascariensis* (Smith), S. Afr. Q. Jnl., ii., p. 285 (1834). [*Madagascar.*]
Madagascar Cuckoo-Falcon.

Wing ♂ 315, tail 203 mm.; ♀ wing 329, tail 228 mm.; general colour brown, darker on mantle, most of the feathers with paler margins, those of head with rufous margins and white bases; crest dark brown; primaries ashy brown, banded with darker brown; tail ashy grey with 3 bands of dark brown; throat with median and mous-

Madagascar

[1] I am unable to recognise *B. leuphotes burmana* W. Sclat. (Bull. B.O.C., xli., p. 32, 1920) as it is founded on a fully adult bird, while the supposed differences of the Indian birds are those of immaturity only.

tachial blackish stripes; below white, upper breast and sides longitudinally marked with rufous brown, lower flanks almost uniform.

269. *Aviceda cuculoides cuculoides* Swains., Bds. W. Africa, i., p. 104, pl. 1 (1836). ["*W. Africa*" = *Senegal* (on label), type in Camb. Univ. Mus.]
W. African Cuckoo-Falcon.

W. Africa (Senegal to Gold Coast, and inland to N. Nigeria and the Niam-Niam country.

Smaller; wing ad. 293 mm.; above ashy brown; head, crest and interscapulary region darker, inclining to slaty black; quills brown above and ashy white below, barred with dark brown on inner webs, the subterminal band broad; upper tail-coverts tipped and barred with white; tail ashy grey, tipped with white, with broad subterminal and 3 other bands of black; throat and chest clear grey; below buffy white, barred with tawny rufous; under wing-coverts uniform tawny rufous.

269a. *Aviceda cuculoides batesi* (Swann), Syn. List Accip., p. 107 (1920). [*River Ja, Cameroon* type in Brit. Mus., Reg. No. 1911. 5.31.60.]
Bates's Cuckoo Falcon.

W. Africa (Cameroon to Aruwhimi R., Upper Congo).

Much darker above, uniform slaty black; throat and chest pale grey, the barrings below confined to upper breast and of a much darker brown colour; belly, flanks, thighs and under tail-coverts pure white, with little trace of buff; under wing-coverts uniform rusty rufous.

269b. *Aviceda cuculoides emini* (Reichenow), J.f.O. 1894, p. 163, footnote. [*S.W. of Albert Nyanza.*]

Equatorial Africa (Ituri dist. of Belgian Congo).

Like *B. c. verreauxi* but with a brown hood ; under wing-coverts paler red brown ; bands of under parts lighter.

*269c. *Aviceda cuculoides verreauxi* Lafr., Rev. Zool., 1846, p. 130. [*Near Port Natal*, type in M.C.Z., Harvard.]
Verreaux's Cuckoo-Falcon.

Slightly larger ; wing ♂ 322 mm. ; above rather dark ashy grey shaded with brown ; crown and crest blacker ; upper tail-coverts ashy grey with brown tips ; chest and throat grey ; below barred with rufous brown and white ; under wing- coverts barred with pale rufous and fulvous ; ♀ browner above and more strongly barred below.

S.E. Africa (Natal to Zambesi and Nyasaland ; also Southern Cape Colony.)

270. *Aviceda jerdoni jerdoni* (Blyth), Jnl. As. Soc. Beng., xi., p. 464 (1842). [*Malacca*, type in Mus. As. Soc. Beng.]
Jerdon's Cuckoo-Falcon.

Wing ♂ 323, ♀ 332 mm. ; culmen 35 mm. ; crown and nape pale fulvous, with blackish central streaks ; nape more tinged with rufous ; crest long, black tipped with white; throat white with distinct central streak of black ; foreneck and chest streaked with pale rufous ; below white, with broad bands of pale rufous ; oldest birds very much darker above and below, the bars below rufous brown, age apparently accounting for the light and dark forms of this species.

E. Himalayas (Sikkim) ; Burmese countries ; Malay Pen.. Sumatra

270a. *Aviceda jerdoni ceylonensis* (Legge), Stray Feath., iv., p. 247 (1876). [*Near Kandy, Ceylon.*]
Ceylon Cuckoo-Falcon.

Ceylon ; S. India (Wynaad cas.).

Slightly smaller; wing ad. 297 mm.; crown black, edged with rufous; crest black, tipped with white; chin and throat buff with broad mesial black streak; chest tawny cinereous, with brownish shaft streaks; below white irregularly banded with pale rufous.

270b. *Aviceda jerdoni borneensis* (Brüggeman) Abhandl. Nat. Ver. Bremen, v., p. 47 (1876) [ex. Schleg.], *nom. nud.*: [*Pontianate, Borneo.*] Sharpe, Ibis, 1893, p. 557. Bornean Cuckoo-Falcon. — Borneo.

Wing ♂ 291, culmen 26 mm.; "sides of face and neck dull rufous; chest white, the feathers edged with rufous and with triangular black centres; under wing-coverts rufous with paler edges; rufous bars on flanks broader and inclining to dark brown."

270c. *Aviceda jerdoni magnirostris* (Gray), List Bds. B.M. Accip., p. 19 (1844, *nom. nud.*); (Kaup), Isis, 1847, p. 343. [ex Gray, *Manila.*] Philippine Cuckoo-Falcon. — Philippine Is. (Luzon and Mindanao).

Wing ad. 311 mm., bill stouter, culmen 38 mm.; above purplish brown; crown and crest black; throat and chest grey, former with broad black central stripe; below white, banded with pale rufous; sides of face greyish, washed with rufous

270d. *Aviceda jerdoni celebensis* (Schleg.) Mus. P.B. Rev. Accipitr., July 1873, p. 135. [*Celebes.*] Rufous-chested Cuckoo-Falcon. [= *A. jerdoni erythrothorax* (Sharpe), [P.Z.S. 1873, p. 625 (Oct., 1873).] — Celebes; Sula Is.

Wing ad. 280-305, culmen 32 mm.; above darker brown; ear-coverts dark cinereous instead of grey; chest rufous; below banded with darker rufous brown.

270e. *Aviceda jerdoni leucopais* (Sharpe), Ibis, 1888, p. 195. [*Palawan I.*, type in Brit. Mus.] — Philippine Is. (Palawan, Romblon and Lemur).

Smaller; wing (imm. ♀) 273 mm.; below white without median black line on throat; breast and abdomen washed with creamy buff, sides and flanks with slight spots of pale tawny buff.

271. *Aviceda subcristata subcristata* (Gould), Syn. Bds. Austral., pt. iii., pl. 46 (1838). [*New S. Wales.*] — Australia (N.S. Wales, Queensland).
Australian Cuckoo-Falcon.

Wing ♂ 325-328, ♀ 334-345 mm.; above brown, slaty black on wings; head, neck, and chest ashy grey; with small occipital crest black; tail ashy brown, with broad subterminal and 3 other black obsolete basal bands; breast buffy white, banded with chestnut brown [blackish in oldest birds]; thighs and under wing and tail-coverts buffy rufous.

271a. *Aviceda subcristata timorlaoensis* (Meyer), Abhandl. Ber. Zool. Mus. Dresden, 1892-3. No. 3, p. 5 (1893). [*Timorlaut.*] — Tenimber Island.
Tenimber Cuckoo-Falcon.

Smaller; wing ♂ 295-306, ♀ 316-325 mm.

271b. *Aviceda subcristata pallida* (Stresemann), Nov. Zool., xx., p. 307 (1913). [*Tual, Kei Is.*, Kühn coll., type in Tring Mus.]

Kei and Goram Is.

Scarcely smaller; wing ♂ 287-295, ♀ 300-313 mm.; fore neck and chest very pale grey; bands on under parts narrower, as also those on under surface of quills.

*271c. *Aviceda subcristata reinwardti* (Müll. & Schl.), Verh. Nat. Gesch. Ned. Aves, p. 35, tab. 5 (1843). ["*Celebes, Borneo,*" errore —type loc. subst. Meyer & Wigles.: *Amboina.*]
Reinwardt's Cuckoo-Falcon.

S. Moluccas (Ceram, Amboina, Buru, Aru Is.,[1] Misol); New Guinea.

Wing ♂ 285-302, ♀ 285-307 mm.; head, neck all round and interscapulary region dark slate grey; chest pale ashy grey; crest blackish; scapulars and inner secondaries chocolate brown; breast and flanks buffy white, with blackish crossbars; vent, under tail-coverts and under wing-coverts orange buff; longer under wing-coverts creamy white.

271d. *Aviceda subcristata megala* (Stresem.), Nov. Zool., xx., p. 307 (1913). [*Fergusson I., D'Entrecasteaux Archip.*]

Fergusson I., Goodenough I

Larger: wing ♂ 300-314, ♀ 322-330.

271e. *Aviceda subcristata gurneyi* (Ramsay), Jnl. Linn. Soc. Zool., xvi., p. 130 (1883). [*Solomon Is.*]
Solomon Islands Cuckoo-Falcon.

Solomon Is. (Bougainville to Guadalcanar).

[1] *B. s. stenozona* Gray, from Aru Is., seems non-separable.

Size almost the same ; under wing-coverts paler isabelline colour.

271f. *Aviceda subcristata bismarcki* (Sharpe), in Gould's Bds. New Guinea, i., pl. 4 (1888). [*Bismarck Archip.*]
Bismarck's Cuckoo-Falcon.

New Britain, New Ireland, New Guinea, Duke of York I. & New Hanover

Slightly larger ; wing ♂ 310-313, ♀ 317-330 mm.

*271g. *Aviceda subcristata rufa* (Schl.), Vög. Ned. Ind. Valkvög., pp. 41, 78 (1866). [*Halmahera*, etc.]
Rufous Cuckoo-Falcon.

N. Molucca Is. (Halmahera, Morotai, Batchian, Ternate, etc.).

Wing ad. 317 mm. ; hind neck much darker grey ; throat and chest light ashy grey, but chest with broad tips of rusty rufous obscuring the grey ; below closely and broadly barred with light rusty rufous ; under tail-coverts buffy rufous.

Gen. LXXXVI. HENICOPERNIS Gray (1859).

Type by orig. desig. *Astur longicauda* Less. = *Falco longicauda* Garnot.

Wings falling much short of end of tail ; tail very long, more than five times length of tarsus ; head slightly crested. Size large.

272. *Henicopernis longicauda* (Garnot), Voy. Coq., Zool., i., p. 588, pl. 10 (1828). [*Dorey, Dutch New Guinea*, type in Paris Mus.]
Long-tailed Kite.

New Guinea, Salawati, Misori I., Waigiou, Aru Is.

Wing ♀ 432, tail 290 mm. ; ♂ wing 360-368 mm. ; above ashy brown, broadly barred with black, except on loser back and rump ;

head and hind neck streaked with blackish and much varied with white ; tail with 5 broad black bands ; below creamy white, with broad streaks of dark brown on throat and breast, narrowing below ; cere and bill bluish white, tip of latter blackish.

273. *Henicopernis infuscata* Gurney, Ibis, 1882, p. 128. [*Blanche Bay, New Britain*, type in Mus. Phil. Acad., co-type in Brit. Mus.] Gurney's Long-tailed Kite. — New Britain.

Wing ♂ 341-355, tail 250 mm. ; much darker ; wing-coverts and upper scapulars dark brown instead of banded with light and dark brown ; secondaries and primaries with 3 pale bands ; tail with 4 blackish brown bands ; below blackish brown with pale edgings, the belly buffish, with dark shaft stripes.

Gen. LXXXVII. MACHÆRHAMPHUS Westerm. (1851).

Type by monotypy *M. alcinus* Westerm.

Head strongly crested ; bill weak and slightly keeled ; loral plumes produced above half the nostril. Size moderate (length 18.5 in.).

274. *Machærhamphus alcinus* Westerm., Bijdr. tot te Dierk., i., pt. 2, p. 29, pl. 12 (1851). [*Malacca*, type in Leyd. Mus.] Malacca Pern. — S. Tenasserim, Malay Penin., Sumatra, Borneo, New Guinea.

Wing 360, tail 198 mm. ; black, with a chocolate brown shade ; a well-defined spot above and below eye white ; throat and centre of chest white ; chin and a broad streak down throat, as well as sides of latter, and a few spots on lower parts black.

275. *Machærhamphus anderssoni anderssoni* (Gurney), P.Z.S., 1865, p. 618 [*Otjimbinque, Damaraland*, type in Norw. Mus.] Anderson's Pern.

Rather smaller ; wing ad. 353, tail 185 mm.; above chocolate brown ; nape with white bases to feathers ; above and below eye a broad white line ; throat white, with dark brown moustachial line each side and a faint central streak ; primaries dark brown, banded with white below ; tail chocolate brown above, banded with pale brown, white below ; upper breast white streaked with dark brown, lower breast and flanks dark brown mottled with white ; bill bluish, black at tip ; feet bluish white.

S.W. Africa, Madagascar, B. E. Africa, Uganda, Brit. Centr. Africa, Cameroon.

275a. *Machærhamphus* [*anderssoni*] *revoili* Oust., Bibl. Hautes Etudes, xxxi., art. 10, p. 2 (1866). [*Somaliland.*]

[Not seen, doubtful form.]

Somaliland.

Gen. LXXXVIII. PERNIS Cuv. (1817).

Type by monotypy *Falco apivorus* L.

Size large ; head usually only slightly crested ; bill stouter ; basal plumes not produced beyond posterior margin of nostril ; wings and tail long ; tarsus short, feathered about half way down.

†276. *Pernis apivorus* (Linn.), S.N., i., p. 91 (1758). [*Europe*—restr. type loc. *Sweden apud* Hart.] Honey Buzzard.

Wing ad. 400-425, tail 275-280 mm. ; plumage variable ; normally above brown, with paler margins and black shaft-stripes ; head ashy grey ; nape mottled with white ; wing quills darker at tips and with 2 basal

Europe, N. to Lapland, S. to Spain, N. Italy and Greece, E. to Ural and Asia Minor ; N. Africa ; in winter to S. Africa ; cas. Canaries.

dark bars, conspicuous on whitish underside ; upper tail-coverts barred and tipped with white ; tail paler brown, tipped with white, and with 3 dark bands ; below white, with brown streaks on throat, large blotches on breast and smaller spots on flanks and abdomen ; ♀ larger and with much less grey on head and more barred below. Immature : head dark brown, rufous on sides and hind neck ; tail more banded ; below rufous brown, with distinct black shaft-streaks ; later under parts become barred with white. Black varieties (nearly uniform sooty brown) occur.

277. *Pernis orientalis* Tacz. Faune Orn. Sib. Or., i., p. 50 (in Mem. Ac. St. Petersb., xxxix., 1891) [*E. Siberia*, type in Warsaw Mus.] Siberian Honey Buzzard.

E. Siberia (Lake Baikal, Ussuri River, Askold I.) ; in winter to S. China.

Larger ; wing ♂ 450, ♀ 475 mm. ; head, nape and band round lower throat black, the nape mottled with white bases to all the feathers.

278. *Pernis cristatus cristatus* (Vieill.), Tabl. Enc. Meth. Orn., p. 1225 (1823). [*Java*, type in Paris Mus.] [=*P. ptilonorhynchus*.] Crested Pern.

Java ; Borneo ; Philippines.

Slightly smaller ; wing (Java) ♂ 437 mm. ; crest of long feathers (77 mm.) ; general colour deep chocolate brown, a little barred with white on belly and thighs ; crown and long crest (77 mm.) black ; sides of head and upper throat grey and scaly-looking ; lower throat black ; tail with very broad central band of pale ashy brown and broad terminal and less broad sub-basal black bands, the base brown mottled with ashy and white. Immature : buffish to white below, with broader shaft-stripes.

†*278a. *Pernis cristatus ruficollis* Less., Traité, p. 76 (1831). [*Bengal*, type in Paris Mus.] [=*P. c. ellioti* Jerd.]
Indian Crested Pern.

Indian Peninsula, Ceylon, Assam Burma (?).

