

the blue colour on the wing-coverts is liable to considerable variation. Sometimes the transverse bars are blue and black; in other birds white, blue, and black, and I find that when the latter is the case, the pattern of the whole is changed, the black bars being more apart. Now and then, but as it seems rarely, tiny white spots can be detected at the end of some of the coverts.

XXXI.—*A List of the Birds of the Anglo-Egyptian Sudan, based on the Collections of Mr. A. L. Butler, Mr. A. Chapman and Capt. H. Lynes, R.N., and Major Cuthbert Christy, R.A.M.C. (T.F.). Part III. PICIDÆ—SAGITTARIIDÆ.* By W. L. SELATER, M.B.O.U., and C. MACKWORTH-PRAED, M.B.O.U.*

(Plate XIX.)

THIS, the third portion of the Birds of the Sudan, contains the Picarian and Accipitrine birds, and we trust that the next part will complete this somewhat lengthy paper.

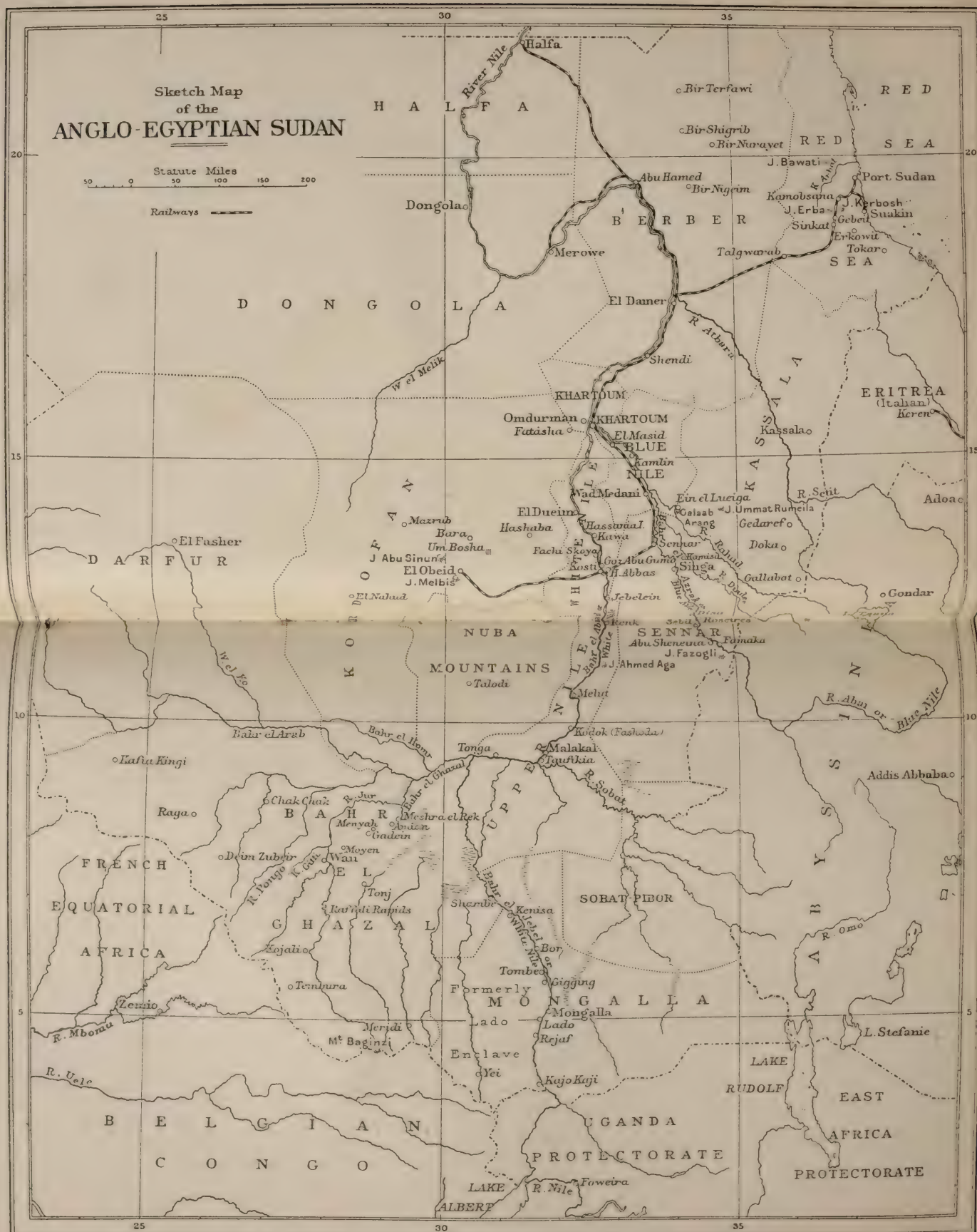
In working out this part we have found Mr. Claude Grant's unfinished account of the birds of the Cosens collection from British East Africa (Ibis, 1915, pp. 1-76, 235-316, 400-473) most useful, as he paid special attention to the racial forms of many of the species met with, and we have very frequently referred to his work. We hope that he may soon return to this country and complete his task which was interrupted by military duty.

For the convenience of readers we have reprinted the map of the Sudan, published in the first portion of our paper.

As before, the names of the Provinces into which the Anglo-Egyptian Sudan is divided for administrative purposes have been added to the localities cited. These have been abbreviated as follows:—

Ber. = Berber Province, R.S. = Red Sea Province, Kas. =

* Continued from Ibis, 1918, p. 721.



Kassala, **Sen.** = Sennar, **B.N.** = Blue Nile, **Kh.** = Khartoum Province, **Kor.** = Kordofan Province, **W.N.** = White Nile Province, **U.N.** = Upper Nile Province, **B.G.** = Bahr el Ghazal, **Mon.** = Mongalla Province, and **L.E.** = Lado Enclave.

There are no new subspecies described in the present part.

Family PICIDÆ.

Campethera nubica nubica.

Picus nubicus Gmelin, Syst. Nat. i. pt. 1, 1788, p. 439: Nubia.

Dendromus nubicus (Gm.) ; Reichenow, V. A. ii. p. 178.

Campothera nubica (Gm.) ; Butler, Ibis, 1905, p. 358, 1909, p. 401.

[B. coll.] 1 Khor Arbat May, **R.S.** ; 5 Roseires Apl. June Aug. Sept., 1 Gerif Apl. **Sen.** ; 1 Sherif Yakub Apl., 1 Ein el Lueiga May, **B.N.** ; 1 Jebel Melbis Apl. **Kor.** ; 1 Jebel Ahmed Agha Feb., 1 Bahr el Zeraf June, **U.N.** ; 1 Giggling, **Mon.**

[C. & L. coll.] 1 Kamisa Dec. **Sen.** ; 2 Kostî Jan. **W.N.** ; 1 nr. Lake No Feb. **U.N.**

[Gurney coll.] 1 Metemma Feb. **Ber.**

Widely distributed throughout the Sudan from north of Khartoum to Uganda and from the Red Sea to Kordofan (*A. L. B.*).

Campethera punctata balia.

Picus balius Heuglin, Orn. N.O.-Afr. i. 1871, p. 810 : Djur and Bongo river, **B.G.**

Dendromus balius (Heugl.) ; Reichenow, V. A. ii. p. 182.

Campothera nubica apud Butler, Ibis, 1908, p. 248.

[B. coll.] 1 Chak Chak Feb. **B.G.**

[Chr. coll.] 2 Mt. Baginzi Mch., 1 Wau, **B.G.**

With this subspecies *Dendromus hargitti* Sharpe (Ibis, 1902, p. 638 : Semmo, Niam-Niam), the type of which is in the British Museum, is synonymous.

Campethera abingoni chrysurus.

Dendromus chrysurus Swainson, Birds W. Afr. ii. 1837, p. 158: Senegal; Reichw. V. A. ii. p. 173.

Dendromus abingoni chrysurus Neum. Bull. B. O. C. xxi. 1908, p. 96.

[Chr. coll.] 1 Meridi Feb. **B.G.**

This bird closely resembles those taken on the Bamingi and Shari rivers by Alexander, and alluded to by Neumann. It has not hitherto been recorded from the Sudan or the Nile valley.

Dendropicos lafresnayi lepidus.

Ipoctonus lepidus Cab. & Heine, Mus. Hein. iv. pt. 2, 1863, p. 118: Abyssinia.

Dendropicos lafresnayi lepidus Claude Grant, Ibis, 1915, p. 462.

[B. coll.] 2 Sheik Tombé, summer, **Mon.**; 1 Lado Feb. **L.E.**

[Chr. coll.] 2 Yambio Meh. **B.G.**

We have followed Claude Grant in his revision of this group. This form is only found in the Mongalla Province, the Lado enclave, and the Bahr el Ghazal, and ranges to Abyssinia, German East Africa, and the eastern Belgian Congo.

Dendropicos pœcilolæmus.

Dendropicos pœcilolæmus Reichw. O. M. 1893, p. 30: Songa west of Lake Albert; id. V. A. ii. p. 196.

[B. coll.] 2 Kajo Kaji Meh. **L.E.**

[Chr. coll.] 2 Meridi Jan. Feb. **B.G.**

This little Woodpecker with a spotted breast is known from Uganda and the upper Welle valley, but does not appear to have been hitherto recorded from the Sudan. It is probable that *Picus minutus* recorded by Des Murs (Lefebvre's 'Voyage en Abyssinie,' vi. 1845, p. 176*, and Reichw. V. A. ii. p. 199 under *Dendropicus minutus*) as having been obtained on the White Nile by M. d'Arnaud really referred to this species.

Thripias namaquus schoënsis.

Picus schoënsis Rüppell, Mus. Senck. iii. 1842, p. 120 : Shoa.

Mesopicus schoënsis (Rüpp.) ; Reichw. V. A. ii. p. 191.

Campothera shoënsis (Rüpp.) ; Butler, Ibis, 1908. p. 247.

[B. coll.] 1 Khor Gitti Jan. B.G.

Yungipicus obsoletus obsoletus.

Picus obsoletus Wagler, Isis, 1829. p. 510 : Senegambia.

Dendropicos obsoletus (Wagl.) ; Reichw. V. A. ii. p. 199.

Iyngipicus obsoletus (Wagl.) ; Butler, Ibis, 1905. p. 358, 1908, p. 248.

[B. coll.] 2 Roseires Apl. Aug., 1 Rahad river May, Sen. : 1 Kaka Feb., 1 Bahr el Zeraf June, U.N. ; 1 Kátta Jan., 1 Chak Chak Feb. B.G. ; 2 Sheik Tombé, Mon.

[C. & L. coll.] 1 nr. Sennar Jan., 2 Kamisa Dec. Sen. ; 1 Jebelein Jan. W.N. ; 1 Jebel Ahmed Agha Jan., 3 Tonga Feb. U.N.

[Chr. coll.] 1 Yei Nov. L.E.

Some of these birds, especially those from the Bahr el Ghazal and Lado, are slightly darker than the typical race and approach *Y. o. ringens* Hartert from British East Africa.

Yungipicus obsoletus heuglini.

Iyngipicus obsoletus heuglini Neumann, J. f. O. 1904, p. 402 : Eritrea.

Iyngipicus obsoletus apud Butler, Ibis, 1909, p. 401.

[B. coll.] 1 Khor Arbat May, R.S.

[C. & L. coll.] 1 Sinkat Mch. R.S.

Distinguished from the typical race by the small amount of the white on the wing-coverts. This bird is apparently new to the British Museum collection.

Mesopicos goertæ poicephalus.

Dendrobates poicephalus Swainson, Birds W. Afr. ii. 1837, p. 154 : W. Africa.

Mesopicos goertæ poicephalus (Swains.) ; Reichw. V. A. ii. p. 186.

Mesopicus pæocephalus (Swains.) ; Butler, Ibis, 1908, p. 248.

[B. coll.] 1 Shendi May, Ber. ; 1 nr. Renk Feb. U.N. ;
1 Gardain Jan., 1 Pongo Feb., 1 Chak Chak Feb.,
1 Wau Apl. B.G. ; 3 Mongalla Jan. July, 1 Sheik
Tombé May, 1 Kenisa, 2 Giggling, 2 Shambe Jan.
Mon. ; 1 Lado Feb. L.E.

[C. & L. coll.] 1 Jebel Ahmed Agha Jan. U.N.

[Chr. coll.] 3 Meridi Jan., 1 Yambio Mch., 1 Wau
July-Aug. B.G. ; 1 Yei Dec. L.E.

[Gurney coll.] 1 Meroë Jan. Ber.

Mesopicos goertæ abessinicus.

Mesopicos goertæ abessinicus Reichw. O. M. 1900, p. 58 :
Abyssinia ; id. V. A. ii. p. 187.

[B. coll.] 2 Roseires July, Aug. Sen.

[C. & L. coll.] 2 Kamisa Dec., 1 Senga Dec. Sen.

Owing to the large amount of material, notably from the Sudan, which has come into the Museum since Claude Grant reviewed this group (Ibis, 1915, pp. 467-470), we think it advisable to do so again. As we now have specimens of *M. g. abessinicus* Reichw., the connecting link between *M. goertæ* (S. Müll.) and *M. spodocephalus* (Bp.), it becomes clear that all are best treated as subspecies of *M. goertæ*.

We recognize the following races :—

1. *M. g. GOERTÆ* (S. Müll.).

Underside distinctly yellowish ; throat pale grey ;
centre of abdomen orange.

Range. Senegal.

2. *M. g. POICEPHALUS* (Swains.).

Underside greyer, not so yellow, throat somewhat
darker grey, otherwise similar to *M. g. goertæ* ;
centre of abdomen orange-red.

Range. Gambia to the mouth of the Congo on the west,
east to the Nile valley.