Wing ♂ 380-390, ♀ 405-418 mm.; crest (35-60 mm.) black; crown and sides of head ashy grey; throat striped with black; general colour chocolate brown; tail with broad terminal black band and another narrower one nearer base, the wide interspace and basal band ashy brown; below paler brown with distinct black shaft-stripes. Immature: fawn below with broader shaft-stripes.

279. *Pernis celebensis celebensis* Walden, Tr. Z. S., viii., p. 111 (1872). [*Celebes*, type in Brit. Mus.]
Celebes Pern.

Celebes.

Smaller; wing ad. 372-392 mm., tail 265 mm.; above chocolate brown, the head blackish; feathers of hind neck margined with rufous; lores and feathers round eye grey; throat white, with distinct black shaft-stripes, and black moustachial and central streaks; chest tawny rufous, with broad central streaks of black; below white barred with blackish brown; tail brown with 5 bars of darker brown and remains of other bars on the interspaces, the tip whitish.

279a. *Pernis celebensis steerei* W. Sclat., Bull. B.O.C., xl., p. 41 (1919). [*San Antonio, Negros*, type in Brit. Mus.]
Philippine Pern.

Philippine Is. (Luzon, Samar, Negros, Mindanao, Basilan).

" Resembling *P. c. celebensis*, but with a long crest composed of one or two elongated feathers, usually measuring about 64 mm. and coloured black with white bases ; as a rule, not so richly coloured . . . the transverse banding on belly and under tail-coverts brown and white, not black and white, and black on under wing-coverts also paler."

279b. *Pernis celebensis tweeddalii* Hume, Stray Feathers, ix., p. 446 (1880). [*Singapore.*] Malayan Pern. — Malay Penin., Sumatra, Siam.

Wing ♂ 395, ♀ 420 mm. ; without rufous on head and neck and with less rufous on chest ; intermediate in general characters between *celebensis* and *cristatus*.

A

SYNOPSIS

OF THE

ACCIPITRES

(DIURNAL BIRDS OF PREY)

PART IV.

Sub. Fam. VII. FALCONINÆ.

Bill short, curved from base, with one distinct tooth near end of cutting edge of upper mandible; nostrils usually circular with central tubercle; feet strong; tibia much longer than tarsus; toes long, talons curved and sharp; tarsus short, usually reticulated; wings long and pointed.

Gen. LXXXIX. MICROHIERAX Sharpe (1874).

Type *Falco cærulescens* L.

Nostrils perpendicular ovals, without central tubercle; tarsus covered with broad scales in front and feathered nearly half way down; wings proportionately shorter than in *Falco*. Size very small (length under 6 in.).

*280. *Microhierax cærulescens cærulescens*[1] (Linn.) S.N., i., p. 88 (1758). [ex Edwards— "Asia" = *Bengal.*]
Red-breasted Pigmy Falcon.

Lower slopes of Himalayas, E. to Bhutan.

Wing ♂ 100-108, ♀ 104-112 mm.; above greenish black; forehead, broad stripe above eye and down sides of neck, as well as collar on hind neck, white; primaries barred with white on inner webs; tail with 5 or 6 white bars on inner webs, basal one concealed and subterminal one either obsolete or a tiny spot; below entirely ferruginous, darkest on throat, vent and thighs and paler on chest; sides of breast greenish black. Immature with stripes on sides of head rufous, instead of white, and throat, chest and breast white.

280a. *Microhierax cærulescens burmanicus* Swann, Syn. List Accip., p. 116 (1920). [*Thayetmyo, Burma*, type in Brit. Mus.]
White-breasted Pigmy Falcon.

Burma, N. Tenasserim, Siam, Cambodia S. Annam.

Wings shorter; ♂ 95, ♀ 104 mm.; throat vent and thighs only ferruginous, chest and breast silky white, the latter slightly washed with ferruginous; tail with the subterminal white band in the form of two fair-sized spots of white, much larger than in last form.

[1] This is quite certainly the correct name for this species. Edwards's plate accurately represents the Indian form except for the white neck band, a point which has given rise to much discussion, but there is no doubt this is an accidental variation, as in the Brit. Mus. coll. such a bird actually exists, without a trace of white collar, from Riocour's collection. (B. M. Reg. No. 89, 5, 30, 48) marked "Malaisie," and although not of the Indian race it proves the possibility of the collar being lost. The Indian form, it should be remarked has the under parts white (except vent and thighs) when immature, but nearly uniform ferruginous when adult. The eastern form on the other hand has, when adult, only a small throat patch and the vent and thighs ferruginous, with a wash of same on breast. In a large series a good deal of variation is found in the width and purity of the white collar, and Indian examples in particular often show a strong shading of black on it.

*281. *Microhierax fringillarius* (Drapiez), Dict. Class. d'Hist. Nat. VI., p. 412, pl. 5 (1824). [" Indes "—type loc. sugg. *Malacca.*] Malayan Pigmy Falcon. S. Tenasserim, Malay Peninsula Java, Sumatra, Borneo.

Wing ♂ 90, ♀ 102 mm. ; without the white collar on hind neck ; no white eyebrow but sides of neck with a white patch ; cheeks and ear-coverts forming a large rounded patch of black ; chest white ; abdomen and under tail-coverts pale chestnut, the longer under tail-coverts and whole flanks glossy black ; tail with 5 or 6 white bars on inner webs, first one concealed ; wing quills spotted rather than barred on inner webs.

*282. *Microhierax melanoleucus melanoleucus* (Blyth), Jnl. As. Soc. Beng. XII., pt. 1, p. 179* (1843). [*Assam.*] Black and White Pigmy Falcon. Assam, Cachar to Indo-China ?

Slightly larger ; wing ♂ 108, ♀ 121 mm. ; above glossy black ; forehead, narrow line above eye and down side of neck as well as entire under parts white ; cheeks and ear-coverts as well as sides of breast black ; thighs white ; wing quills broadly banded with white on inner webs ; tail with 5 or 6 white bars on inner webs.

282a. *Microhierax melanoleucus sinensis* Sharpe, Ibis, 1875, p. 254 [ex *M. chinensis*, David, Bull. Soc. Philom. Séance 27 Fevr. 1875 (pub. 1877), (*Kiangsi Prov.*)]. Chinese Pigmy Falcon. S. China.

Size similar ; wing ad. 108 mm. ; similar, but having an irregular white nape band

(not constant), and with more black on sides of body. [See pl. 8, *Oiseaux de la Chine*, David et Oustalet, 1877.]

283. *Microhierax latifrons* Sharpe, Ibis, 1879, p. 237, pl. vii. [*Lawas River and Lumbidan*, type in Brit. Mus.] N. Borneo.
White-headed Pigmy Falcon.

Size of *M. fringillarius* ; (wing ad. 102 mm.); greater part of crown as well as forehead white ; region round eye black ; cheeks white ; no white stripe on sides of neck ; below paler than in *M. fringillarius*, but sides and thighs black ; tail unbarred.

284. *Microhierax erythrogenys erythrogenys* (Vigors), P.Z.S., 1831, p. 96. [*Luzon*, type in Brit. Mus.] N. Philippine Is. (Luzon, Mindoro, Negros, Bohol).
Luzon Pigmy Falcon.

Size similar ; wing ♂ 102, ♀ 108 mm. ; above greenish black ; primaries barred with white on inner webs in ♂, uniform black in ♀ ; cheeks, ear-coverts, sides of neck and under surface silky white, the sides, flanks, thighs and lower under tail-coverts black ; tail entirely black.

*284a. *Microhierax erythrogenys meridionalis* Ogilvie Grant, Ibis, 1897, p. 220. [♂ *Zamboanga, S. Mindanao*, type in Brit. Mus.] S. Philippine Is. (Samar, Cebu, Mindanao).
Samar Pigmy Falcon.

Larger ; wing ♂ 108-113 ; ♀ 117-122 mm. ; under wing-coverts and inner webs of primaries[1] uniform black in ♂ ; belly, vent and under tail-coverts washed with pale fulvous.

[1] Characters not constant in this form. A ♀ in Tring Mus. from Daliaun, Mindanao, has inner webs of primaries barred with white.

Gen. XC. POLIHIERAX Kaup (1847).

Type by monotypy *Falco semitorquatus* Smith.
[= *Poliohierax* Sharpe et auct.]

Nostrils as in *Microhierax*; tarsus less feathered in front; wing with second primary longest, first nearly equal to third, 4th shortest; size small (length under 8 in.)

*285. *Polihierax semitorquatus semitorquatus* (Smith), Rep. Expl. Centr. Afr., p. 44 (1836). [Near *Latakoo, Bechuanaland.*] African Pigmy Falcon.

Wing ♂ 117, ♀ 121 mm.; ♂ above bluish grey; head darker; forehead, sides of face and hind neck pure white; quills and tail brown, spotted on outer and barred on inner webs with white; upper tail-coverts white, as well as entire under parts; ♀ interscapulary region and scapulars deep vinous chestnut.

S. Africa, Bechuanaland to Damaraland, Orange Free State, and Basutoland.

285a. *Polihierax semitorquatus castanonotus*[1] Heugl., Ibis, 1860, p. 407. [*Méré Belenia, White Nile.*] Abyssinian Pigmy Falcon.

Wing ♂ 115-119, ♀ 120 mm.; above with head and neck darker slaty grey; below with white bars on under surface of wings and tail broader; wings rather longer; feet stronger and stouter.

S. Abyssinia, Somaliland, Brit. E. Africa.

[1] Heuglin afterwards withdrew this name, as his supposition that the mantle was chestnut in both sexes proved incorrect. The characters I have given, however, serve to distinguish the northern from the southern race. Zedlitz (J. f. O., 1914, p. 675) has described *P. s. deckeri* from S. Somaliland, while Oberholser had previously described *P. s. homopterus* from W. Somaliland, but I am unable to separate these supposed races from *castanonotus*.

Gen. XCI. NEOHIERAX gen. nov.

Type *Poliohierax insignis* Walden.

Tail longer and more rounded than in *Polihierax*, outer pair of feathers very short; wing with 2nd primary longest, first nearly equal to third, 4th shorter.

286. *Neohierax insignis* (Walden), P.Z.S., 1871, p. 627. [*Tongoo, Upper Burma,* type in Walden Coll.]
Burmese Pigmy Falcon. — Burma, N. Tenasserim, Indo-Chinese countries.

Wing ♂ 145 mm., tail 130 mm.; ♂ above black; head and hind neck grey with black shaft stripes; rump and upper tail coverts white; quills and tail with white spots on inner webs; below white; ♀ head and mantle bright ferruginous red.

Gen. XCII. SPIZIAPTERYX Kaup (1851).

Type by monotypy *Harpagus circumcinctus* Kaup.

Bill with tooth not distinct; nostrils round with central tubercle; outer toe longer than inner; middle toe very short; 3rd and 4th primaries nearly equal, fourth longest; distance between tips of primaries and tips of secondaries less than half the length of tail. Size small (length 11.50 in.).

*287. *Spiziapteryx circumcinctus* (Kaup), P.Z.S., 1851, p. 43. [*Chile,* errore = *Argentina.*]
Spot-winged Falcon. — Argentina.

Wing ♂ 172-175, ♀ 178 mm.; tail 145 mm.; above ashy brown with black central streaks, the head blackish brown; rump

and upper tail-coverts creamy white; wing-coverts with blackish central streaks and spots of white on each web; quills blackish with large spots of white; tail black, all but central feathers spotted on outer and barred on inner web with white; sides of face and eyebrow white, moustachial streak black; below ashy white, with blackish central streaks; vent and thighs white.

Gen. XCIII. NESIERAX Oberholser (Pr. Phil. Ac. 1899, p. 203)

Type by orig. desig. *Falco novæ-seelandiæ* Gmel.

[New name for *Harpa*, Bp.]

Size much larger (length 16-18.5 in.); middle toe very long; wing with third primary longest, instead of second as in *Falco*.

*288. *Nesierax novæ-seelandiæ novæ-seelandiæ* (Gmel.) S. N., i., p. 268 (1788). [ex Lath. —*New Zealand*.]
New Zealand Quail-Falcon.

New Zealand; Auckland Islands.

Wing ♂ 248-260, ♀ 273-289; tail 210 mm.; above blackish brown, narrowly barred, except on head, which is blackish, with pale rufous; quills and tail barred with greyish white; the tail bands 8 in number; ear-coverts and moustachial streak black; below buffy white, the breast and abdomen with central streaks of dark brown, broader on sides, which are also ocellated with large white spots; thighs and under tail-coverts bright rusty red with dark brown shaft-streaks.

288a. *Nesierax novæ-seelandiæ pottsi*,[1] Math. and Iredale, Ibis, 1913, p. 420. [*Puroah Bay, N. Island.*]
Bush Falcon.

New Zealand.

Smaller ; wing ♂ 228-233, ♀ 246-255 mm. ; plumage similar ; [scarcely distinguishable except by sexing].

Gen. XCIV. FALCO Linn. (1758).

Type by subs. desig. (A.O.U. Checklist, 1886) *Falco subbuteo* L.

Distance between tips of primaries and tips of secondaries more than half length of tail ; first and third quills equal, second longest ; feet large and powerful ; tarsus short, reticulated ; toes long with curved and sharp claws, the outer toe rather longer than inner. Size variable.

A. Size small ; length about 10-13 in. (Typical *Falco* L.).

†*289. *Falco subbuteo subbuteo* Linn., S. N., i., p. 89 (1758). [" *Europe* " = *Sweden*, apud Hartert].
Hobby.

Europe ; from Scandinavia and Brit. Isles to Mediterranean ; W. Siberia; in winter to Africa and N.W. India.

Wing ♂ 255-265, ♀ 273-280 mm.; above dark slate grey, darker on head and paler on rump ; hinder part of cheeks and sides of neck buffy white, with well-defined black moustachial stripe below ; nuchal collar reddish white ; tail slate grey, all but middle pair of feathers barred on inner webs with ferruginous ; below creamy white, striped on breast and flanks with black ; thighs and under tail-coverts rust-red.

[1] *N. australis* (Hombr. & Jacq.) being not tenable, the small form has been re-named by Mathews and Iredale. I am very doubtful as regards the advisability of separating the supposed small race.

†289a. *Falco subbuteo jugurtha* Hart. and Neum., J. f.O., 1907, p. 591. [*Tangier.*] [=*F. gracilis*, auct.]
North African Hobby.

Size scarcely larger; above paler; below with the stripes rather smaller.

Tunisia, Algeria, Marocco.

289b. *Falco subbuteo centralasiæ* (Buturl.) Orn. Mitt. ii., p. 175 (1911). [*Baimgol, Tianshan.*] [=*F. s. cyanescens* Lonnberg.]
Central Asian Hobby.

Paler above and with slightly longer wings than *F. s. subbuteo*; wing of ♂ nearly equal to wing of ♀ of typical form

Central Asia; S. to Chinese Turkestan and Assam.

289c. *Falco subbuteo jakutensis*[1] (Buturl.), Nascha Ochota, 4, 6, p. 71 (1910). [New name for his *F. saturatus*, type loc. *Tschuktschen-Bezirk, N.E. Siberia.*]
Kamtschatkan Hobby.

Slightly larger than *F. s. subbuteo*; wing ♂ 273 mm.; darker and more heavily marked below.

E. Asia and Kamtschatka; S. in winter to Japan and N. China.

289d. *Falco subbuteo streichi* Hart. & Neum., J.f.O., 1907, p. 592. [*S. China—Swatow.*]
Chinese Hobby.

Similar to *F. s. subbuteo*, but smaller; wing ♂ 238-246, ♀ 250-257 mm.

China, from Kwangtung Prov. N. to Shensi.

[1] Domaniewski (C. R. Soc. Sci. Varsovie, x., p. 260, 1918) has described another form from Manchuria, viz.: *F. subbuteo ussuriensis*, but I have had no opportunity of considering this race, nor have I been able to see examples from the Irkutsk Govt., Siberia (*F. subbuteo erkutensis* Johansen, Orn. Jahr. xxv., p. 83, 1915).

†290. *Falco eleonoræ* Gené, Rev. Zool., 1839, p. 105. [*Sardinia.*]
Eleonora's Falcon.