This species was described by Swainson from West Africa without definite locality, nor is there anything in the description to show that he was describing the Gambian and Gold Coast bird rather than the one from Senegal. Still, as Reichenow (O. M. 1900, p. 58) has assigned Swainson's name to the Gambia race, we may leave it at that. *M. g. königi* (Neumann, O. M. 1913, p. 181: Mutmir, Berber Province) is, if distinct, which we cannot with our present material determine, confined to the Berber Province. We have three examples—one from Shendi in the Butler collection, one from Nakheila (C. N. Rothschild coll.), and one from Meroë (Gurney coll.)—which are undoubtedly somewhat paler than the birds from the upper Nile valley, but they are all in worn plumage.

3. *M. g. CENTRALIS* Reichw.

Underside darker and washed with greenish on the flanks; throat and chest still darker grey.

Range. Uganda and Niam Niam country.

4. *M. g. ABESSINICUS* Reichw.

At once distinguished by the greater amount of red in the centre of the abdomen; underside also more barred and washed with greenish yellow.

Range. North Abyssinia and Blue Nile.

5. *M. g. SPODOCEPHALUS* (Bp.).

Darker grey below and with yet more red on the abdomen, but still with a pronounced greenish wash on the flanks.

Range. South Abyssinia.

6. *M. g. RHODEOGASTER* Fsch. & Reichw.

Like the last race, but clear grey below with no greenish wash.

Range. British East Africa.

A single bird in the British Museum, said to be from Nairobi, collected by Percival is undoubtedly the Abyssinian form. We cannot explain this until a larger series from the intervening country is available.

Iynx torquilla torquilla.

Iynx torquilla torquilla (Linn.) ; Hartert, Vög. pal. Faun. p. 938 ; Butler, Ibis, 1905, p. 358.

[B. coll.] 2 Erkowit Meh. Apl. R.S. ; 1 nr. Renk Jan. U.N. ; 1 Chak Chak Feb. B.G.

[C. & L. coll.] 1 Kamisa Dec. Sen.

[Chr. coll.] 1 Yei Nov. L.E.

Widely distributed in winter, but not abundant (*A. L. B.*).

Iynx ruficollis pulchricollis.

Iynx pulchricollis Hartlaub, Ibis, 1884, p. 28, pl. iii. : Babira, east of the Bahr el Gebel. (In the Mongalla Province of the Sudan or possibly in the Nile Province of Uganda.)

This bird is known only from the pair originally obtained by Emin and described by Hartlaub. It is not represented in the Museum collection. It is distinguished by the black and white banding on the chin and throat.

Family CAPITONIDÆ.

Pogonorhynchus rolleti.

Pogonius rolleti De Filippi, Rev. Mag. Zool. 1853, p. 290 : Upper White Nile.

Pogonorhynchus rolleti (Fil.) ; Reichw. V. A. ii. p. 117.

Erythrobucco rolleti (Fil.) ; Butler, Ibis, 1908, p. 246, 1909, p. 87.

[B. coll.] 1 Buval Jan., 3 Chak Chak Feb., 1 Pongo river Meh., 1 Dud Majok Meh., 1 Kojali Meh., 1 Wau Apl. B.G. ; 2 Rejaf Feb. Apl. L.E.

[Chr. coll.] 2 Mt. Baginzi Meh., 6 Wau July Aug. B.G.

This handsome bird ranges from the valley of the upper White Nile westwards to the upper Shari, where it was obtained by Alexander at Bunda near Fort Archambault in July 1905.

Lybius bidentatus æquatorialis.

Melanobucco æquatorialis Shelley, Ibis, 1889, p. 476: Hparo.

Lybius æquatorialis (Shell.); Reichw. V. A. ii. p. 119.

[Chr. coll.] 4 Meridi Jan., 2 Mt. Baginzi Mch.,
2 Yambio Mch. **B.G.**

This subspecies takes the place of the West African *L. b. bidentatus* from the Shari river eastwards to Mau and southern Abyssinia, but it does not seem to have been met with by Butler though mentioned by Henglin as rare on the upper Nile.

Neumann (Bull. B. O. C. xxiii. 1908, p. 29) separates the southern Ethiopian form as *L. b. æthiops* on account of its slightly smaller size, but there appears to be a good deal of variation in this respect, and there is hardly any ground for recognizing it as distinct. The wings of the Christy birds vary from 95 to 105 mm.

Lybius leucocephalus.

Laimodon leucocephalus De Filippi, Rev. Mag. Zool. 1853, p. 291: White Nile.

Lybius leucocephalus (Fil.); Reichw. V. A. ii. p. 121; Butler, Ibis, 1908, p. 246, 1909, p. 87.

[B. coll.] 1 Menyah Jan., 2 Gardain Jan., 1 Ayem Jan., 2 Doleiba May, **B.G.**; 1 Kajo Kaji Mch. **L.E.**

[Chr. coll.] 1 Mt. Baginzi Mch., 3 Wau July-Aug. **B.G.**; 3 Yei Nov. Dec. **L.E.**

Claude Grant suggests in 'The Ibis,' 1915, p. 438, that this bird may be the young of *L. senex*. This we cannot agree with, as no specimens of *L. senex* are known from the main range of *L. leucocephalus*. No doubt they are closely related and were developed from a common stock, but we cannot admit their identity or even that they are subspecies of the same bird at the present time. One of the birds collected by Christy at Wau has considerably more white on the belly than the others, thus showing a tendency to *L. senex*, which is possibly the ancestral form.

Lybius tridactylus.

Loxia tridactyla Gmelin, Syst. Nat. i. pt. 2, 1789, p. 866 ; Abyssinia.

Lybius tridactylus (Gm.) ; Reichw. V. A. ii. p. 124.

Lybius abyssinicus (Lath.) ; Eutler, Ibis, 1908, p. 246, 1909, p. 88.

[B. coll.] 4 Roseires Apl. July Aug., 1 Jebel Fazogli May, Sen. ; 1 Ardebba Jan. B.G. ; 1 Mongalla, 3 Bor May, 1 Kenisa May, 3 Sheik Tombé Jan. May, 4 Giggig Oct. Mon.

[Chr. coll.] 4 Yei Nov. Dec. L.E.

We agree with Grant (Ibis, 1915, p. 438) in not recognizing *L. t. ugandæ* Berger (O. M. 1907, p. 201 : Nimule, Mon.). Our birds do not differ appreciably from the Abyssinian typical form.

Lybius vieilloti vieilloti.

Pogonias vieilloti Leach, Zool. Misc. ii. 1815, pl. 97 : Africa—probably Abyssinia.

Melanobucco vieilloti (Leach) ; Butler, Ibis, 1905, p. 358.

Lybius vieilloti (Leach) ; Butler, Ibis, 1908, p. 246, 1909, p. 88.

[B. coll.] 5 Roseires Apl. July Aug. Sept. Sen. ; 1 El Ein Meh. Kor. ; 1 Kaka Feb., 1 Jebel Ahmed Agha Jan. U.N. ; 1 Gardain Moyen Jan., 1 Chak Chak Feb., 2 Raffali Feb. Meh., 1 Wau Apl. B.G.

[C. & L. coll.] 5 Kamisa Dec. Sen. ; 3 Jebel Ahmed Agha Meh. U.N.

[Chr. coll.] 5 Wau July Aug. B.G.