Wing ♂ 315-325, ♀ 326-338 mm.; sexes dissimilar; ♂ general colour blackish slate, browner on upper parts; outer tail-feathers slightly barred with blackish; below with a trace of rufous, but the thighs dark slate; ♀ dark slate brown above, tail barred with rufous and blackish; hind cheeks and throat deep buff, with a conspicuous black moustachial stripe; breast buffish, becoming rufous on abdomen, striped with black; thighs deep chestnut.

Islands of Mediterranean; E. Canaries; N.Africa,Algeria to Marocco; S. Spain (?)[1] in winter S. to Madagascar.

291. *Falco concolor* Temm. Pl. Col., livr. 56, text (not plate 330), (1825). ["*Senegal, Cotes de Barbarie, Egypt, Arabia*—typ. loc. sugg.: *Arabia.*] [*F. eleonoræ schistaceus* Erlang., a synonym?]
Uniform Falcon.

Smaller; wing ♂ 264, ♀ 284 mm.; sexes similar; uniform leaden grey with black shaft-stripes to the feathers; primaries and tail with whitish bands on inner webs; cere, orbits and feet bright yellow; bill bluish.

E. Africa (coast from Red Sea to Madagascar): Arabian Coast; Muscat.

292. *Falco severus severus* Horsf., Trans. Linn. Soc., xiii., p. 135 (1822). [*Java.*]
Indian Hobby.

Wing ♂ 215, ♀ 230 mm.; above slaty black; head, cheeks and ear-coverts deep black; upper tail-coverts and tail slate, barred with black; throat and sides of neck creamy white, washed with ferruginous;

Burma, Malay Peninsula, French Indo-China; Sunda Is,; Philippine Is.

[1] See Swann, "Oologists' Record," 1921, p. 53.

below chestnut, immaculate in old birds; in younger birds heavily marked with drop-shaped spots of black.

*292a. *Falco severus papuanus* A. B. Meyer & Wiglesw., Abhandl. Ber. Mus. Dresden, 1892-3, No. 3, p. 6 (1893). [*Huon Gulf, N. New Guinea.*]
New Guinea Hobby.

Wing ♂ 215-220, ♀ 228-240 mm.; chest usually with black shaft-stripes; above darker; tail nearly black; below darker chestnut; quills and tail below obsoletely banded with pale rufous, or sometimes unbanded.

Borneo, Celebes, Ceram, Halmahera[1], New Guinea, Salawatty, New Britain; Solomon Is. (?)

*292b. *Falco severus indicus* A. B. Meyer and Wiglesw. Bds. Celebes, i., p. 84 (1897). [*Calcutta.*]
Central Indian Hobby.

Wing ♀ 242 mm.; above paler; wings and tail browner slaty; inner webs always strongly barred below with pale cinnamon; chestnut of lower parts paler, without black markings in adults.

Indian Penin.; Assam; cas. Ceylon.

*293. *Falco longipennis longipennis* Swains., Anim. in Menag., p. 341 (Jan., 1838). [*Tasmania*]. [=*F. lunulatus* Lath.]
Little Falcon.

Wing ♂ 245, ♀ 265 mm.; above slaty blue darker on head and lighter on rump; primaries and tail barred on inner webs with rufous; hind neck tinged with rufous,

East Australia; Tasmania.

[1] *F. severus religiosus* Sharpe (Cat. Bds. Br. Mus., i., p. 397, 1874, *Ceram*), from Ceram and Halmahera, is evidently a melanism of this form. It is a more sooty bird, black below with remains of rufous edgings, instead of chestnut.

forehead white ; throat and sides of neck reddish white ; below pale dull rufous, with a few dark shaft-stripes on breast and obsolete grey bars on flanks.

*293a. *Falco longipennis murchisonianus* Math., Nov. Zool., xviii., p. 252 (1912). [*E. Murchison.*]
Murchison Falcon.

South and Mid. West Australia.

Smaller ; wing ♂ 238 mm.

293b. *Falco longipennis apsleyi* Math., Austral. Av. Rec. i., p. 33 (1912). [*Melville Island.*]
Northern Little Falcon.

Northern Territory ; N.W. Australia.

Larger than last form, and differs from typical form in its blue-grey upper surface and paler under surface.

293c. *Falco longipennis hanieli* Hellmayr, Avif. Timor, p. 100 (1914). [*W. Timor.*]
Timor Little Falcon.

Timor, Flores.

[Not seen.]

294. *Falco hypoleucus* Gould, P.Z.S. 1840, p. 162 (1841). [60 *miles from Swan River, W. Australia.*]
Grey Falcon.

Australia.

Size small ; wing ♂ 268 mm. ; above ashy, with indistinct fulvous margins and blackish shaft-stripes, especially distinct on head and nape, latter of which is whitish tinged with rufous ; tail with broad fulvous tip, and some obsolete black bars at apical end ; below white, tinged with buff on flanks and vent, and with narrow blackish shaft-streaks, except on throat.

295. *Falco cuvieri* Smith, S. Afr. Q. Jnl., i., p. 392 (1830). [*Cafferland, near Kai River.*] African Hobby.

S. and W. Africa from Cape to Gold Coast and Shoa ; cas. in Egyptian Sudan

Wing ♂ 215 mm. ; above dark slate grey, blackish on interscapulary region ; primaries and tail feathers dark brown, latter barred with fulvous on inner web ; forehead buffy white ; throat and sides of neck white, washed with rufous ; below rusty red, with central streaks of black on breast and sides ; under wing-coverts buff, streaked with black.

*296. *Falco deiroleucus* Temm. Pl. Col. i., livr. 59, pl. 348 (1825). [*St. Francis I., Sta. Caterina, Brazil.*]
[= *F. aurantius* Gmel., auct.]
Orange-breasted Falcon.

South and Central America ; Brazil to Guatemala.

Wing ♂ 240, ♀ 278 mm. ; above black, most of the feathers bordered with slate grey ; tail with 3 bars of greyish white ; throat white ; below chestnut, except lower breast and under wing-coverts which are black, tipped and spotted with rufous buff.

*297. *Falco albigularis albigularis* Daud., Traité, ii., p. 131 (1800). [*Cayenne.*]
[*F. rufigularis* Daud., a synonym.]
White-throated Bat Falcon.

South and Central America, from Argentina to Mexico.

Wing ♂ 185, ♀ 212-225 mm. ; above slaty black ; tail black, tipped with white, and with 3 or 4 narrow bands of greyish white ; throat and sides of neck orange rufous to white with a tinge of rufous ; upper breast and sides black, finely barred with white ; abdomen, thighs and under tail-coverts chestnut.

297a. *Falco albigularis pax* Chubb, Bull. B.O.C., xxxix., p. 23 (1918). [*Charuplaya, Bolivia,* type in coll. Brit. Mus.]
Bolivian White-throated Falcon.

S.E. Bolivia, N.W. Argentina.

Wing ♂ 198 mm.; "upper surface dark slate grey instead of black; below with breast and sides of body dark brown, not black, and much more broadly banded with white."[1]

297b. *Falco albigularis petoensis* (Chubb), Bull. B.O.C., xxxix., p. 22 (1918). [*Peto, Yucatan,* April 1888, Salv.-Godm. coll., type in Brit. Mus.]
Yucatan White-throated Falcon.

Yucatan.

Wing ♂ 190, ♀ 215 mm.; "differs from *F. r. albigularis* in being slate colour above, with black shaft-lines, instead of black with slightly paler margins; bend of wing white varied with buff; breast and sides of body blackish brown, instead of black, and the white bars broader."

†*298. *Falco chicquera chicquera* Daud., Traité, ii., p. 121 (1800). [ex Levaill., *Bengal.*]
Red-headed Merlin.

Indian Peninsula, E. to Assam.

Wing ♂ 218, 228 mm.; head and hind neck chestnut red; above pale bluish, with remains of blackish cross bars, except on back and scapulars; tail narrowly barred with black, with a broad black subterminal band and white tips; eyebrow and moustachial stripe black; forehead, sides of

[1] A larger series is necessary to show if this form is really separable. I think that the blackness of the upper breast and sides is an age character chiefly, as also the amount of white. The same remark applies to the next form. Paraguayan birds (*F. ophryophanes* Salvad.) appear to me indistinguishable from typical birds.

head and neck, throat and chest white, with a few black shaft-lines on latter; below white, thickly barred with black.

*298a. *Falco chicquera ruficollis* Swains., Bds. W. Afr., i., p. 107, pl. 2 (1837). [*Senegal.*] African Rufous-necked Falcon.

Size smaller; wing ♂ 192-195 mm.; darker, more barred above, especially on back and scapulars, and with bars on breast more defined and rather closer together.

Tropical Africa, N. to the Gambia and Egypt. Sudan.

298b. *Falco chicquera horsbrughi*[1] Gunning & Roberts, Ann. Trans. Mus., iii., p. 110 (1911). [*Pretoria,* type in Transv. Mus.]

Larger; wing ♂ 218, ♀ 240 mm.; above paler bluish grey.

South Africa, Transvaal and Cape Colony.

298c. *Falco chicquera pyrrhogaster* Reichenow, Orn. M.B., xxiii., p. 25 (1915). [*Bosum, E. Cameroon.*]
Cameroon Hobby.

Wing 150, tail 146 mm.; above like *F. chiquera ruficollis,* below like *F. fasciinucha* [not seen, probably immature (?)].

Cameroon.

B. Size similar; length 11-13 in. (Sub. gen. *Tinnunculus* Vieill.).

†*299. *Falco columbarius columbarius* Linn., S.N., i., p. 90 (1758). ["*America,*" ex Catesby = *Carolina.*]
Pigeon Hawk.

Eastern N. America; in winter S. to W. Indies and Northern S. America.

[1] I formerly regarded this as a synonym of *ruficollis,* from a drawing made and sent to me by the late Lt. Finch-Davies from the type, an immature bird, and examined by Dr. Hartert and myself, but as the S. African race differs, *horsbrughi* is the name that must be adopted.

Wing ♂ 184-192, ♀ 205-218 mm. ; ♂ above dark slate colour, with distinct black shaft-stripes, the head, mantle, and wing-coverts darker ; hind neck mottled with rufous buff ; upper tail-coverts paler grey ; tail black, tipped with whitish and crossed with 3 slate grey bands ; cheeks and throat whitish, with narrow streaks of black, except on latter ; below ochraceous buff to white, with blackish brown shaft-streaks, broadest on the flanks ; thighs more reddish with narrow black stripes ; ♀ much browner above ; tail umber brown with 4 incomplete buffish white bands.

*299a. *Falco columbarius suckleyi* Ridgw., Bull. Essex Inst., v., p. 201 (1873). [*Shoalwater Bay, Washington.*]
Suckley's Merlin.

N.W. America (Sitka to Brit. Columbia) ; in winter S. cas. to Venezuela.

Wing ♂ 186-191, ♀ 205-213 mm. ; ♂ above much darker ; head, mantle, and wings black ; rump and upper tail-coverts paler slate ; tail black, the grey bands nearly obsolete and hardly apparent on central feathers ; below with markings heavier and darker ; ♀ above and below darker ; tail blacker, the light bars nearly obsolete on central feathers.

299b. *Falco columbarius richardsoni* Ridgw., Proc. Acad. Nat. Sci. Philad., 1870, p. 145 (1871). [*Mouth of Vermilion River, S. Dakota.*]
Richardson's Merlin.

Gt. Plains of W. North America (Saskatchewan Valley to N. Dakota) ; in winter to N.W. Mexico.

Wing ♂ 195-212, ♀ 205-225 mm. ; ♂ above much paler bluish grey than *F. c. columbarius*, with black shaft-lines to all the feathers ; tail with 4 bands of greyish white, the intermediate black bars partly

obsolete, and tipped with white; below buffy white, striped with pale brown, broadest on the flanks; thighs buffish white, with blackish shaft-lines; ♀ above light brown, instead of blackish brown; below striped pale brown instead of blackish brown.

299c. *Falco columbarius bendirei* Swann, Bull. B.O.C., xlii., p 66, (1922). [*Fort Walla Walla, Washington Terr.*, Oct. 18, 1881, Capt. Bendire, type in M.C.Z., Harvard, No. 76877.]
Californian Merlin.

California, N. through Oregon, Idaho and Washington to E. Brit. Columbia and Alberta; in winter S. to Lower California.

Smaller; wing ♂ 186-200, ♀ 202-218 mm.; ♂ above darker slate than *F. c. richardsoni*, but lighter than *F. c. columbarius*; tail black, with 3 bands of greyish white and white tips; below as dark and heavily striped as *F. c. columbarius*; thighs rufous buff, much darker than in *F. c. richardsoni*; ♀ similar to that of *F. c. richardsoni* above, but a shade darker brown; below as dark as *F. c. columbarius*.

†*299d. *Falco columbarius regulus*[1] Pallas, Reise d. Versuch. Prov. d. Ross. Reichs, ii., p. 707 (1773). [*Siberia = W. Siberia*].
Common Merlin.

N. Europe to Brit. Isles, Central Russia and W. Siberia; in winter S. to N. Africa.

Wing ♂ 195-203, ♀ 215-224 mm.; ♂ above rather darker slate blue than in No. 299, with the black shaft-lines; below rather more rufous; tail slaty blue, tipped with white and with broad subterminal black band, the other black bands nearly obso-

[1] *F. æsalon* Tunstall cannot be accepted as it is not based on any definite reference.

lete ; ♀ above dark brown, tail with 5 narrow pale bands ; below dull white streaked with brown.

†299e. *Falco columbarius alfred-edmundi*, Kleinschmidt, Falco, xiii., p. 9 (1917). [*Iceland.*] Iceland Merlin.

Much darker race.

Iceland.

299f. *Falco columbarius insignis* (Clark), Pr. U.S. Nat. Mus., xxxii., p. 470 (1907). [*Fusan, Korea.*]
Asiatic Merlin.

Size similar ; wing ♂ 197-205 mm. ; ♂ above lighter grey ; ♀ above paler brown ; much less heavily striped below.

Asia ; Turkestan to China, Japan and Ussuriland ; in winter to Cyprus, Egypt, Syria, India, S. China.

*299g. *Falco columbarius christiani-ludovici* Kleinschmidt, Falco, xiii., p. 10 (1917). [*Caucasus*, type in Kleinschmidt's Coll.] New name for *F. c. pallidus* (Suschk.), preoccupied.
Pallid Merlin.

Slightly larger ; wing ♂ 209 mm. ; above still paler grey and below with smaller and paler stripes ; ♀ paler generally.

Caucasus and Kirghissteppe ; in winter to Turkestan and N.W. India.

299h. *Falco columbarius lymani* Bangs, Bull. M.C.Z., liv., No. 16, p. 465 (1912). [*Tschegan-Burgazi Pass, Altai Mtns.*]
Altai Merlin.
Larger than *F. c. insignis* ; wing ♂ 225, ♀ 248 mm. ; similar in plumage.

E. Asia, (Altai Mtns.).

C. Size similar; length 10-11 in. (Sub. gen. *Erythropus* Brehm).

†*300. *Falco vespertinus vespertinus* Linn., S.N. ed. xii., i., p. 129 (1766). ["*Ingria*" =*Prov. St. Petersburg.*]
Red-footed Falcon.

Wing ♂ 243-250, ♀ 247-253 mm.; sexes dissimilar; ♂ above dark plumbeous; tail black; below blue-grey with faint blackish shaft-stripes; thighs, vent and under tail-coverts chestnut; under wing coverts greyish black; cere and feet brownish red; ♀ head and neck rufous; above ashy grey, barred with darker grey; primaries barred with reddish white on inner webs; throat and cheeks reddish white; below rufous.

E. and C. Europe, N. to Sweden and Archangel; W. Siberia[1] to Lake Baikal and Lower Lena; Asia Minor; cas. Brit. Isles; in winter S. to S.W. Africa.

300a. *Falco vespertinus amurensis* Radde, Reisen i. S. von O. Sibir., ii., p. 102, pl. 1, fig. 2, (1863). [*Amur.*]
Eastern Red-footed Falcon.