Ogilvie-Grant pointed out (Ibis, 1902, p. 426) that the West African race of this bird had considerably more red on the underparts and breast than Abyssinian and Sudanese examples, and could be distinguished under the name *L. v. rubescens* (Temm.). We follow him also in believing that Leach's type came from Abyssinia.

Tricholæma diademata diademata.

Pogonorrhynchus diadematus Heuglin, Ibis, 1861, p. 126, pl. 5. fig. 3 : West of Bahr el Abiad, between 7° and 8° N.

Tricholæma diadematum Reichw. V. A. ii. p. 135.

Tricholæma diademata diademata Claude Grant, Ibis, 1915, p. 441.

[B. coll.] 3 Mongalla Jan. and summer; 1 Lado Feb.
L.E.

Apparently not a common bird in the Sudan. Its range extends to southern Abyssinia and British East Africa, where it intergrades with *T. d. massaica*.

Tricholæma melanocephala melanocephala.

Pogonias melanocephala Cretzschmar in Rüppell's Atlas, 1826, p. 41, pl. 28 : Kordofan.

This species, said to have been obtained by Rüppell in Kordofan and Sennar, is not represented by Sudanese examples in the Museum, nor has it been met with by Butler. There is a good series of Abyssinian specimens in the National collection. Possibly Rüppell's birds really came from Abyssinia.

Pogoniulus chrysoconus schubotzi.

Barbatula chrysocoma schubotzi Reichw. O. M. 1912, p. 28 : Ft. Archambault, Shari River.

Barbatula chrysocoma apud Butler, Ibis, 1908, p. 247, 1909, p. 88.

Pogoniulus chrysoconus schubotzi (Reichw.) ; Claude Grant, Ibis, 1915, p. 446.

[B. coll.] 1 Makwak, 1 Buval Jan., 1 Chak Chak Feb.,
1 Meshra el Rek May, B.G.

We agree with Claude Grant's revision of this group (Ibis, 1915, pp. 444-447) except that the material before us now extends the range of *P. c. schubotzi* to the Bahr el Ghazal and confines that of *P. c. zedlitzi* to the lower White and Blue Niles, if not to Sennar alone. The specimens from the Ubangi river, which Grant referred to the typical form, are, we believe, not that form but *P. c. centralis*.

Of the Sudanese forms, *P. c. zedlitzi* is distinguished from *P. c. schubotzi* by its slightly paler yellow underside

and distinctly yellower back, the edges of the light-coloured feathers of the mantle being bright yellow and not white.

Dr. Otto von Wettstein has also described a race from Kordofan (Anz. k. Akad. Wien, 1916, no. 13, p. 131) which from the description does not appear to differ from *P. c. schubotzi*; but we have no examples from that region, and it may be quite a valid subspecies.

***Pogoniulus chrysoconus zedlitzi*.**

Barbatula chrysocoma zedlitzi Neum. Bull. B. O. C. xxiii. 1909, p. 30 : Sennar.

Pogoniulus chrysoconus zedlitzi Claude Grant, Ibis, 1915, p. 446.

[B. coll.] 1 Roseires July, 1 Abu Shogal Apl. Sen.

[C. & L. coll.] 1 nr. Sennar, 4 Kamisa Dec. Sen.

***Pogoniulus pusillus uropygialis*.**

Barbatula uropygialis Heuglin, J. f. O. 1862, p. 37 : Ain Saba, Eritrea ; Reichw. V. A. ii. p. 152.

This bird is recorded by Heuglin (Orn. N.O.-Afr. p. 762) from Khartoum and the Blue Nile. We have seen no Sudanese examples of this bird, and Mr. Butler never met with it. It is distinguished from the *P. chrysoconus* group by its red forehead and more reddish rump, and is represented in the Museum by specimens from Abyssinia and Somaliland.

***Trachyphonus margaritatus margaritatus*.**

Bucco margaritatus Cretzschmar, Atlas, 1826, p. 30, pl. 20 : Sennar.

Trachyphonus margaritatus Reichw. V. A. ii. p. 156 ; Butler, Ibis, 1905, p. 358, 1908, p. 247, 1909, p. 401.

[B. coll.] 2 Erkowit Mch., 1 Talgwareb Apl., 1 Kamob-sana Mch., 1 Khor Arbat May, R.S. ; 3 nr. Fatasha Jan. & Feb. Kh. ; 1 Setit River May, Kas.

[C. & L. coll.] 2 Port Sudan Dec., 2 Erkowit Apl., 1 Sinkat Mch. R.S. ; 1 Kamisa Dec. Sen.

The three specimens from Fatasha in the Butler collection are markedly more orange on the breast and back of the

neck than the other examples. Lake Chad examples, however, collected by Boyd Alexander, appear to be quite typical. Zedlitz, O. M. 1910, p. 57, has separated the Somaliland birds by their paler underside as *T. m. somalicus*, and this is borne out by the series in the Museum.

Trachyphonus darnaudii darnaudii.

Micropodon darnaudii Des Murs in Lefebvre, Abyss. 1850, p. 133 : Kordofan.

Trachyphonus arnaudi Reichw. V. A. ii. p. 157 ; Butler, Ibis, 1908, p. 247.

[B. coll.] 11 Bor Jan. May, July, Aug. Sept. **Mon.**

We have no examples from anywhere near the type-locality, so we can only follow Dr. Reichenow in believing southern specimens to be identical with those from Kordofan.

Family INDICATORIDÆ.

Indicator indicator.

Cuculus indicator Gmelin, Syst. Nat. i. pt. 1, 1788, p. 418 : South Africa.

Indicator indicator (Gm.) and *Indicator major* Steph. ; Reichw. V. A. ii. pp. 104, 106.

Indicator sparrmani Steph. ; Butler, Ibis, 1905, p. 357, 1908, p. 245, 1909, p. 87.

[B. coll.] 1 Roseires Aug. **Sen.** ; 1 Wau Jan., 3 Pongo R. Feb., 1 Kojali Mch. **B.G.** ; 2 Mongalla Jan. July ; 1 Lado Feb., 2 Rejaf, Jan. Apl. **L.E.**

[Chr. coll.] 1 Mt. Baginzi Mch. **B.G.** ; 3 Yei Sept. **L.E.**

We follow Claude Grant (Ibis, 1915, p. 430) in regarding *I. indicator* and *I. major* as merely plumage phases of the same bird and also in not recognizing any racial forms of this species.

Indicator minor diadematus.

Indicator diadematus Rüppell, N. Wirbelt. 1835, p. 61 : Abyssinia.

Indicator minor diadematus Rüpp. ; C. Grant, Ibis, 1915, p. 432.

Indicator minor apud Butler, Ibis, 1909, p. 87.

[B. coll.] 2 Roseires Apl. July, Sen.; 3 Mongalla summer, 2 Kenisa summer, 1 Shamba Dec. Mon.

[C. & L. coll.] 1 Kamisa Dec. Sen.; 1 nr. Lake No Meh. U.N.

We follow Claude Grant in referring these birds to Rüppell's *diadematus*, from which we believe, notwithstanding what Zedlitz (J. f. O. 1915, p. 11) states, Ogilvie-Grant's *I. lovati* cannot be distinguished.

Indicator exilis pygmæus.

Indicator pygmæus Reichw. Sitzb. D. O. G. 1891, p. 4; id. J. f. O. 1892, p. 24: Bukoba; id. V. A. ii. p. 112.

[Chr. coll.] 1 Tembura Apl. B.G.

This Honey-Guide exactly matches a series in the Museum from Cameroon collected by Bates which have been identified as *I. exilis*; from this last, however, they all differ in their considerably larger size, the wing measuring in *I. e. pygmæus* 73–80 mm. as compared with 63–67 of the true *exilis* from Gaboon.

This form combines the heavily-striped back of the *exilis* with the larger size of the *minor* group, and appears to form a link between the two.

Prodotiscus regulus regulus.

Prodotiscus regulus Sundev. Öfv. Ak. Förh. 1850, p. 109: Natal; Reichw. V. A. ii. p. 114.

[B. coll.] 3 south of Roseires, Apl. & May, Sen.

These birds appear to be indistinguishable from the typical race of this species from southern and central Africa. The wing-measurement in each case is 80 mm. Our birds have the two outer pairs of tail-feathers, which are considerably worn, pure white. It appears that these feathers, when they first appear, are brown and wear to white. *P. r. peasei* O.-Grant of southern Abyssinia, as pointed out by C. Grant (Ibis, 1915, p. 437), only differs by its slightly larger size.

Feeds on the flowers of the "Tartar" tree (*Sterculia cinerea*), on which I always found it (*A. L. B.*).

Family CUCULIDÆ.

Clamator glandarius.

Cuculus glandarius Linn. Syst. Nat. 10th ed. 1758, p. 111: North Africa and South Europe.

Coccytes glandarius (Linn.); Reichw. V. A. ii. p. 81; Butler, Ibis, 1905, p. 257, 1908, p. 245, 1909, p. 87.

Clamator glandarius (Linn.); Hartert, Vög. pal. Faun. p. 955.

[B. coll.] 1 Erkowit Meh. 25, R.S.; 1 Roseires July 16, Sen.; 1 Tawela June 24, U.N.; 1 Dud Majok Meh. 31, 1 nr. Rumbek Jan. 11, 2 Madal May 5, B.G.; 1 Kajo Kaji Meh. 31, L.E.

[C. & L. coll.] 1 Erkowit Apl. 7, R.S.

From the dates given above it appears to be not unlikely that the Great Spotted Cuckoo breeds in the Sudan, as it certainly does in South Africa. The bird collected by Butler at Erkowit is abnormally large, the wing measuring 224 mm. against the usual 190 to 210. Another bird in the British Museum from Suakim, collected by Capt. Penton, measures 222, and a third, collected by G. Blaine, but without locality, probably also from the Sudan, attains to 225. Whether this indicates the existence of a larger race breeding somewhere in Asia cannot at present be settled, but it seems worth while drawing attention to the matter.

Clamator cafer.

Cuculus cafer A. Lichtenstein, Cat. rer. rar. Hamb. 1793, p. 14: Kaffirland, *i. e.* eastern Cape Colony.

Coccytes cafer (Licht.); Reichw. V. A. ii. p. 76; Butler, Ibis, 1909, p. 87.

[B. coll.] 1 Roseires Aug. 25, Sen.; 2 Tembura Meh. 3, B.G.; 1 Mongalla "summer."

[Chr. coll.] 1 Yambio Meh. B.G.

Clamator jacobinus jacobinus.

Cuculus jacobinus Boddaert, Tabl. Pl. Enl. 1783, p. 53: Coromandel coast of India, ex Daubenton.

Coccystes jacobinus (Bodd.) ; Reichw. V. A. ii. p. 78 ;
Butler, Ibis, 1908, p. 245.

[B. coll.] 1 Khartoum Aug. ; 1 Malakal June, U.N. ;
2 Mongalla "summer," 1 Bor May, Mon.

[Chr. coll.] 1 Tembura Apl. B.G.

Hartert (Nov. Zool. xxii. 1915, p. 254) has recently suggested that it might be possible to recognize the African bird as distinct from that of India, in which case the name of our bird should be *Clamator jacobinus pica* (*Cuculus pica* Hempr. & Ehr. Symb. Phys. 1828, fol. r. : Ambukol in Dongola).

We have measured the wings of the large series of Indian and African birds in the British Museum, and our results are almost exactly the same as those of Hartert, the African birds averaging 154, the north Indian 149, the south Indian 144, and the Singalese 138. If these slight differences are considered to be sufficient ground for doing so we must recognize three or four races, but there is no other tangible difference.

Butler states that this Cuckoo breeds near Khartoum, and that he believes *Argya acaciæ* is the probable foster-parent.

Pachycoccyx validus.

Cuculus validus Reichw. Orn. Centralb. 1879, p. 139 :
Muniuni, Tana river, B.E.A.

[Chr. coll.] 1 Yambio, 2 Mt. Baginzi Mch. B.G.

This remarkable Cuckoo is an addition to the Sudan fauna. It was met with by Emin at Tingasi on the upper Welle, but its occurrence in the Bahr el Ghazal extends its range considerably farther northwards.

Cuculus canorus.

Cuculus canorus Linn. Syst. Nat. 10th ed. 1758, p. 110 :
Europe ; Butler, Ibis, 1905, p. 356, 1908, p. 245, 1909, p. 87.

[B. coll.] 1 Roseires Sept. 13, Sen. ; 1 Gedaref Apl. 21,
Kas. ; 5 Khartoum July 24-31 Apl. 19.

[Chr. coll.] 1 Mt. Baginzi Mch. B.G.

Two of these Cuckoos have distinctly finer barring on the

underside than is usual in the European form, as also has one collected by Hawker at Fashoda. This last is referred by Hartert to *C. c. telephonus*, but as the type of that subspecies came from Japan, we prefer not to commit ourselves to any racial name at the moment. The dates of capture of these specimens are of interest. It is surprising to record European Cuckoos from Khartoum in July.

A common winter migrant; most pass through and go farther south (*A. L. B.*).

Cuculus gularis.

Cuculus gularis Stephens in Shaw's Gen. Zool. ix. 1815, p. 83, pl. 17: Camdeboo, Cape Colony (ex Levaillant); Reichw. V. A. ii. p. 91.

[B. coll.] 1 Fazogti May, **Sen.**: 1 Mongalla July–Sept.,
2 Bahr el Zeraf June, **Mon.**

A widely-distributed resident (*A. L. B.*).

Cuculus solitarius.

Cuculus solitarius Stephens in Shaw's Gen. Zool. ix. 1815, p. 84: Caffraria (*i. e.* eastern Cape Colony) ex Levaillant.

[B. coll.] 1 south of Karia river Apl. 15, **L.E.**

[Chr. coll.] 3 Yambio Meh., 1 Tembura Apl. **B.G.**

Cuculus jacksoni.

Cuculus jacksoni Sharpe, Bull. B. O. C. xiii. 1902, p. 7: Toro, Uganda.

[Chr. coll.] 1 Yambio Meh., 1 Mt. Baginzi Meh. **B.G.**

We have examined all the examples of the *C. solitarius* group in the Museum, and we find that it is distributed all over Africa from the Gold Coast and Abyssinia to Cape Colony.