Smaller; wing ♂ 235-245 mm.; ♂ under wing-coverts pure white, instead of greyish black; feet orange; ♀ head browner and below pale rufous, the breast white, broadly streaked with black, becoming bars on the flanks.

Siberia, E. of Lake Baikal, to Manchuria, N. China; in winter to N.E. India and S. and E. Africa.

D. Larger; length 17-19 in. (Sub. gen. *Notofalco* Math.).

301. *Falco subniger subniger* Gray, Ann. Mag. N.H. xi., p. 371 (1843). [Hab. unknown =*Victoria*, apud Math.]
Black Falcon.

Australia.

[1] Hartert considers *F. v. obscurus* Tschusi from W. Siberia to be a synonym.

Wing ♂ 362, ♀ 400 mm.; general colour blackish brown; forehead and sides of head and neck and under tail-coverts mottled with white; throat white, streaked with brown; breast slightly spotted with buff; tail barred.

301a. *Falco subniger minnie* Math., Austr. Av. Rec. ii., p. 127 (1915). [*Queensland.*] Queensland Black Falcon. — Queensland.

Without bars on tail.

E. Size moderate; length 12-20 ins. (Sub. gen. *Rhynchodon* Nitzsch).

†*302. *Falco peregrinus peregrinus* Tunst., Orn. Brit., p. 1 (1771). [Ex Pennant—*Gt. Britain.*] Peregrine Falcon. — Europe,[1] N. of Mediterranean, E. to Urals; in winter to Africa; cas. Greenland.

Wing ♂ 305-323, ♀ 350-370 mm.; head, hind neck and wing-coverts blackish, as also cheeks, ear-coverts and short moustachial stripe; forehead and sides of neck behind ear-coverts white; rest of upper parts bluish slate, barred or arrow-headed with blackish; tail broadly barred with black and tipped with white; below white, with a blue tinge on breast, chest with narrow black shaft stripes, breast spotted and belly and under tail-coverts irregularly barred with black; bill bluish; feet yellow. Immature: brown above, with paler margins, including head; tail barred with pale rufous; below longitudinally marked.

[1] Kleinschmidt (Berajah, 1916, pp. 42, 46) has described two European forms which I am unable to distinguish, viz.: *F. peregrinus rhenanus* from the Rhine Valley, and *F. peregrinus scandinavicæ* from Sweden. His *F. peregrinus leucogenys* (*t. c.*, p. 54, 1917) is, I think, a synonym of *calidus*, and his *F. peregrinus germanicus* (*t. c.*, p. 61, 1918) also seems inseparable from the typical form.

302a. *Falco peregrinus calidus* Lath., Ind. Orn. 1., p. 41 (1790). [*India.*]
Siberian Peregrine Falcon.

With the black of cheeks and ear-coverts reduced to a narrow stripe and the white band behind much increased. Juvenile: below buffy white, striped with blackish brown.

N. Asia, W. Siberia; in winter to Cyprus, N.E. Africa, India, Ceylon, China, Bering I., and Malay Archipelago.

†302b. *Falco peregrinus anatum* Bp., Geogr. and Comp. List, p. 4 (1838). [ex Aud. pl. 16 —*Egg Harbour, New Jersey.*]
American Peregrine Falcon.

Very slightly larger; wing ♂ 329-333, ♀ 355-374 mm.; chest with a more reddish buff tint, and with a few or no markings. Immature: much darker below, with a reddish tinge and more heavily marked.

N. America (except N.W.); wintering in Southern U.S. and S. to Panama, also W. Indies; England (cas.).

†302c. *Falco peregrinus pealei* Ridgw., Bull. Essex Inst., v. p. 201 (1873). [*Oregon,* type in U.S. Nat. Mus.]
Peale's Falcon.

Rather larger; wing, ♂ 330-335, ♀ 375-383 mm.; darker above and below; head and hind neck blackish; below more heavily and closely banded with blackish. Immature; above brownish black; below brownish black, broadly edged and spotted with buffish white.

Pacific Coast of N.W. America, from Oregon to Aleutian, Commander and Kuril Islands.[1]

[1] A pair in Tring Mus. from Vulcan Island, S. of Japan, May 11, 1904, A. Owston, are referred by Dr. Hartert to this form but seem to be a specialized insular colony, blacker on head and tail, below slaty grey, closely barred with black; rather smaller, wing ♂ 308, ♀ 364 mm.

*302d. *Falco peregrinus cassini* Sharpe, Ann. & Mag. N.H. (4), xi., p. 221 (1873). [*Magellan Str. and Falkland Is.*]
Cassin's Falcon.

Smaller ; wing ♂ 300-308, ♀ 340-355 mm. ; oldest dress : above, including head, bluish grey, barred and spotted with black ; rump paler, whitish grey ; tail barred with black and tipped white ; throat white with broad black moustachial patch ; chest buffy white ; below greyish white, finely barred with black. Immature : brownish black above, with paler edgings ; below deep buff, with a strong reddish shade, heavily striped with black ; flank feathers black, barred with reddish buff. Intermediate plumage as adult described by Sharpe.

Andes. from Ecuador S. to Chile and Falkland Islands.

302e. *Falco peregrinus brookei* Sharpe, Ann. and Mag. N.H. (4) xi., p. 21 (1873). [*Sardinia*, type in Brit. Mus.]
[= *F. punicus, auct.*]
Lesser Peregrine Falcon.

Smaller than *F. p. peregrinus* and with more slender feet ; wing ♂ 280-300, ♀ 320-339 mm. ; less heavily marked below and with the ground colour much more ruddy buff.

Mediterranean countries and islands, from S. Spain to Greece, and Asia Minor, N. Marocco.

302f. *Falco peregrinus minor* Schleg., Abh. Geb. Zool. & Vergl. Anat., heft iii., p. 20 (1844). [*Mtns. of Cape of Good Hope.*]
S. African Peregrine Falcon.

Slightly smaller ; wing ♂ 270, ♀ 280-298 mm. ; duller in colour than *F. p. peregrinus* and with the dark bars on abdomen closer together.

Africa, from Cape Colony to Blue Nile and Socotra on E., and on W. to Angola and Gold Coast.

302g. *Falco peregrinus radama* Hartlaub, Orn. Beitr. Faune Madag., p. 17 (1861). [Ex Verreaux MS.—*Madagascar.*]
Madagascar Peregrine Falcon.

Madagascar, Comoro Is.

Wing ♂ 272 mm.; above darker than *F. p. minor*; head, mantle, and wings blackish; chest and vent buffy white, and under wing-coverts white; rest of under parts closely barred with black.

302h. *Falco peregrinus peregrinator* Sund., Physiogr. Sällskapets Tidsskr. Lund. i., p. 177, pl. 4 (1837). [*Indian Ocean, off Nicobar Is.*]
Indian Peregrine Falcon.

Indian Peninsula; Ceylon; S. China.

Smaller than *F. p. peregrinus*; wing ♀ 305-330 mm.; below tawny ferruginous, paler on throat and sides of neck; marked on flanks, thighs and under tail-coverts with a few spots and cross bars of black.

302i. *Falco peregrinus macropus* Swains., Anim. in Menag., p. 341 (Jan. 1838). [*Tasmania.*] [=*F. p. melanogenys* Gould.]
Black-cheeked Falcon.

E. and W. Australia, Tasmania, New Caledonia.

Wing ♂ 295-304, ♀ 335-342 mm.; ♂ head and nape deep black, including sides of face, cheeks and ear-coverts; interscapulary region blackish, with obsolete bars of bluish grey; rest of upper parts bluish ashy, barred with black; tail with broad subterminal and 11 other bars of black; throat and chest deep creamy buff, latter with a few black shaft stripes; below buffy white closely and narrowly barred with black, the sides and thighs tinged with grey; ♀ more ferruginous below and with the cross bars more irregular.

302k. *Falco peregrinus ernesti* Sharpe, Ibis, 1894, p. 545. [*Mt. Dulit*, type in Brit. Mus.] Hose's Falcon.

Size similar; wing ♂ 293 mm.; darker above; chest much more rufous; under wing-coverts and axillaries more closely barred with black, the white inter-bars more rufous; under tail-coverts and thighs barred with bluish grey and black, instead of whitish and black.

Borneo, Greater Sunda Is., Philippine Is., New Guinea, New Hebrides, Fiji Islands.

303. *Falco fasciinucha* Reichen. and Neum., Orn. M.B. iii., p. 114 (1895). [*Teita, Kenya, E. Africa.*] Kilimanjaro Falcon.

Immature ♂ [Tring Mus.]. Wing 228 mm.; above black with remains of rufous edgings; an indistinct collar on hind neck pale rufous; upper tail-coverts with broad ashy margins; tail slate, tipped buffy white and indistinctly barred with black; throat white, sides of head and moustachial patch black; below rufous fawn, narrowly striated with black.

E. Africa (Kilimanjaro district).

†*304. *Falco pelegrinoides pelegrinoides* Temm., Pl. Col., livr. 81, pl. 479 (1830?). [*Nubia.*] [= *F. barbarus* Linn.? and *F. punicus* Levaill. jun.] Barbary Falcon.

Smaller than *F. p. peregrinus*; wing ♂ 278-288, ♀ 282-293 mm.; above much paler bluish grey, the cross bars fainter; crown dusky brown instead of black, the fore part tinged with rufous; entire hind neck rusty red, with some dusky mottlings; fore part of ear-coverts and cheek stripe blackish; throat and sides of neck buffish

N. Africa (N. of the Sahara) from W. Morocco to Egypt; in winter S. to Sudan; Canary Is.

white; below pale buffy fawn, breast unspotted, but sides with a few blackish spots, becoming bars on under wing and tail-coverts. Younger birds dark brown above, with rufous margins; hind neck creamy white, tinged with rufous; below creamy white, breast and flanks streaked with brown, more broadly on the latter.

304a. *Falco pelegrinoides arabicus* Erlanger, J.f.O. 1903, p. 293. [*Lahadsch*, type in Berlin Mus.]
Arabian Falcon.

S.W. Arabia, Erythræa, Somaliland; cas. Sudan (?).

Said to be darker above.

304b. *Falco pelegrinoides babylonicus* Sclater, Ibis, 1861, p. 218, pl. vii. [*Oudh*, type in Norwich Mus.]
Red-capped Falcon.

W. and C. Asia, from Mesopotamia, Turkestan and E. Persia to Afghanistan and Baluchistan; in winter to N. India.

Larger; wing ♂ 304, ♀ 329 mm.; above lighter bluish grey; fore part of crown more rufous; hind part of crown greyish black; nape and hind neck clear rufous, with darker centres to many of the feathers; below buffy white, with arrow-head brown spots on centre of belly and bars on the sides; throat and chest unspotted.

†*305. *Falco biarmicus biarmicus* Temm., Pl. Col. livr. 55, pl. 324 (1825). [*Kaffirland and Cape Colony.*]
South African Lanner.

S. Africa, N. to Angola and E. Africa.

Size similar; wing ♂ 304, ♀ 355 mm.; forehead whitish; fore part of crown black; rest of crown and nape brick-red, with

black shaft stripes; moustachial stripe, feathers round eye and band down side of neck black; above dark brown, barred, except on interscapulary region, with blue-grey, inclining to fulvous on scapulars and secondaries and more regular and paler grey on rump; tail regularly barred with fulvous grey and blackish brown; below vinous buffish, warmer on breast, streaked on chest and slightly spotted on sides with blackish in most birds, but nearly unspotted in oldest examples.

305a. *Falco biarmicus tanypterus* Schleg., Abhandl. Geb. Zool. & Vergl. Anat., heft iii., pp. 8, 16, pl. xii., xiii. (1844). [*Nubia.*] Nubian Lanner.

Slightly larger; wing ♂ 313-325, ♀ 355-373 mm.; above darker and more uniform; nape less rufous; slightly more spotted below, but with the ground colour more buffish white, and the chest as a rule free from markings.

Nubia, Egyptian Sudan Egypt, Arabia, Palestine.

*305b. *Falco biarmicus abyssinicus* Neum., J.f.O., 1904, p. 369. [*Shoa*; type in Tring Mus.] Abyssinian Lanner.

Very slightly larger; wing ♂ 326-344, ♀ 362-375 mm.; lower parts more heavily spotted with black.

Abyssinia, Shoa, Gallaland and Sudan, S. to Uganda, W. to Hausaland and Togoland; Aden.

*305c. *Falco biarmicus erlangeri* Kleinschm., Aquila, viii., p. 33 (1901). [*Tunis and Tangier*: restr. type loc. *Tunis*; type in Kleinschmidt's coll.] North African Lanner.

N. Africa (Atlas district from Tunisia to W. Marocco).

Similar to *F. b. feldeggii*, but paler and less marked with blackish on crown, also slightly smaller ; wing ♂ 310-323, ♀ 338-356 mm.

†*305d. *Falco biarmicus feldeggii* Schleg., in Susemihl, Vögel Europas, pl. 8a (1843 or 1844) ; idem Abh. Geb. Zool. & Vergl. Anat., heft iii., p. 2-3, pl. 10, 11 (1844). [*Dalmatia.*] European Lanner.

S.E. Europe (Balkan countries [not extending to Russia], S. Italy.

Size about the same ; wing ♂ 310-326, ♀345-356 mm. ; with the under parts much more heavily spotted than in *F. b. biarmicus* and the ground colour more creamy white ; crown and nape creamy rufous.

†*306. *Falco cherrug cherrug* Gray, in Hardw. Ill. Ind. Zool. ii., pl. 25 (1833-34). [*India.*] Saker Falcon.

S.E. Europe (Balkan Penin. and S. Russia) ; Cyprus (cas.) ; C. Asia, to N.W. India, China and Sudan in winter.

Larger ; wing ♂ 350-370, ♀ 392-420 mm. ; head pale rufous to rufous white, with narrow blackish shaft stripes ; above earthy brown, all feathers margined with rufous ; quills with white bars on inner webs uniting on margins ; tail barred with rufous white on inner webs and with oval spots on outer webs ; sides of face and throat white, with dusky streaks on ear-coverts, but no distinct moustache ; below whitish, chest slightly and breast and belly thickly marked with blackish brown, becoming bars on flanks. Immature : very little rufous on head ; moustache stripe more apparent ; tail with central feathers generally unmarked ; below more heavily and longitudinally marked.

306a. *Falco cherrug milvipes* Hodgs., in Gray's Zool. Misc., p. 81 (1844) [*nom nud.*]; Jerdon, Ibis, 1871, p. 240. [*Umballa, India.*]
Hodgson's Saker.

Size similar; more barred above with pale rufous; tail regularly and closely barred across centre feathers, not marked with oval spots.

High plateaux of Central Asia (Turkestan, Thibet, Mongolia); in winter S. to India, China, & Baluchistan.

†307. *Falco jugger* (Gray, in Hardw. Ill. Ind. Zool. ii., pl. 26 (1833-4). [*India.*]
Laggar Falcon.

Smaller; wing ♂ 317-330, ♀ 355-370 mm.; feathers of crown dull rufous, with blackish brown centres; nape rather paler and mottled with black; above ashy brown, with pale fulvous margins; rump paler and clearer grey; tail ashy grey, tipped with white, outer feathers barred on inner web with whitish ashy; below white, with narrow black moustachial stripe; lower breast with a few dark shaft-streaks; flanks and thighs ashy brown.

Indian Penin., Assam, E. Baluchistan, E. Afghanistan.

308. *Falco altaicus* (Menzb.), Orn. Turkestan, i., p. 272 (1892). [*Altai and Minusinsk.*]
Altai Falcon.
[*F. lorenzi* (Menzb.) a synonym.]

Wing ♂ 370 mm.; upper parts reddish brown washed with ash, under parts ochraceous with tear-shaped dark brown stripes; tail brown, tipped with pale ochreous, the two middle feathers unbarred, rest with indistinct oval transverse reddish brown spots; tarsus bare for more than half its length. (Dresser). [Not seen.

Mountain ranges of Central Asia; West Siberia.