The forms known as *C. gabonensis* and *C. jacksoni* apparently occupy thickly forested districts within the distribution area of *C. solitarius* and must, we think, at our present state of knowledge, be regarded as distinct species.

Of *C. jacksoni* the Museum possesses the type from Toro, a good series from the Mbira forest in Uganda (*Seth-Smith*), an example from the slopes of Kenya (*Delamere*), and two large series from N'Dalla Tando in northern Angola

(*Ansorge*), and the Charada forest in southern Abyssinia (*Zaphiro*), which we are unable to distinguish from the Uganda bird.

With regard to *C. mabiræ* (Somerén, Bull. B. O. C. xxxv. 1915, p. 116), this species, of which we have examined the type and two other examples at Tring, is as nearly as possible intermediate between *C. solitarius* and *C. gabonensis*.

Of *C. gabonensis* we have examples from Gaboon and Cameroon (*Bates*). There is a good description of this form in the Catalogue (vol. xix. p. 259), and it need not detain us here. We cannot accept *C. aurivillii* Sjöst. from Cameroon as distinct from *C. gabonensis*, as the character of the absence of the white spot of the tail is obviously a variable one.

The relationship of the *solitarius* group with *C. clamorus*, the Black Cuckoo, which is also found all over Africa, is very obscure, as is also the relationship of *C. solitarius* and *C. gabonensis*. There appear to be a series of intermediate forms (which has been called *C. jacksoni*) between *C. clamorus* and *C. solitarius*. There is also a series of intermediate forms (called *C. mabiræ*) between *C. gabonensis* and *C. solitarius*. It is possible that these may be regarded either as three separate species intergrading in certain areas, or as three species in process of evolution from one form within those areas.

The type of *C. mabiræ* has practically no barring on the underside, but we regard this as unusual, as the other specimens are barred as in *C. solitarius*.

Chrysococcyx caprius.

Cuculus caprius Boddaert, Tabl. Pl. Enlum. 1783, p. 40 : Cape of Good Hope.

[B. coll.] 1 juv. nr. Giggling summer, **Mon.**

The Emerald Cuckoo is recorded from Fazogli by Heuglin, but is evidently a rare bird in the Sudan. It is more abundant in southern Abyssinia, and there is a good series in the Museum from the Jinna and Kaffa districts collected by Zaphiro.

We follow Claude Grant (*Ibis*, 1915, p. 417) in his conclusions in regard to nomenclature.

Chrysococcyx auratus.

Cuculus auratus Gmelin, Syst. Nat. i. pt. i, 1788, p. 421 : Cape of Good Hope.

Chrysococcyx cupreus auct. ; Reichw. V. A. ii. p. 94 ; Butler, Ibis, 1909, p. 87.

[B. coll.] 1 Tawela June, U.N. ; 3 Bahr el Zeraf June 12 & 14, 3 Giggling "summer," 8 Mongalla "summer," Mon. ; 1 Meshra el Rek May 10, B.G.

[Chr. coll.] 2 Tembura Apl. B.G. ; 1 Yei Dec. L.E.

Claude Grant has shown (Ibis, 1915, p. 417) that the name *C. cupreus* Bodd. is non-existent, and we must therefore adopt Gmelin's name for this species.

Chrysococcyx klaasi.

Cuculus klaasi Stephens in Shaw's Gen. Zool. ix. 1815, p. 128 : Cape Colony (ex Levaillant).

Chrysococcyx klaasi (Steph.) ; Reichw. V. A. ii. p. 98 ; Butler, Ibis, 1908, p. 245.

[B. coll.] 10 Roseires Apl. 18-27 May 11 July 10 Aug. 1-30 Sept. 5-21, 1 Famaka May 3, Sen. ; 2 Kátta Jan. 31, B.G.

[Chr. coll.] 3 Meridi Jan. & Feb., 1 Wau July-Aug. B.G.

Centropus grillii.

Centropus grillii Hartlaub, J. f. O. 1861, p. 13 : Gaboon.

Centropus nigrorufus (nec Cuv.) Reichw. V. A. ii. p. 70.

[B. coll.] 1 Bahr el Zeraf June, U.N.

Claude Grant in 'The Ibis' for 1915, p. 419, gives reasons for not accepting Cuvier's name for this species, and also discusses the races of it. As, however, we have no material from the type-locality, we prefer not to commit ourselves to any subspecific name. As compared with Nyasaland birds, which Neumann pronounced as identical with the typical race, our specimen shows a somewhat bluer metallic sheen on the head, but this is not so pronounced as in Claude Grant's description of *C. g. corruleiceps*. We know of no previous record from the Sudan.

***Centropus monachus fischeri*.**

Centropus fischeri Reichw. J. f. O. 1887, p. 57: Niakatschi, N.E. Victoria Nyanza; id. V. A. ii. p. 64.

Centropus monachus apud Butler, Ibis, 1905, p. 356, 1908, p. 245.

[B. coll.] 1 Jebel Ahmed Agha May, 1 Lake No Feb., 1 Abu Kika May, **U.N.**; 1 Bor "summer," **Mon.**

[C. & L. coll.] 1 Jebel Ahmed Agha Jan., 1 Tonga Feb., 2 White Nile lat. 12° N. Jan., 1 White Nile lat. 9½° N. long. 31° E. Feb. **U.N.**

[Chr. coll.] 1 Tembura Apl., 1 Meridi Jan. **Ber.**

We have followed Claude Grant's revision of the races of this species (Ibis, 1915, p. 421) and consider *Centropus heuglini* Neum. Verh. V. Intern. Ornith. Kongr. 1910, 1911, p. 504, pl. i., from the Bahr el Ghazal, to be identical with this race.

For some reason the birds collected by Messrs. Chapman and Lynes are quite noticeably darker than either the Christy or Butler specimens, though collected at the same time of year, and in some cases in the same localities. The stomach of one of these specimens is stated to have contained a large Reed-Warbler, probably one shot by Capt. Lynes half an hour before, and this is said to be a not uncommon trick of these birds.

***Centropus senegalensis senegalensis*.**

Cuculus senegalensis Linn. Syst. Nat. 12th ed. 1766, p. 169: Senegal.

Centropus senegalensis (Linn.); Reichw. V. A. ii. p. 58.

Centropus monachus nec Rüpp. : Butler, Ibis, 1909, p. 87.

[B. coll.] 1 east of Rumbek Jan. **B.G.**

[C. & L. coll.] 1 Mouth of Zeraf river Feb. **U.N.**

[Chr. coll.] 3 Meridi Jan., 1 Yambio Mch. **B.G.**

This species has also been reviewed by Claude Grant (Ibis, 1915, p. 423), and we agree with his revision from the present material at our disposal. In the J. f. O. 1915,

p. 124, Reichenow describes another race from Lake Chad under the name of *C. s. tschadensis*. We have only one specimen from that exact locality, and so we cannot say whether or not the differences he points out are constant, but if they are, it is a very local race, as specimens from the Niger as well as the Shari and Welle are certainly the typical race.

C. senegalensis is not unlike *C. m. fischeri*, but may always be distinguished by its dull green and not blue head and nape.

***Centropus superciliosus superciliosus*.**

Centropus superciliosus Hempr. & Ehr. Symb. Phys. 1828, fol. 1 : S. Arabia ; Reichw. V. A. ii. p. 65 ; Butler, Ibis, 1905, p. 357.

Centropus superciliosus superciliosus Hempr. & Ehr. ; Claude Grant, Ibis, 1915, p. 424.

[B. coll.] 1 Eilafun Jan. **B.N.** ; 1 Roseires July, 1 Sowleit Apl. **Sen.** ; 1 north of Khartoum ; 1 Reuk Jan., **U.N.** ; 1 Rejaf Feb. **L.E.**

[C. & L. coll.] 1 Sennar Jan., 2 Kamisa Dec. **Sen.** ; 1 White Nile lat. $10\frac{3}{4}^{\circ}$ N., **U.N.**

***Ceuthmochares æreus intermedius*.**

Ceuthmochares intermedius Sharpe, J. Linn. Soc. London, xvii. 1884, p. 432 : Semmio, Niam Niam Country.

Ceuthmochares æreus intermedius Reichw. V. A. ii. p. 74.

[Chr. coll.] 1 Meridi Jan., 1 Tembura Apl., 3 Yambio Meh. **B.G.**

This race is distinguished from typical *C. æ. æreus* from the Congo by its greener and less blue back, but we confess that it is with some hesitation that we keep the two races separate. Our birds are still more green than the type of the subspecies from Semmio. This bird does not appear to have been previously recorded from the Sudan, though not uncommon in Uganda and on the upper Welle.

Family MUSOPHAGIDÆ.

Turacus leucolophus.

Corythaix leucolophus Heuglin, J. f. O. 1855, p. 65 : Bahr el Abiad, *i. e.* Upper White Nile.

Turacus leucolophus (Heugl.) ; Butler, Ibis, 1908, p. 244, 1909, p. 86.

[B. coll.] 3 Kátta Jan., 1 Pongo river Feb., 2 Chak Chak Feb., 2 Kojali Feb. Mch., 3 Tembura Mch. B.G. ;
2 Kajo Kaji Mch. L.E.

[Chr. coll.] 8 Meridi Jan. Feb. B.G. ; 1 Yei Dec. L.E.

Turacus leucotis.

Corythaix leucotis Rüppell, N. Wirbelt. 1835, p. 8, pl. 3 : Abyssinia.

The Abyssinian Plantain-eater is recorded by Heuglin from Fazogli, and there is a specimen in the British Museum labelled "White Nile," but the latter is of doubtful authenticity.

Butler states : "Probably works down the Blue Nile from Abyssinia to Fazogli in the rains. I never met with it."

Musophaga violacea rossæ.

Musophaga rossæ Gould, P. Z. S. 1851, p. 93 : Loanda (see C. Grant, Ibis, 1915, p. 413) ; Reichw. V. A. ii. p. 29.

[Chr. coll.] 1 Yambio Mch. B.G.

This species has not previously been met with in the Bahr el Ghazal, though known from Semmio (*Bohndorff*). It ranges through Uganda and Belgian Congo to Cameroon and Angola.

Chizærhis zonurus.

Chizærhis zonurus Rüppell, N. Wirbelt. 1835, p. 9, pl. 4 : Temben, Abyssinia.

Schizorhis zonurus Butler, Ibis, 1905, p. 356, 1908, p. 244, 1909, p. 87.

[B. coll.] 1 Gallabat Apl. Kas. ; 1 Pongo river Feb.,
1 Tonj river Jan., 4 Tembura Mch. B.G.

[Chr. coll.] 4 Meridi Jan., 3 Yambio Mch. B.G.

This Plantain-eater appears to us to be sufficiently distinct from the West African form to merit specific distinction.

Family TROGONIDÆ.

Apaloderma narina narina.

Trogon narina Stephens in Shaw's Gen. Zool. ix. 1815, p. 14: Knysna.

Apaloderma narina narina (Steph.); C. Grant, Ibis, 1915, p. 406.

[B. coll.] 3 Roseires July Sept. Sen.

A rare bird found at Roseires in the rainy season and also observed at Kajo Kaji, L.E. (*A. L. B.*); Heuglin records it from Fazogli, Sen.

Family COLIIDÆ.

Colius striatus leucotis.

Colius leucotis Rüppell, Mus. Senck. iii. 1845, p. 42, pl. 2: Tamben, N. Abyssinia; Reichw. V. A. ii. p. 204 part; Butler, Ibis, 1905, p. 356.

[B. coll.] 1 Setit river May, Kas.; 2 Roseires Aug. & Sept. Sen.

This race is confined to northern Abyssinia, Eritrea, and the adjacent part of the Sudan.

Colius striatus erlangeri.

Colius striatus erlangeri Zedlitz, O. M. 1910, p. 58, and J. f. O. 1910, p. 756, pl. 10: Adis Ababa.

Colius striatus jebelensis Mearns, Proc. U.S. Nat. Mus. xviii. 1915, p. 394: Gondokoro.

[B. coll.] 3 Abu Kika May, 3 Mongalla, 2 Bor, 1 Shambe "summer," Mon.

[Chr. coll.] 2 Yei Nov. L.E.

We cannot agree with Claude Grant in his review of the races of this species in 'The Ibis,' 1915, p. 402. We consider that on our present material we must admit the validity of both this race from south-western Abyssinia, and of *C. s. hilgerti* from central and eastern Abyssinia. The present race differs

from *C. s. leucotis* from northern Abyssinia by its darker throat, more sharply defined white ear-coverts, and finer barring of the mantle, whereas *C. s. hilgerti* is still darker than *C. s. erlangeri*. The plate in the J. f. O. 1910, though not perhaps as accurate as might be wished, nevertheless gives a very fair idea of the differences between the three forms. With regard to *C. s. jebelensis* Mearns, from Gondokoro, we cannot ourselves make out any distinction between it and *C. s. erlangeri* Zedl.

Mearns does not in his description compare the two forms though he mentions the plate in the J. f. O. Our present good series from the upper Nile agrees very well with the figure of *C. s. erlangeri* there depicted, and we can find nothing in Mearns' description incompatible with that of Zedlitz. We must therefore consider Mearns' name as a synonym. The race differs from *C. s. nigricollis*, as we have indicated under that species.

Colius striatus nigricollis.

Colius nigricollis Vieill. Nouv. Dict. d'Hist. Nat. vii. 1817, p. 378 : Malimbe, Congo ; Reichw. V. A. ii. p. 203.

Colius leucotis nec Rüpp., Butler, Ibis, 1909, p. 86.

[B. coll.] 2 Kojali Feb. B.G.

[Chr. coll.] 2 Meridi Feb., 1 Mt. Baginzi Mch. B.G.

This is an extension of the known range of this race: it is found through Portuguese and French Congo to Cameroon, and, like many other species, enters our limits by way of the Welle valley. Its distinction from the upper Nile race, *C. s. erlangeri*, is obvious at a glance, owing to the much deeper and greater extent of black on the throat, the heavier barring of the chest, and the complete lack of white on the ear-coverts.