†309. *Falco mexicanus* Schleg., Abh. Geb. Zool. heft iii., p. 15 (1844). [ex Licht.—*Mexico* =*Monterey*.]
Prairie Falcon.

W. North America, from S. Brit. Columbia to S. Mexico.

Wing ♂ 305-328, ♀ 330-350 mm. ; above brown, with pale fulvous margins ; crown and nape with whitish margins ; tail tipped with white and all but centre pair of feathers barred on inner webs with whitish, but outer webs scarcely spotted ; below white, chest streaked and breast and belly spotted with brown, more in form of bars on flanks.

F. Larger ; length about 18-24 in. (Sub. gen. *Hierofalco* Cuvier).

†*310. *Falco rusticolus rusticolus*[1] Linn., S.N., i., p. 88 (1758). [*Sweden*.]
Norwegian Gyrfalcon.

N. Sweden and Norway ; Lapland ; N. Russia ; S. in winter to Middle Europe.

[Grey-backed form]. Wing ♂ 345-370, ♀388-405 mm. ; head blackish grey ; above dark slate grey barred with pale bluish

[1] A close study of the Gyrfalcons in Europe and America has led me to the conclusion that there is only one species, which is practically circumpolar. In its primitive plumage it was evidently slate-backed, like the typical form (*rusticolus*), but its habitat has induced an albinistic plumage which has resulted in the larger and more powerful form we call *candicans*. This albinistic plumage, although general, is not constant, hence we get in Greenland, and elsewhere, a percentage of primitive grey-backed birds (*holboelli* of Sharpe, *islandus* or *gyrfalco* of other authors), as well as a juvenile plumage which is identical with that of the primitive phase. This albinistic phase has naturally its reflex in a melanistic phase, which is most common in Labrador (*obsoletus* of Gmelin, *labradora* of Audubon) but also occurs in Greenland. Where, however, the range of this species extends southward of the limits of perpetual snow in such a fixed degree that a permanent colony is established, we find the primitive phase coming out as the only plumage ; then we get a race which may justly be named as distinguishable from the common stock of the boreal species. Such examples are *F. r. rusticolus*, *F. r. islandus*, and *F. r. alascanus*. Possibly to these may be added *F. r. uralensis*, if we could ascertain that the grey-backed Asiatic birds had a fixed breeding range south of their albinistic northern relatives, but this we do not know. Bering Island forms a remarkable instance, according to Stejneger, moreover, of a colony of smallish white birds breeding far to the southward of their usual range. Yet, on Bering Island occur larger white birds and also grey-backed Siberian birds (Tring Mus.), but only in winter as far as we know.

grey ; wings and tail browner, latter barred with bluish grey and tipped with white ; below white with a broad slate brown moustachial stripe, the breast and abdomen with drop-shaped stripes and flanks barred ; bill bluish, tip black ; feet yellow.

†*310a. *Falco rusticolus islandus* [*partim*] Brünnich, Orn. Bor., p. 2 (1764). [*Iceland.*] Iceland Falcon.

[Grey-backed form]. Slightly larger ; wing ♂ 368, ♀ 405 mm. ; above dark slate, barred with greyish white, the head streaked with dusky slate and buffish white ; chin and throat white ; below white, chest streaked and belly and sides spotted with slaty black.

Iceland ; S. in winter to Brit. Isles, Europe and N.E. America.

310b. *Falco rusticolus alascanus* Swann, Bull. B.O.C., xlii., p. 67 (1922). [♀ *Norton Bay, Alaska,* Oct. 1879, E. W. Nelson, type in U.S. Nat. Mus., No. 96776.]
[nom. nov. pro *F. sacer* [Forster] of Ridgw., nec auct.]
Alaska Gyrfalcon.

[Grey-backed form]. Smaller ; wing ♂ 340-358, tail 210 mm. ; wing ♀ 386-400, tail 220-230 mm. ; wing (type) 400 mm. ; darker, less grey than *rusticolus,* and with bars on wing-coverts and secondaries rather whiter and wider ; above blackish slate, barred and edged with pale grey ; head more uniform, hind neck mottled with white ; rump lighter and bluer ; primaries broadly barred with white on inner webs and with obsolete spots on outer webs ; tail evenly barred across with dark slate and greyish white ; cheeks with distinct black moustachial stripe ; below white,

Alaska, breeding S. to St. Michael's and Norton Bay, N. to Anderson River (?) ; in winter to S. Alaska, Prybilov Is., Brit. Columbia and Washington State.

chest streaked, breast and under wing-coverts spotted, and flanks barred with black; thighs and under tail-coverts strongly barred with blackish slate; bill bluish, tip black. Juvenile: above dark brown, unbarred at first; tail with fainter and narrower bars; below whitish, heavily and broadly streaked all over with dark brown. More mature birds have the upper parts of a more blackish brown than grey shade until quite old, the bluish shade being then most evident on the rump.

†*310c. *Falco rusticolus candicans* Gmel., S.N., i., p. 275 (1788). ["*Islandia et Scotia*," errore, type loc. subst. Hartert—*Greenland*.] Greenland Falcon.

[Albinistic form]. Larger; wing ♂ 365-380, ♀ 408-428 mm.; bill yellow in old birds; [white phase]: general colour pure white; the feathers above mostly marked with a black or dark brown bar or spot towards tip; head with a few streaks of black; tips of primaries black, inner webs usually with notches obsolete; tail white with more or less obsolete bars on central feathers; below white, usually with a few blackish or brownish striations and spots on sides. [Dark or primitive phase]: above

Circumpolar; breeding in Greenland, Labrador and Arctic America (E. of Alaska), Arctic Europe and Asia[1] (Spitsbergen (?), Novaya Zembla (?); E. to Kamtschatka and Bering Is.); in winter to Brit. Isles, N.W. Europe, Canada and

[1] If the Asiatic birds south of the polar circle are a constant grey-backed race, and distinguishable as a dark breeding race, they would be called *Falco rusticolus uralensis* (Sewertz. and Menzb.), [Orn. Geogr. Europ. Russl., i., p. 288, tab. 3 (1882)—*Ural Mtns., Russia*], but we lack data as to this and only know that both grey-backed and white birds occur in Arctic Asia. On Bering Island, according to Stejneger, the white bird breeds and not the grey-backed one, which he says only comes in winter. The latter has been named *F. grebnitzkii* (Sewertz.), but the name is a synonym of *uralensis*. I have examined two white resident birds and three immature birds in the United States National Museum, and find them smaller than usual *candicans* (wing ♂ 358-362, ♀ 385-400), but at Tring are both grey-backed and larger white winter birds from Bering Island. The name *obsoletus* of Gmelin, it should be stated, has 7 pages priority over *candicans*, but is based on the melanistic variety, and is for that reason best discarded in favour of *candicans*.

dark slate, barred with greyish white in oldest dress; browner, less slaty, in less mature birds (this phase much resembling plumage of *islandus*). Immature: bill bluish black; first plumage plain brown above; below heavily striped lengthwise with dark brown; tail brown with faint or incomplete paler bars; later whitish spots and bars appear on upper parts, the pale tail bars widen, and the large wide stripes on under parts decrease into streaks and into bars on the flanks. [Melanistic phase (*obsoletus*)]: this, common in Labrador, is nearly uniform brownish black instead of white; below marked with white streaks or spots, diminishing according to age in the same way as the dark markings diminish in the white phase.

Northern United States.[1]

Gen. XCV. RHYNCHOFALCO Ridgw. (1873).

Type by orig. desig. *F. femoralis* Temm. = *F. fusco-cærulescens* Vieill.

Wing with third primary longest; first shorter than second; tarsus longer than middle toe, with transverse scutes; sexes alike; size moderate.

*311. *Rhynchofalco fusco-cærulescens fusco-cærulescens* Vieill., N. Dict., xi., p. 90 (1817). [ex *Azara—Paraguay.*]
Aplomado Falcon.

Argentina; Patagonia and Tierra del Fuego (migratory).

Wing ♂ 245-260, ♀ 277-280 mm.; ♂ above dull slaty, greyer on crown and lighter on rump; upper tail-coverts barred and tipped with whitish; tail blackish brown, with

[1] All the winter birds I examined in the American museums from Canada and E. and N. United States were of this form; a few in the white plumage, the rest in the brown immature plumage, but none in the grey adult "primitive" phase. Of course, those from the West, British Columbia, etc., are generally *alascanus*, which appears to migrate down the coast in winter. They are determinable by their small size and dark adult plumage.

about 6 white bands ; a band from behind eye round hind neck white, below which is a line of black on sides of neck ; throat chest, ear-coverts and sides of neck buffy white ; sides of breast black, barred with white narrowly ; belly and vent tawny buff ; ♀ larger and more richly coloured ; sides of head and under parts richer tawny

311a. *Rhynchofalco fusco-cærulescens femoralis* Temm., Pl. Col. pl., 121, 343. [*Brazil*, ex Natterer.]
Lesser Aplomado Falcon.

Smaller ; wing ♂ 233-243, ♀ 258-268 mm. ; above more bluish slate ; tail with narrower bars, grey on central feathers and white on outer.

Venezuela, N. to Cent. America ? S. to Matto Grosso, Brazil (non-migratory)

†*311b. *Rhynchofalco fusco-cærulescens septentrionalis* Todd, Proc. Biol. Soc. Wash., xxix., p. 98 (1916). [*Fort Huachuca, Arizona.*]
Northern Aplomado Falcon.

Larger ; wing ♂ 267-280, tail 180 mm. ; wing ♀ 294-303, tail 201-210 mm. ; plumage similar in colour to typical form.

Mexico, cas. in Arizona and Texas ; S. in winter to Peru (Marayniyoc).

Gen. XCVI. IERACIDEA Gould (1838).

Type by monotypy *Falco berigora* V. & H.

Distance between tips of primaries and tips of secondaries less than half length of tail ; tarsus transversely plated near base of toes, and appreciably longer than in *Falco*.

†*312. *Ieracidea berigora berigora* (Vigors & Horsf.) Trans. Linn. Soc., xv., p. 184 (1827). [*New South Wales*, type in Brit. Mus.]
Striped Brown Hawk.

Size moderate; wing ♂ 330, ♀ 355 mm.; above sandy brown, most of the feathers edged with rufous; head with blackish shaft-stripes; tail ashy brown, tipped with white and barred with rufous; below creamy white with brownish shaft-streaks, and a dark brown moustachial stripe; thighs, axilliaries and inner lower wing-coverts chestnut.

Interior of S. Queensland and N.S. Wales.

312a. *Ieracidea berigora orientalis* Sharpe, Cat. Bds. Brit. Mus., i., p. 422 (1874). [*New S. Wales*, ex Schl. Naum. 1855, p. 254.][1]
Brown Hawk.

Less rufous above, more uniform darker brown, without shaft stripes; below without shaft-stripes, the sides blackish brown, often uniform blackish brown. [Possibly only dark phase of *I. berigora berigora*.]

Coastal districts of S. Queensland and N.S. Wales; whole of Victoria.

312b. *Ieracidea berigora tasmanica* Math., Bds. Austr., v., p. 276 (1916). [*Tasmania*.]
Tasmanian Brown Hawk.

Smaller; wing (sex?) 325 mm.; above brown with buffy tips; below white, with dark shaft-streaks and some brown tips.

Tasmania.

312c. *Ieracidea berigora occidentalis* Gould, P.Z.S. 1844, p. 105. [*Perth*.]
Western Brown Hawk.

S.W. Australia.

[1] For the forms of this group, all very doubtfully distinct, see Mathews's Birds of Australia.

Smaller; otherwise nearest to typical form.

312d. *Ieracidea berigora kempi* Math., Bds. Austr., v., p. 277 (1916). [*Cape York.*] Kemp's Brown Hawk. — Cape York, North Australia.

Wing ♀ 369 mm.; dark phase; above and below smoky black or fuliginous brown.

312e. *Ieracidea berigora melvillensis* Math., Austral. Av. Rec., i., p. 34 (1912). [*Melville Is.*] Northern Brown Hawk. — Northern Territory, N.W. Australia.

Wing ♀ (?) 352 mm.; above dark rusty brown; below sandy brown, with dark shaft streaks.

312f. *Ieracidea berigora centralia* Math., Bds. Austr., v., p. 277 (1916). [*Finke River, Central Australia.*] Central Australian Brown Hawk. — Central Australia.

Very pale race; wing ♂ 315 mm.; above pale rusty brown with black shaft streaks; below white, throat with dark shaft streaks; sides and flanks rufous.

312g. *Ieracidea novæ-guineæ* A. B. Meyer, J.F.O., 1894, p. 89. [*S.E. New Guinea.*] New Guinea Brown Hawk. — S.E. New Guinea.

Differs from typical *I. berigora berigora* in having almost unspotted upper wing-coverts and the darker head and shoulders.

Gen. XCVII. CERCHNEIS Boie (1826).

Type *Falco rupicolus* Daud.

With the general characters of *Falco*, but wings not so long and third primary nearly equal to second; outer and inner toes equal. (Plumage always rufescent; sexes usually dissimliar). Size small (length 9.5-15 in.).

†*313. *Cerchneis tinnunculus tinnunculus* (Linn.), S.N., i., p. 90 (1758). ["*Europe*" = *Sweden.*] Common Kestrel.

Size small; wing ♂ 230-250, tail 158-165 mm.; wing ♀ 245-260, tail 165-172 mm.; ♂ above brick-red, with a few arrow-head black markings, especially on the inner secondaries; head and neck blue-grey, with narrow black shaft lines; primaries dark brown, notched with white; lower back, rump and tail blue-grey, the tail with broad subterminal band of black and tipped with white; below pale rufous fawn, chest with black streaks, becoming spots on flanks; thighs rufous buff, throat and under tail-coverts buff, unspotted; ♀ above entirely rufous, banded with black, with only a bluish shade on rump; tail rufous barred with black; below paler.

Europe, from 68° N. in Scandinavia and 61° N. in Russia to Mediterranean and N.W. Africa; Brit. Isles; W. and C. Asia; in winter to Africa.

313a. *Cerchneis tinnunculus rupicolæformis* (Brehm), Vogelfang, p. 29 (1855). [ex Württemberg MS.—"*Egypt and Germany*"; restricted type loc. *Egypt.*] Egyptian Kestrel.

Below deeper and warmer than in typical form, which it quite equals in size.

Egypt, Nubia; N. Somaliland; S. Arabia.

*313b. *Cerchneis tinnunculus dörriesi* Swann, Syn. List Accip., p. 146 (1920). [♂ *Sidemi, E. Siberia,* Dörries coll., June 2nd, 1884, type in Tring Mus.; co-type: ♀ *Amur River, E. Siberia,* Dörries coll., Mar. 27, 1894, in Brit. Mus., Reg. No. 97, 10, 30, 258.][1] Siberian Kestrel.

Larger and averaging paler above and below; wings and tail longer, the latter especially much longer than in other forms; wing ♂ 255-267, ♀ 260-267 mm.; tail ♂ 172-194, ♀ 178-200 mm.

Siberia (Amur River to Yeneisei) and Mongolia; S. in winter to India, Ceylon, Assam, Burma, China and N.E. Africa (Egypt to Blue Nile).

*313c. *Cerchneis tinnunculus canariensis* Koenig, J.f.O., 1889, p. 263. [*Canary Is.*] Canarian Kestrel.

Smaller; wing ♂ 215-225, ♀ 225-240 mm.; much darker above and below.

W. Canary Is. (Tenerife, Gran Canary, Hierro, Palma, Gomera); Madeira.

313d. *Cerchneis tinnunculus neglectus* (Schleg.), Mus. Pays-Bas, Rev. Accipitres, p. 43 (1873). [*St. Vincent.*] Cape Verde Kestrel.

Size similar; wing ♂ 222, ♀ 228 mm.; a form approaching the last.

Cape Verde Islands.

1 Material from Siberia being very meagre, I have principally determined this form from the considerable number of large and long-tailed birds, always on the pale side, existing in collections from Ceylon, India, Assam, etc., which are obviously migrants from the north, and have no connection with the smaller and darker form breeding in N. India (*C. t. interstinctus*), with the rather dark but nearly typical bird breeding in W. Asia, or with the large dark race breeding in Japan (*C. t. japonicus*). A large immature ♂ bird in my collection from Ceylon has a tail measurement of 194 mm., and there are birds in the Tring collection with nearly the same measurement. That this form also reaches the east side of Africa is shown by ♂ and ♀ examples in my collection from the Blue Nile, both agreeing in paleness with Siberian birds and having the wings respectively 260 and 262 mm., and the tails 178 and 184 mm. Col. Meinertzhagen (*Ibis*, Jan. 1922, pp. 60-61) has recently rejected the Siberian race on wing measurements, but he overlooked the tail measurements. No such measurements as those cited can be found in typical *tinnunculus*.

313e. *Cerchneis tinnunculus dacotiæ* (Hart.), Vög. Pal. Faun., p. 1086 (1913). [*Lanzarote.*]
East Canarian Kestrel.

Wing ♂ 213-225, ♀ 225-250 mm.; above as pale as in *C. t. tinnunculus*; below deeper rusty.

E. Canary Islands (Fuertaventura Lanzarote.)

313f. *Cerchneis tinnunculus japonicus* (Temm. and Schleg.), in Siebold's Fauna Jap. Aves, p. 2, pl. 1, and 1b. (1844). [*Japan =near Nagasaki.*]
Japanese Kestrel.

Larger; wing ♂ 240-247, ♀ 253-260 mm.; head darker than in *C. t. tinnunculus*; dark spots on mantle larger and with broad dark shaft-marks to the feathers; below darker than *C. t. tinnunculus.*

Japan; S. in winter to China, Hainan, Borneo and Philippines.

†*313g. *Cerchneis tinnunculus interstinctus* McClelland, P.Z.S., 1839, p. 154. [*Assam.*]
[=*C. tinnunculus saturatus*, auct.]
Himalayan Kestrel.

Rather smaller; wing ♂ 230-240, tail 152; wing ♀ 240-253 mm.; smaller and much darker than *C. t. tinnunculus*; much deeper rufous above and more heavily spotted; head and tail showing a great tendency to a rufous wash, and tail more generally with remains of black bars even when adult; chest more heavily striped and breast with larger spots.

Mountains of N. India to China; in winter S. to Travancore and Malay Penin.; cas. Ceylon (?).

313h. *Cerchneis tinnunculus carlo* Hart & Neumann, J.f.O., 1907, p. 592. [*Bissidimo near Harrar*, type in Tring Mus.]
Central African Kestrel.

Smaller than *C. t. tinnunculus*; wing ♂ 220-240 mm.; dark form approaching *interstinctus.*

Mountains of Tropical Africa (Somaliland, Abyssinia, Blue Nile, to Victoria Nyanza & Tanganyika); S. Arabia.

*313i.	*Cerchneis tinnunculus rupicolus* (Daud.), Traité, ii., p. 135 (1800). [ex Levaill.—*Cape of Good Hope.*] South African Kestrel. Scarcely larger than *C. t. tinnunculus*; wing ♂ 253 mm.; similar in general colouration, but with sides of face dull blue-grey like head; ♀ tail blue-grey banded with black, instead of rufous.	S. Africa, (Natal, Cape Colony, Damaraland), N. to Angola and Nyasaland.
*314.	*Cerchneis moluccensis moluccensis* (Hombr. & Jacq.), Voy. Pole Sud. Zool. Atlas, pl. 1, f. i. (1842) et texte iii., p. 46 (1853). [*Moluccas* (?).] Moluccan Kestrel. [*C. m. orientalis* a synonym.] Smaller; wing ♂ 220-233, ♀ 228-243 mm.; ♂ above deep bay, with broad arrow-head markings of black; head and hind neck uniform, streaked with black; rump, upper tail-coverts and tail bluish grey, latter with broad black subterminal band and white tips; throat rufous white; below bay colour, streaked on breast and arrow-headed on flanks with black; ♀ more banded above; tail with extra dark bars, besides the subterminal one.	Molucca Is. (Amboyna, Bouru, Ceram, Goram. Peling Is., Halmahera, Morotai, Ternate, Batchian).
314a.	*Cerchneis moluccensis occidentalis* (A. B. Meyer & Wiglesw.), Abhandl. Ber. Mus. Dresd., vi., No. 2, p. 8 (1896). [*Celebes.*] Javan Kestrel. Smaller; wing ♂ 205-230, ♀ 228-234, (Celebes) 234 mm.; paler, with more greyish cheeks and ear-coverts, much whiter under wing-coverts and lighter underside.	Celebes, Borneo, Lesser Sunda Is. from Wetter to Kangean; Java.[1]

[1] *Cerchneis moluccensis microbalia* Oberholser, Pr. U.S. Nat. Mus., liv., p. 178 (1917). [*Solombo Besar I.*], is a synonym.

†*315. *Cerchneis cenchroides cenchroides* (Vig. and Horsf.), Trans. Linn. Soc., xv., p. 183 (1827). [*Australia = Paramatta, N.S. Wales*, apud Math.]
Nankeen Kestrel.

East Australia.

Size similar ; wing ♂ 235-250, ♀ 260 mm. ; ♂ above pale rufous, almost unspotted ; head washed with pale bluish grey, and with black shaft-lines ; rump and tail coverts blue-grey, as also the tail in oldest birds, the latter with broad subterminal black band and white tips ; sides of face greyish white ; below buffish white, the chest tawny buff, that and sides with black shaft-stripes ; under wing-coverts white ; ♀ head and tail like back, the tail usually barred with black.

315a. *Cerchneis cenchroides milligani* Math., Nov. Zool., xviii., p. 253 (1912). [*Parry's Creek, N.W. Australia.*]
Dusky Nankeen Kestrel.

N.W. Australia, Northern Territory.

Smaller ; wing ♂ 225-235 mm. ; darker above.

315b. *Cerchneis cenchroides unicolor* Milligan, Emu, iv., p. 1 (1904). [*Yalgoo.*]
Westralian Nankeen Kestrel.

S.W. and Mid. W. Australia.

Smaller ; below darker, decided cinnamon pink ; tail rusty cinnamon.

†*316. *Cerchneis rupicoloides rupicoloides* (Smith), S. Afr. Q. Jnl., i., p. 238 (1830). [*Groene River, Little Namaqualand*, type in Brit. Mus.]
Larger African Kestrel.

South Africa, S. of Zambesi.

Larger ; wing ♂ 280, ♀ 290 mm. ; ♂ above tawny rufous, with broad cross-bars of black ; head uniform, but streaked with black ; rump and upper tail-coverts blackish, barred with fulvous ; tail ashy rufous, banded with black, the subterminal band broad, followed by a white tip ; primaries blackish brown, the inner ones mottled with rufous on inner webs and spotted on outer webs ; below dull tawny rufous, breast streaked with brown, flanks more heavily marked ; under wing-coverts white ; ♀ similar, but flanks more barred.

316a. *Cerchneis rupicoloides fieldi* Elliott, Field Columb. Mus. Pub., No. 1, Orn., p. 58 (1897). [*Silo Plain, Somaliland.*]
Somali Kestrel.

Somaliland.

Smaller ; much paler above.

316b. *Cerchneis rupicoloides arthuri* (Gurney). List Diurn. Bds. Prey, p. 156 (1884). [*Mombasa.*]
East African Kestrel.

E. Africa (Kenya Colony).

Rather darker, tail with narrower black bars, the pale ones more blue grey.

317. *Cerchneis alopex alopex* (Heugl.) Syst. Uebers., p. 10 (1856), and Ibis, 1861, p. 69, pl. iv. [*prov. Galabat.*]
Fox-coloured Kestrel.

N.E. Africa (Bogosland to Shoa) ; Equat. Africa (Redjaf).

Wing ♂ 268 mm. ; plumage above and below fox red ; head narrowly and back and wing-coverts more broadly streaked with black ; the greater wing-coverts with remains of bars ; primaries black, margined and tipped with paler red ; tail

darker red, with about 15 bars of black; throat unmarked, but rest of under surface with narrow central streaks of black.

317a. *Cerchneis alopex eremica* Oberholser Pr. Biol. Soc. Wash., xxx., p. 76 (1917) nom. nov. pro. *C. a. desertícola* Reichenow, Orn. M.B., vii., p. 190 (1899). [*Mangu, Togo Hinterland.*]
Desert Kestrel.

Togo Hinterland; Gold Coast Hinterland.

Paler below than typical form.

318. *Cerchneis newtoni* (Gurney), Ibis, 1863, p. 34 pl. 2. [*Madagascar.*]
Madagascar Kestrel.

Madagascar; Comoro Is., Aldebra I.

Smaller; wing ♂ 188, ♀ 208 mm.; ♂ above, light rufous, streaked on head and neck and arrow-headed on scapulars and wing-coverts with black; rump and upper tail-coverts dark bluish grey with more or less of black arrow-head markings; tail bluish grey banded with black, subterminal band very broad; forehead, sides of head and under parts creamy white, tinged with rufous on chest, with elongated black spots, becoming more oval on breast and flanks; under wing-coverts white, streaked with black; ♀ similar.

319. *Cerchneis punctatus* (Temm.), Pl. Col., i., livr. 8, pl. 45 (1823). [*Isle de France.*]
Mauritius Kestrel.

Mauritius.

Size similar; wing ♂ 178, ♀ 192 mm.; above dull foxy rufous, with rather broad bars of black; head with blackish shaft-stripes; tail deep bay, with 6 bands of

black ; below white, with large oval spots of brownish black, smaller and more longitudinal on flanks ; ♀ similar.

320. *Cerchneis area* Oberholser, Pr. Biol. Soc., Wash., xxx., p. 75 (1917) ; [nom. nov. pro. *C. gracilis* (Less.) Traité, p. 93 (1831).] [*Seychelles.*]
Seychelles Kestrel.

Seychelles Is.

Smaller ; wing ♂ 142, ♀ 160 mm. ; ♂ above maroon-chestnut, with a few black shaft-lines and spots, chiefly on wing-coverts and scapulars ; rump, upper tail-coverts and tail bluish grey, latter with broad subterminal and 4 other black bands ; head dark bluish grey ; sides of face paler ; below isabelline fawn colour, unspotted ; ♀ scarcely differs.

†*321. *Cerchneis naumanni naumanni* (Fleischer), Sylvan, 1817-18, p. 174 (1818). [*S. Germany and Switzerland*, restr. type loc. *S. Germany*]
Lesser Kestrel.

Mediterranean countries, from Spain to S. Russia,[1] also N.W. Africa ; Asia Minor, Cyprus ; in winter to Africa ; cas. in Central Europe and Brit. Isles.

Size small ; wing ♂ 230-245, ♀ 230-248 mm.; ♂ head, hind neck, rump, upper tail-coverts and tail blue grey, latter tipped with white and with broad subterminal black band ; rest of upper parts cinnamon rufous, unspotted ; greater wing-coverts and inner secondaries blue grey, shaded with rufous externally ; primaries dark brown ; throat whitish ; chest and breast pale cinnamon, marked with small black spots, larger on the flanks ; abdomen and

[1] I have not had an opportunity of examining *C. naumanni sarmaticus* described by Domaniewski (C. R. Soc. Sci. Varsovie, x., p. 1044, 1918, *Poland*), but it seems doubtful if Polish examples can be separated.

under tail-coverts yellowish white ; ♀ more like that of *C. t. tinnunculus*, but smaller and distinguished by its white claws.

321a. *Cerchneis naumanni pekinensis* (Swinh.), P.Z.S., 1870, p. 442. [*Near Pekin*, type in Brit. Mus.]
Chinese Lesser Kestrel.

N. China ; in winter to Himalayas.

Size similar ; wing ♂ 242 mm. ; darker above and below, and without spots below when adult, or with minute spots on sides when less mature ; wing coverts almost entirely blue-grey, only innermost ones slightly washed with rufous.

321b. *Cerchneis naumanni turkestanicus* Zarudny, Mess. Orn., 1912, p. 114. [*Russian Turkestan.*]
Turkestan Lesser Kestrel.

Turkestan ; S. in winter to Somaliland.[1]

Slightly smaller ; wing ♂ 228 mm. ; above with red of mantle much paler ; below paler fawn colour and uniform without spots, except a few on sides in less mature birds ; wing coverts with more blue than in European birds, but not equal to *pekinensis*.

†*322. *Cerchneis sparverius sparverius* (Linn.), S.N., i., p. 90 (1758). ["*America*," ex. Catesby = *Carolina*.]
American Kestrel.

United States, E. of Rocky Mtns. ; S. in winter to Florida and Gulf States.

[1] I have described this form from a presumed typical ♂ from Samarkand, May 1st, 1908, alt. 2,000 ft., D. Carruthers coll., in the Brit. Mus. coll. An example in the Brit. Mus. coll. from Somaliland, very pale and unspotted below, is as pale above as the Samarkand bird and is evidently referable to this form, the line of migration to N.E. Africa being a quite natural one. Examples from Central and S.E. Africa are, however, *C. n. naumanni*. I do not believe that true *pekinensis* occurs in Africa. Palestine birds I regard as intermediate between the Turkestan and typical races.

Wing ad. 190-203 mm., tail 127-152 mm.; head slaty, crown usually rufous; above rufous, more or less barred with black (according to age); tail with subterminal band of black and white tips; outer feathers more or less white, with one or more extra partial bands of black on inner webs (according to age); below buffish white, the chest pale cinnamon fawn, more or less finely spotted with black on sides of body (according to age). [Specific distinctions: crown generally rufous; chest washed with rufous; sides spotted.][1]

†*322a. *Cerchneis sparverius phalæna* (Lesson), Echo du Monde Savant, Ann. 12, June 19, p. 1086 (1845). [*San Blas and Acapulco, Mexico.*]
Western Kestrel.

Slightly smaller; wing ♂ 190, tail 133 mm.; appreciably paler; tail relatively longer and paler; wing-coverts less spotted; rufous crown patch appreciably larger; below with larger, rounder and more numerous black spots; chest cinnamon fawn.

Western North America from E. Brit. Columbia and W. Montana to N.W. Mexico; in winter S. to Mexico and Guatemala.

[1] Opinions differ greatly as to the specific and subspecific value of the American Kestrels, but I think it desirable to give specific rank to the typical race of each of the three groups of forms, and I have pointed out the principal characters on which I base these species. Some ornithologists appear to me to have failed to grasp the most important factors in determining the subspecies of these groups of forms, and to have attached undue importance to tail markings and the spotting of under parts, characters which vary with maturity and require to be considered with great caution. The spotting below is common to the less mature birds of all three groups, but disappears with age entirely in the *isabellinus* group and varies in the other two, while the rufous on crown is likewise common to all three when immature, but disappears in the *isabellinus* and *cinnamominus* groups, yet it is usually retained in the *sparverius* group. The markings of the outer pair of tail feathers and the width of the subterminal tail band are most unreliable characters in themselves, as a series of old and young of both sexes in my collection from one district in Venezuela shows.

†322b. *Cerchneis sparverius peninsularis* (Mearns), Auk., ix., p. 267 (1892). [*San José, Lower California.*]
Lower Californian Kestrel.

Smaller; wing ♂ 165, ♀ 172 mm.; paler; with rufous crown patch; subterminal tail band wide (25 mm.); below buffish white, well marked with black.

Southern Lower California.

*322c. *Cerchneis sparverius paulus* Howe and King, Contr. N. Amer. Orn., i., p. 28 (1902). [*Miami, Florida*, type in M.C.Z., Harvard.]
Florida Kestrel.

Larger; wing ♂ 178-190 mm.; under parts nearly immaculate in old birds, the ground colour either cinnamon fawn or nearly white; throat white.

Florida Peninsula; Bahama Islands (?)[1]

322d. *Cerchneis sparverius carribbæarum* (Gmel.), S.N., i., p. 284 (1788). [ex Briss. "*Antilles*," type loc. sugg. *Dominica.*]
Antillean Kestrel.

Size small; wing ad. 175 mm.; above more heavily banded with black, the tail barred broadly with black even when mature, but bars obsolete on central feathers in some examples; below creamy white, chest washed with fawn, with large black spots on breast and sides.

Lesser Antilles (St. Lucia, Dominica, Guadeloupe. Antigua, Montserrat, Anguilla, Virgin Gorda, St. Thomas) to Porto Rico.[2]

[1] I am unable to say definitely what race inhabits the Bahama Islands, not having seen examples.

[2] I am unable to separate the Porto Rico race [*Cerchneis sparveria loquacula* Riley, Smiths. Coll., xlvii., p. 284, 1904: *Vignes I.*] as so far as the scanty material available shows it is not distinguishable from *caribbæarum*.

*322e. *Cerchneis sparverius dominicensis* (Gmel.), S.N., i., p. 285 (1788). [*San Domingo.*] St. Domingo Kestrel. — San Domingo and Cuba.

Wing ♂ 173 mm.; head slate, usually without rufous on crown, and black bands on back nearly absent; chest pale fawn in oldest birds, faintly striped in younger; below white, unspotted in oldest birds, or with a few dusky spots on sides in less mature; inner webs of primaries white, the black bars nearly obsolete; ♀ with bands above narrower than in typical form; below much whiter, slightly streaked on sides of breast with pale brown.

*322f. *Cerchneis sparverius guatemalensis*[1] Swann, Syn. List Accip., p. 156 (1920). [*Capetillo, Guatemala,* in coll. H. Kirke Swann; co-type *Huehuetenango, Guatemala,* in coll. Brit. Mus.] Central American Kestrel. — Central America (Brit. Honduras, Honduras, Nicaragua, Costa Rica, Guatemala); Mexico (cas. ?).

Wing ♂ 184, tail 133 mm.; above darker than *C. s. phalæna*, especially tail; back more heavily banded with black; tail band slightly broader; head darker slate, either without rufous, or with a small and indistinct nape patch; below creamy white, including the chest, and much more heavily striped on chest and spotted on breast and sides with large black spots; thighs and vent unspotted.

[1] The Central American form here designated is the resident form, and I have added a co-type in the Brit. Mus. coll. obtained in June, as my own type is without date. It is true that North American migrants (principally of the western form, *phalæna*) occur commonly in Central America, but I regard the birds with heavily marked under parts, little or no colour on chest, and little or no red on crown, as quite distinct and forming the resident race in Central America.

*323. *Cerchneis cinnamominus cinnamominus* (Swains.), Animals in Menag., p. 281 (1838). [*Chile.*]
Cinnamon Kestrel.

Larger; wing ♂ av. 198, tail 140 mm.; ♂ with no rufous on crown; ♀ usually with partial crown patch; ♂ tail with one narrow (av. 13 mm.) black subterminal band and white tips mixed with rufous, tips of central pair and inner webs of outer pair of feathers rufous; below white, chest with decided tinge of fawn, and with large black rounded spots on sides; ♀ with much narrower (almost linear) bands on tail-coverts and tail, which is much paler; below whiter with narrower and paler stripes. [Specific distinctions: ♂ slate crown without rufous, pale chest, and spotted under parts; ♀ narrower and more regular bars on tail-coverts and tail.]

Southern S. America: Chile; Argentina (except N.E.)[1]; S. Peru, W. of Andes (?); Patagonia to Straits of Magellan; Falkland Is.

*323a. *Cerchneis cinnamominus australis* (Ridgw.), Pr. Acad. Nat. Sci. Philad., 1870, p. 149. [*Paraguay*, type in U.S. Nat. Mus.; new name for *Falco gracilis* (nec. Lesson) Swains., Anim. in Menag., p. 281, 1838, *Bahia, Braz.*, type in Brit. Mus.]
Brazilian Kestrel.

Slightly smaller; wing ♂ av. 180, tail 127 mm.; tail with subterminal black band appreciably wider (av. 22 mm.); sides moderately spotted with black; ♀ tail darker red, and with broader, straighter, and more complete cross-bars, subterminal one broader; below with broader and darker brown stripes.

Brazil, N. to Amazon River (?), S. to N. Argentina; W. to Paraguay and the eastern slopes of Andes in Bolivia and Peru.

[1] Line of demarcation in Paraguay, Bolivia and S. Peru uncertain.

*323b. *Cerchneis cinnamominus equatorialis* Mearns, Auk., 1892, p. 269. [♂ "*Guayaquil*," errore =*interior of Ecuador*, type No. 101, 309 in coll. U.S. Nat. Mus.]
[*C. c. caucæ* Chapm. and *C. c. andina* Cory, synonyms.][1]
Andean Kestrel.

Ecuador; N. to West Columbia (W. slope of central and northern Andes).

Size similar; wing ♂ 178-190, tail 133 mm.; ♀ wing 184-190 mm.; ♂ head much darker, blackish slate; above darker rufous; tail band 18-22 mm. (central examples widest, northern and southern narrowest); below much deeper cinnamon; spots on sides fewer (except in less mature birds); ♀ above (including tail) and below much darker cinnamon rufous; wing quills washed with rufous on inner webs, black bars much narrower and white interspaces 6 mm. wide; tail bands narrow and regular as in *C. c. cinnamominus*, but underside much less white and bars appearing much narrower, with no black terminal band.

323c. *Cerchneis cinnamominus fernandensis* Chapm., Bull. Am. Mus. N.H., xxxiv., Juan Fernandez Islands, off Chile.

[1] I think that the absence of exact locality for Mearns's type cannot be held to disqualify his name, as it seems certain the example came from some part of Ecuador, and I accept "interior of Ecuador" as a sufficient locality, since I am unable to distinguish four (!) separate races for Ecuador as set forth by Cory (Field Mus. Pub. Orn., Ser. i., pp. 319-23). *C. c. caucæ* appears to me to be a northern extension of this dark form, reducing in size slightly; *C. c. andina* appears to rest on the largest and darkest birds, with fewest spots on sides, and presumably the most mature, judging by the description and by presumed examples I have seen. His *C. c. peruviana*, being the paler southern examples, is in my opinion untenable, as most Peruvian birds can be referred either to *cinnamominus* or *australis*. There are only two groups of forms in South America, the larger *cinnamominus* and the smaller *isabellinus*. If a bird is of fair size and has spotted sides when quite adult it must belong to the former, and if small, with unspotted sides when adult, it must belong to the latter. To treat both as forms of *sparverius*, as Cory does, is confusing. It cannot be too strongly emphasised that the spotting in the *isabellinus* group is immaturity; in *cinnamominus* it remains in the adult, but must vary as we get away from the typical race. *Andina*, by its size, appears to belong to the *cinnamominus* group, and according to Cory's description the spots are not entirely absent.

p. 379 (1915). [*Masatierra I., Juan Fernandez Is.*, type in Am. Mus. N.H.]
Juan Fernandez Kestrel.

Slightly larger; wing ♂ 190 mm.; more deeply coloured and more heavily marked; vent and under tail-coverts clear buff; spots below larger and more numerous; ♀ under parts (except throat) much deeper, in some specimens dull rufous, obscurely streaked and spotted with blackish; vent and thighs clear buff.

324. *Cerchneis isabellinus isabellinus* (Swains.), Anim. in Menag., p. 281 (1838). [*Demarara*, type in Brit. Mus.]
Isabelline Kestrel.

Guiana and E. Venezuela (E. to Caracas(?), S. to Rio Branco, N. Brazil).

Smaller and paler; ♂ wing 178, tail 127 mm.; head and nape bluish slate, without rufous when fully ad.; above rufous, with only one or two small specks of black; wing-coverts slate blue, slightly spotted with black; primaries with black bars more or less obsolete, not extending across webs; tail with black subterminal band 15-25 mm. wide, and white tips; outer web of outer feather white, inner rufous; below light pinkish cinnamon, unspotted (except in less mature birds); thighs and vent white; ♀ below isabelline, with a few fine streaks and spots of pale brown on chest and sides of breast; nape often with rufous patch or tinge. [Specific distinctions: small size, slate crown, and unspotted cinnamon under parts.]

*324a. *Cerchneis isabellinus ochracea* Cory, Field Mus. Pub. Orn. Ser., i., p. 298 (1915). [*Colon, Tachira, W. Venez.*, type in Field Mus.]
Venezuelan Kestrel.

Wing ♂ 178-184, tail 127 mm. ; ♀ wing 190-196, tail 133 mm. ; ♂ above darker rufous, with only a few black spots and bars ; head blackish slate with no rufous patch when adult ; primaries barred right across inner webs ; tail with broader black subterminal band (25-30 mm.) ; below decided rufous cinnamon, unspotted in ad. (less mature with a few black spots on sides) ; ♀ and juv. ♂ isabelline rufous below with dark brown streaks and spots ; crown with more or less rufous.

Venezuela, (Merida, Colon, Valle, Ohama, Montana de la Sierra, Cutata, Margarita I.) ; N.E. Colombia, Andes region of Colombia.[1]

324b. *Cerchneis isabellinus brevipennis* Berl., J.f.O., 1892, p. 91. [*Curacao.*]
Curacao Kestrel.

Wing shorter ; ♂ av. 165, ♀ 175 mm. ; similar to last form but with a greater tendency to banding above and to heavy black spotting below in less mature birds ; ad. ♂ below isabelline rufous unspotted ; tail band av. 25 mm. [Barely separable form.]

Curacao, Bonaire, Aruba Is., off Venezuela.

[1] *C. i. intermedia* Cory (Field Mus. N. H. Orn., i., p. 325 (1915), seems to be non-separable. The average wing of his examples is the same as the measurement of his type of *ochracea* ; the narrower band on the tail seems scarcely a reliable distinction, while the white spotting on outer webs of primaries is a very variable character. *C. i. margaritensis* Cory (T. c., p. 297), I am also unable to distinguish, as examples with the paler under parts occur in the Merida district along with the darker birds. His *C. i. perplexa* (t. c., p. 327) I am unable to distinguish, dark and pale-breasted birds occurring together as I have before pointed out ; while *C. i. distincta* (t. c., p. 297) is most certainly typical *isabellinus*, the principal character, the obsolete bars on inner webs of primaries, being present in Brit. Guiana examples.

*325. *Cerchneis sparverioides* (Vig.), Zool. Jnl., iii., p. 436 (1828). [*Cuba.*]
Cuban Kestrel.

Wing ♂ 184-197, ♀ 188-192 mm.; head, neck, back and wing-coverts slaty blue; with a tinge of rufous on interscapulary region; rump, upper tail-coverts and tail deep bay, the tail tipped with white and with a broad subterminal bar of black; throat and sides of face whitish; below chestnut fawn, paler on vent, and shaded with greyish on flanks, with one or two spots of black.

Cuba; San Domingo (?); cas. Florida (?)

Gen. XCVIII. DISSODECTES Sclat. (1864).

Type by subs. desig. (Sharpe, 1874) *Falco dickinsoni* Sclat.

With the general characters of *Cerchneis* but with a more or less constant double-toothed mandible, and plumage not rufescent; wing with third primary longest.

326. *Dissodectes ardosiacus* (Bonn. et Vieill.), Enc. Meth., Orn., iii., p. 1238 (1823). [*Senegal.*]
Slate-coloured Kestrel.

Wing ♂ 225 mm.; general plumage slaty grey (paler below) with dark shaft-lines to the feathers; tail with whitish bands on inner webs; throat and sides of face whitish.

W. Africa (Senegambia to Angola); Equatorial Africa (Uganda to Egypt. Sudan and Abyssinia).

327. *Dissodectes dickinsoni* Sclat., P.Z.S., 1864, p. 248. [*Shirē River.*]
Dickinson's Kestrel.

Portuguese E. Africa, Nyasaland, Angola.

Smaller ; wing ♂ 210 mm. ; head and neck whitish ashy, with distinct blackish shaft-stripes ; rest of upper parts blackish brown, the primaries darker and banded on inner webs with white ; rump and upper tail-coverts white, shaded with grey ; tail greyish white, banded with black, the subterminal band broad ; throat whitish ; under parts ashy brown.

328. *Dissodectes zoniventris* (Peters), Verhandl. Akad. Wiss. Berl., 1853, p. 783 (1854). [*Madagascar.*] Madagascar Grey Kestrel. Madagascar.

Wing ♂ 221 ; ♀ 230 mm. ; above ashy grey with black shaft-stripes, paler and bluer grey on rump and upper tail-coverts ; scapulars and wing-coverts barred with greyish black ; primaries blackish, barred with rufous or whitish on inner webs ; tail black, all but the 2 central feathers barred with greyish white ; forehead and throat whitish, streaked on throat and barred below with ashy brown.

Sub. Fam. VIII. *PANDIONINÆ.*

Gen. XCIX. PANDION Savigny (1809).

Type *P. fluvialis* Sav. = *Falco haliaëtus* L.

Plumage very close and compact, wanting the accessory plumale ; no facial disc ; eyes placed laterally in the head ; nostrils generally not concealed by bristles ; tarsus reticulated ; toes devoid of feathers, the under surface rough, covered with small pointed scales ; the outer toe reversible. Size large (length 20-24 in.).

†329. *Pandion haliaëtus haliaëtus* (Linn.), S.N., i., p. 91 (1758). [*Europe = Sweden.*]
Common Osprey.

Wing ad. 480-530 mm.; head white, the crown striped with blackish brown; nape feathers elongated and lanceolate; ear-coverts and stripe through eye blackish brown; above dark brown, with paler margins to most of the feathers; tail dark brown, inner webs barred with dark brown and whitish; below white, the breast varied with pale brown centres to the feathers; bill black; feet blue.

Europe, from Lapland (and formerly Scotland) to the Mediterranean and Coasts of N. Africa and Red Sea; S. Arabia; N. Asia to Japan and Kamtschatka.

†*329a. *Pandion haliaëtus carolinensis* (Gmel.), S.N., i., p. 263 (1788). [*Carolina*, ex Catesby.]
American Osprey.

Size similar; wing ♂ 460-490, ♀ 492-518 mm.; dark markings of head blacker; above darker and richer brown; less marked on under side; tail with indistinct darker bars on central feathers.

N. America, N. to Newfoundland and Alaska; S. in winter to Cent. America; S. America, S. to Peru and Paraguay.

329b. *Pandion haliaëtus ridgwayi* [" Ridgweir," err.] C. J. Maynard, Amer. Exch. and Mart, Boston, Jan. 15, 1887. [*Bitter Guana Key, Bahama Is.*, type in Brit. Mus. (?)]
Bahaman Osprey.

Size similar; wing ♀ [M.C.Z.], 495 mm.; head, hind neck, and under parts pure white, with only one or two dark specks on crown, and slight streaks on chest.

Bahama Is.

*†329c. *Pandion haliaëtus cristatus* (Vieill.), N.D., iv., p. 481 (1816). [*New Holland = Tasmania*, apud Math.]
White-headed Osprey.

Similar to typical race, but smaller; wing ad. 430-460 mm.; head and hind neck much whiter, generally without markings; tail dark brown, without visible bars; chest marked with pale brown.

Australia; Tasmania; Sunda Is., Moluccas; New Guinea; Philippines; Solomon Is.

329d. *Pandion haliaëtus microhaliaëtus* Brasil, Rev. Franc. Orn., 1916, p. 201. [*New Caledonia.*]
Lesser Osprey.

Smaller; wing (New Caledonia), 392-412, wing (Celebes), ♂ 383, ♀ 430, tail 175 mm.

New Caledonia; Celebes.

Addendum to pp. 3-4.

Dr. Wetmore has pointed out to me that Molina apparently named the continental and not the coastal Turkey Vulture in Chile, so it becomes necessary to use his name *iota* for the form I have renamed *meridionalis* and to drop the latter name. Therefore *iota* used for the coastal bird, as suggested by Chubb, must be replaced by *falklandica* of Sharpe. I also find it desirable to restore *septentrionalis* for the larger U.S. race which I included with *C. aura aura*, to unite with the latter my *C. aura insularis*, and also to distinguish the small Eastern South American red-headed bird, united by Chubb with the yellow-headed bird under the name of *ruficollis*, which properly belongs to the former. The races therefore stand as below (the corrections being also indicated) :—

4. *Cathartes aura aura* (Linn.).
For distribution read " E. Mexico, Guatemala, Cozumel I., Cuba, Jamaica, Bahamas " ; in description for wing measurement read " 470-505 " ; and before " metallic reflections " add " blue and purple."

4a. *Cathartes aura iota* (Molina), Saggio St. N. Chile, pp. 265, 343 (1782). [" *Chile*," type loc. subst. *Santiago, Chile.*]

4b. *Cathartes aura falklandica* (Sharpe), Ann. N.H. (4), xi., p. 133 (1873). [*Berkeley Sound.*]
To distribution add " on coast and also to Chincha Is., Peru." To description add " above glossed with green and bronze."

4c. *Cathartes aura septentrionalis* (Wied), Reise Nord. Amerika, i., p. 162 (1839). [*Near New Harmony, Indiana.*] N. America, S. to Mexican tableland.

Larger than *C. aura aura* ; wing ad. 510-540, tail 270-285 mm. ; plumage blackish brown, wing-coverts margined with pale brown ; above glossed with blue and purple.

4d. *Cathartes aura ruficollis* Spix, Av. Bras., i., p. 2, 1824. [*Interior Bahia et Piauhy.*] Brazilian Turkey-Vulture. Eastern S. America (Venezuela, Guiana and Brazil to Paraguay).

Smaller ; wing ad. 485-510, tail 270 mm. ; blacker than *C. aura aura* or *C. aura iota* ; less brown on wings ; plumage glossed with blue and purple.

5. *Cathartes urubitinga* Pelz, Sitzungsb. Akad. Wien, xliv., p. 39 (1861). [*S. and C. Brazil.*]
[=*C. a. ruficollis*, Swann Synopsis, p. 4.]

To description add : " above glossed with green and violet."

Errata et Addenda.

Page 5, No. 6.—For "*californicus*" read "*californianus.*"

Gen. VI. add: Type by monotypy *Falco serpentarius* Miller.

Page 8, No. 13.—In description, line 2, for "back" read "black."

Page 9, No. 14b.—For "*Gymnogyps*" read "*Pseudogyps.*"

Page 12, No. 21.—For distribution read: "Northern S. America" only.

After this article add:

21aa. *Polyborus cheriway audubonì* Cass. Pr. Philad. Acad. 1865, p. 2. [*Texas.*] — S. United States, Cuba, Mexico, and Central America.

Larger; wing ♂ 390-400 mm. (as against 360 mm. in S. American form); plumage browner; under tail-coverts white, with a few dark bars only.

Page 15, No. 30.—For distribution read:— Paraguay, N. Argentina (Chaco dist.), S. Brazil.

For description read:
Wing ♂ 296, ♀ 295-305 mm.; above blackish brown, with slight paler edgings; behind eye each side a black stripe; head and hind neck buff, streaked with pale brown; upper tail-coverts and basal two-thirds of tail buffish white, with about 7 blackish bars on tail; apical third of tail black; below deep to pale ochraceous buff according to age. Juv.: head, neck and under parts dark brown, latter heavily striped with whitish.

Page 15, No. 30a.—For distribution read:— Panama, Colombia to Brit. Guiana.

For "Not seen" read:
Wing ♂ 300 mm.; above browner than in *M. c. strigilatus*; head and under parts, especially under side of wings, warm buff instead of white; base of primaries with narrow blackish bars.

After this article add:

30b. *Milvago chimachima strigilatus* Spix., Av. Bras., i., p. 10 and pl. [juv.] (1838). [*River Xingú.*] White-breasted Caracara. — E. and Central Brazil, N. to Amazonia.

Smaller; wing ♂ 265, ♀ 280-290 mm.; above blacker; basal half of primaries pure white, without bars; head and hind neck buffish white; upper tail-coverts and basal two thirds of tail white, the bars more or less obsolete; below pure white.

Page 18, No. 34a.—To distribution add: "N.E. Siberia."

Page 20, No. 38a.—After this article add:

38b. *Circus assimilis quirindus* Math., Bds. of Austr., v., p. 23 (1915). [*Celebes.*] — Celebes.

Smaller; wing ♂ 370-375, ♀ 425-435 mm.; above bluer grey; throat and chest grey, without spots.

Page 25, No. 49.—For distribution read: "Brazil and Paraguay"; and after No. 49a add:

49b. *Micrastur melanoleucus percontator* Cabot, Boston Jnl. N.H., vol. 4, p. 462 (1844). [*Chichen Itza, Yucatan.*] Mexican Harrier-Hawk. — Mexico and Yucatan, S. to Central America and Northern S. America.

Larger; wing ♂ 260-278, ♀ 275-292 mm. (as against 255-260 and 270-275 mm. in typical form); above blacker; juvenile deeper ochraceous buff below.

Page 27, No. 55.—For distribution read: "Mexico to Nicaragua"; and after this article insert:

55a. *Climacocercus guerilla interstes* Bangs, Auk., 1907, p. 289. [*La Estrella, Cartago, Costa Rica*, type in M.C.Z., Harvard.] Bangs's Harrier-Hawk. — Costa Rica, S. to Panama.

Wing ♂ 160-167, ♀ 171 mm.; above like *C. guerilla guerilla* (♂ blackish slate, wings browner; ♀ back as well as wings chocolate brown); below closely barred down to under tail-coverts, while in *C. guerilla guerilla* the black bars are narrower and more widely spaced on centre of abdomen, the vent much whiter.

55b. *Climacocercus guerilla jugularis* Gurney, List Diurn. Bds. Prey, p. 117 (1884). [*Brazil, Venezuela, Colombia*—type loc. selected *Venezuela.*] — Colombia, Venezuela Brazil.

Wing ad. 170-182 mm.; above much greyer slate; below heavily barred as in *interstes* but the chest tinged with rufous.

Page 35, No. 66d.—The following name has priority over "*tenebrosus*":
Astur tachiro aceletus Oberholser, Pr. U.S.N. Mus., xxviii., p. 829 (1905). [*Taveta, B.E.A.*, type in U.S.N. Mus.]

After this article add:

66dd. *Astur tachiro orienticola* Oberholser, Ann. Carnegie Mus., iii., p. 495 (1906). [*Mombasa*, type in Carnegie Mus., Pittsburgh.] — Mombasa, B.E.A.

Small pale form; wing ♀ 198 mm.

Page 45, Footnote.—Last line, for " to " *Accipiter*, read " from " *Accipiter*.

Page 52, No. 101.—For *Accipiter fuscus fuscus*, etc., read : *Accipiter velox velox* (Wils.), Amer. Orn., v., p. 116, pl. 45, f. 1 (1812). [*Banks of Schuylkill R., near Philadelphia.*]

Page 52, No. 101c.—For " Vetomre " read " Wetmore."

Page 53, No. 103.—After this article add :

103a. *Accipiter superciliosus exitiosus* Bangs and Penard, Pr. New Engl. Zool. Cl., vii., p. 45 (1920). [*Carrillo, Costa Rica*, type in M.C.Z., Harvard.] Costa Rica, S. to West Colombia.

Smaller ; wing ♂ 127-134, ♀ 148 mm. ; darker above, blacker ; below with bands broader and more distinct.

Page 58, No. 112a.—For " *ethronemius* " read " *erythronemius*."

Page 74, No. 138a., line 4.—For " *Ehmeke* " read " *Ehmcke*."

Page 74, No. 139.—In distribution, " Egypt " should be transferred from line 3 to line 9, after " India."'

Page 75, No. 139a.—To distribution after " Tunisia " add " Egypt and S. Palestine."

Page 76, No. 140a.—" W. Sclat " should be without parentheses.

Page 80., No. 143i., line 4.—For " *nudem* " read " *nudum*."

Page 104, No. 179.—In distribution, for " S.E." read " N.W."

Page 114, No. 196. line 3.—For " *propre* " read " *prope*."

Page 119, No. 205c., line 3.—For " *nudem* " read " *nudum*."

Errata et Addenda.

Page 9, Gen. X.—After *auricularis* insert " Daudin."

Page 28, No.56b.—After this article insert :

56c. *Geranospizias cærulescens livens* Bangs & Penard, Proc. Biol. Soc., Wash., xxxiv., p. 89 (1921). [*Alamos, State of Sonora*, type in M.C.Z., Harvard.] N.W. Mexico.

Wing ♂ 334, ♀ 349 mm. ; paler, not blackish, but neutral grey ; larger and darker than *G. c. cærulescens*.

Page 33, No. 64e.—To distribution add : " probably breeding N. of United States." For discription read : " much darker grey (blacker) and generally fogged with blackish. Juv. : very brownish, with the whites dull and rather ruddy."

Page 37, No. 71.—For wing measurement read ♂ 145-155, ♀ 180-182 mm.

Page 90, No. 156a.—For this article read :

Asturina plagiata micrus Miller and Griscom, Am. Mus. Novitates, No. 25, p. 4 (Dec. 7, 1921). [*Chinandega, Nicaragua*, type in Am. Mus. N.H.] Nicaragua, Costa Rica.

Page 93, No. 157i.—For this article read :

Rupornis magnirostris puchevani J. & E. Verr., Rev. et Mag. de Zool., 1855, p. 350. [*Paraguay, apud* Chubb.]

Page 103, No. 175.—For " Chauchamayo " read " Chanchamayo."

Page 165, No. 263.—I am unable to accept *Ictinia plumbea vagans* recently described by Miller & Griscom (Am. Mus. Nov., No. 25, p. 5, Dec. 7, 1921—*Pena Blanca, Nicaragua*), as it is based on larger size only and has not a definite range. It is presumed to breed in both Central America and S. America. My smallest bird is from Guatemala (wing 287 mm.) and my largest pair from Ecuador (wing 293-300 mm.). The examples with wings of 300-319 mm. are not confined to Central America, and the largest bird measured by Miller & Griscom is from Matto Grosso. Most of the ♂ examples from the latter locality are placed under the typical form, and most of the ♀ examples under *vagans* !

Page 164, No. 262b.—Miller & Griscom (*cit. supra*, p. 13) think Chubb's characters are insufficient to distinguish *leonæ* from *meridensis* Swann. In an errata slip they retain *leonæ* as the older name, to include the Venezuelan and Guianan birds. I think, however, that Nicaraguan birds are undoubtedly larger than Venezuelan and that both races may stand, *leonæ* being the name for the Central American race.

PLATES OF EGGS.

1. *Ægypius monachus*, Nos. 1, 2 (Spain). *Gyps fulvus fulvus*, Nos. 3, 4 (Spain).
2. *Ægypius monachus*, Nos. 1, 2 (Spain).
3. *Neophron percnopterus percnopterus*, Nos. 1, 4 (Pyrenees); No. 2 (Palestine); No. 3 (Spain).
4. *Gypaëtus barbatus grandis*, Nos. 1, 3 (Spain); No. 2 (Pyrenees).
5. *Elanus cæruleus cæruleus*, Nos. 1, 3 (S. Africa). *Elanus cæruleus vociferus*, No. 2 (India). *Circus cyaneus cyaneus*, Nos. 4, 5, 6. *Circus macrourus*, No. 7 (Turkey); Nos. 8, 9 (S. Russia). *Circus æruginosus æruginosus*, No. 10 (Hungary). *Circus pygargus*, Nos. 11, 12 (Spain).
6. *Buteo vulpinus intermedius*, Nos. 1, 2 (Orenburg, Russia). *Buteo buteo buteo*, Nos. 3, 4, 5, 6.
7. *Triorchis lagopus lagopus*, Nos. 1, 2, 3, 4 (Lapland). *Buteo ferox ferox*, No. 5 (S. Russia); No. 6 (Asia Minor).
8. *Hieraaëtus fasciatus fasciatus*, No. 1. *Hieraaëtus pennatus*, No. 2 (Spain). *Aquila nipalensis orientalis*, No. 3 (S. Russia). *Circaëtus gallicus*, No. 4 (Styria).
9. *Aquila pomarina pomarina*, Nos. 1, 2, 3 (Pomerania). *Aquila clanga*, Nos. 4, 5, 6 (Transylvania).
10. *Aquila heliaca*, Nos. 1, 2 (Bulgaria). *Aquila adalberti*, No. 3 (Spain). *Aquila rapax belisarius*, No. 4 (Atlas Mtns., N.W. Africa).
11. *Aquila chrysaëtos chrysaëtos*, Nos. 1, 3 (French Pyrenees); No. 2 (Ural Mtns.). *Aquila chrysaëtos occidentalis*, No. 4 (S. Spain).
12. *Milvus milvus milvus*, Nos. 1, 2 (Denmark); Nos. 3, 4 (Spain). *Milvus migrans ægyptius*, No. 5 (Egypt); No. 6 (Palestine).
13. *Milvus migrans migrans*, Nos. 1, 2 (Spain); No. 3 (Pomerania). *Milvus lineatus*, Nos. 4, 5 (Turkestan); No. 6 (Thibet).
14. *Pernis apivorus*, Nos. 1-6 (Europe).
15. *Falco rusticolus rusticolus*, Nos. 1-3 (Lapland). *Falco rusticolus candicans*, No. 4 (Greenland). *Falco rusticolus islandus*, Nos. 5, 6 (Iceland).
16. *Falco cherrug cherrug*, No. 1 (Turkey); No. 2 (Bulgaria); Nos. 3, 4 (S. Russia). *Falco biarmicus feldeggii*, Nos. 5, 6 (Bulgaria).
17. *Falco peregrinus peregrinus*, No. 1 (Denmark); No. 2 (French Pyrenees); Nos. 3, 4 (Germany); No. 5 (Finland). *Falco peregrinus brookei*, No. 6 (Damietta, Egypt); No. 9 (Tangier, Morocco). *Falco pelegrinoides pelegrinoides*, Nos. 7, 8 (Ghizeh, Egypt).
18. *Falco subbuteo subbuteo*, No. 1 (Germany); Nos. 2, 5 (Styria); No. 3 (Russia). *Falco columbarius regulus*, No. 4 (Finmark); No. 6 (Scotland); Nos. 7, 8 and 9 (Lapland). *Astur badius dussumieri*, Nos. 10, 12 (India). *Astur brevipes*, No. 11 (Greece).
19. *Falco eleonoræ*, Nos. 1-12 (Greece).
20. *Cerchneis tinnunculus tinnunculus*, Nos. 1-6. *Accipiter nisus nisus*, Nos. 7-12.
21. *Cerchneis naumanni naumanni*, Nos. 1-6 (Styria). *Falco vespertinus vespertinus*, Nos. 7-12 (Russia and Hungary).
22. *Pandion haliaëtus haliaëtus*, Nos. 1, 5 6 (Germany); No. 3 (Sweden); No. 4 (Finland). *Pandion haliaëtus carolinensis*, No. 2 (Pennsylvania).

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4, 5, 6. CIRCUS CYANEUS.
7, 8, 9. CIRCUS SWAINSONI.
10. CIRCUS ÆRUGINOSUS.
11, 12. CIRCUS CINERACEUS.

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1–6 FALCO TINNUNCULUS.
7–12 ACCIPITER NISUS.

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5, 6, MILVUS ÆGYPTIUS.

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4, 5, 6, MILVUS MELANOTIS.

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4, 6, 7, 8, 9 FALCO ÆSALON.
10, 12 ASTUR BADIUS.
11 ASTUR BREVIPES.

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FALCO ELEONORÆ.

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1—5 FALCO PEREGRINUS.
6 and 9 FALCO PUNICUS.
7 „ 8 FALCO BARBARUS.

1, 2, 3, 4. FALCO CHERRUG.
5, 6. FALCO FELDEGGI.

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1, 2, 3, FALCO GYRFALCO.

4, FALCO CANDICANS.

5, 6, FALCO ISLANDUS.

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7—12. FALCO VESPERTINUS.

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PANDION HALIÆTUS.

PART I.—SEPT. 28, 1921.

A

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Comprising Species and Subspecies described up to 1920, with their Characters and Distribution

BY

H. KIRKE SWANN, F.Z.S., M.B.O.U.

Corresponding Fellow, Amer. Orn. Union.

SECOND EDITION

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