Colius macrourus macrourus.

Lanius macrourus Linn. Syst. Nat. 12th ed. 1766, p. 134 : Senegal.

Colius macrourus (Linn.) ; Reichw. V. A. ii. p. 210 ; Butler, Ibis, 1905, p. 356, 1908, p. 243.

[B. coll.] 1 Jebel Kerbosh Meh. R.S. ; 3 Khartoum July, 1 Fatasha Jan. Kh. ; 5 Mongalla July-Sept.

[C. & L. coll.] 2 Sinkat Meh. R.S. ; 2 Kamisa Dec. Sen. ;
1 White Nile lat. 11° N. Jan. U.N.

[Gurney coll.] 1 Meroë Feb. Ber.

We have no hesitation in assigning all the birds from the Sudan to the typical race. There is one example from the Baro river in the Museum, collected by Zaphiro, which is quite remarkably dark below and blue above. This led Claude Grant (Ibis, 1915, p. 406) to suppose that the darker East African race, *C. m. pulcher* Neum., extended north into the Sudan up to the Baro river. Our birds from Mongalla, however, show that this is not the case, and probably the boundary between *C. m. macrourus* and *C. m. pulcher* is somewhere about Lake Albert, though one from Lado is somewhat intermediate. In Abyssinia *C. m. syntactus* is stated by Claude Grant to be identical with *C. m. macrourus*.

Family MICROPODIDÆ.

***Micropus apus apus*.**

Hirundo apus Linn. Syst. Nat. 10th ed. 1758, p. 192 : Europe, restricted type-locality Sweden.

Apus apus apus (Linn.) ; Hartert, Vög. pal. Faun. p. 836.

Cypselus apus (Linn.) ; Butler, Ibis, 1905, p. 344.

[B. coll.] 1 Kaka June 3, U.N.

***Micropus apus kolibayi* ?**

Apus apus kolibayi Tschusi, Orn. Jahrb. xiii. 1902, p. 234 : Curzola I., Dalmatia ; Hartert, Vög. pal. Faun. p. 837.

[B. coll.] 2 Bahr el Jebel, 1 Lake No May 14 & 16,
U.N.

Of these four specimens of Swifts, three seem to belong to the long-winged race which, according to Hartert, breeds in southern Dalmatia and probably elsewhere in southern Europe. The wing-measurements of these three examples, all males, are 184, 178, and 174 mm. The other specimen which we refer to *M. a. apus* has a wing of 165 mm. At

the same time we would point out that the dates of capture of these birds are very remarkable if they were going to breed in Europe that year. We rather wonder therefore if there is not a breeding race of Swift in the Sudan, corresponding to the considerably smaller Abyssinian breeding race, *M. a. shelleyi*. It is probable also that the browner Asiatic race, *M. a. pekinensis*, also passes through the Sudan in winter, though the only record of its occurrence that we can find is one mentioned by Hartert from Gondokoro.

***Micropus apus shelleyi*.**

Cypselus shelleyi Salvad. Ann. Mus. Civ. Gen. xxix. 1888, p. 227 : Dembi, Shoa.

Apus shelleyi (Salvad.) ; Reichw. V. A. ii. p. 373.

Antinori is said to have obtained specimens of this small Abyssinian race of Swift from Berber. He named it *C. dubius*, but in his original description, Cat. coll. uccelli, 1864, p. 25, he says "equal in size to *C. murarius*" = *M. a. apus*. We should require further confirmation therefore before admitting it to the Sudanese list.

***Micropus melba melba*.**

Hirundo melba Linn. Syst. Nat. 10th ed. 1758, p. 192 : Straits of Gibraltar.

Apus melba melba Hartert, Vög. pal. Faun. p. 834.

[B. coll.] 1 Kajo Kaji Mch. 27, L.E.

We are strongly inclined to assign this bird to the European race and not to the African. If we are right, it will then be the first record from what may be termed "tropical" Africa. The only constant differences we can find between *M. m. melba* and *M. m. africana*, is that the latter is usually darker and has a broader breast-band and a smaller extent of white on the throat. The wing-measurements do not differ much. This specimen is a pale-coloured bird with a narrow breast-band and a large amount of white on the throat, and we can in no way distinguish it from European examples. Wing 213 mm.

There is also in the Museum collection a bird from

Ruwenzori, collected by Blaine in February, wing 219 mm., which we are also inclined to assign to the present race. Ruwenzori is the type-locality of *M. m. maximus* O.-Grant, but this is a very much larger and darker resident form.

Micropus affinis.

Cypselus affinis Gray & Hardw. Ill. Ind. Zool. i. 1832, pl. 35. fig. 2: India.

This species, which ranges throughout India and Africa, must no doubt occur in the Sudan, and Heuglin records it from eastern Sennar, but we are not certain as to whether it is this species or *M. horus* that is referred to, since Heuglin considered the latter a variety of *M. affinis*.

Micropus horus.

Cypselus horus [Hartl. & Finsch in MSS.]; Salvad. & Antin. Atti R. Accad. Torino, viii. 1872, p. 94: Wad Medani, Blue Nile.

Apus horus (Salvad. & Antin.); Reichw. V. A. ii. p. 381.

[C. & L. coll.] 1 Blue Nile, 20 miles above Sennar, Sen.

This specimen, a female of small size, wing 143 mm., against 153 given for the type by Salvadori, comes from close to the type-locality, and is the first specimen received by the Museum from the Sudan. This species is distinguished from *Micropus caffer streubeli* by the shortness of its tail.

Micropus caffer streubeli.

Cypselus streubeli Hartl. J. f. O. 1861, p. 418: Keren (*vide* Heuglin, *ibid.* p. 422).

Apus streubeli (Hartl.); Reichw. V. A. ii. p. 381.

Cypselus affinis nec Gray & Hardw., Butler, Ibis, 1905, p. 342.

[B. coll.] 1 Gedaref June, Kas.; 1 Rejaf Apl. L.E.

Mr. Butler apparently did not distinguish between this Swift and the true *M. affinis* without a forked tail, so we are unable to say anything of its distribution.

This form has a strongly forked tail, thus differing from

M. horus with a slightly forked tail and *M. affinis* without a fork. *M. c. streubeli* differs from *M. c. caffer* only in its slightly smaller dimensions.

Tachornis parvus parvus.

Cypselus parvus Licht. Verz. Doubl. 1823, p. 58: N.E. Nubia.

Tachornis parvus (Licht.); Reichw. V. A. ii. p. 283; Butler, Ibis, 1905, p. 344, 1908, p. 239.

[B. coll.] 2 Khartoum Apl.; 1 Malakal May, U.N.

[C. & L. coll.] 2 Jebel Ahmed Agha Jan. U.N.

Widely distributed wherever Dom or Doleib palms occur. The two eggs are glued to the bottom of the nest, which can be turned upside down without their falling out (A. L. B.).

Family CAPRIMULGIDÆ.

Caprimulgus europæus europæus.

Caprimulgus europæus Linn. Syst. Nat. 10th ed. 1758, p. 193: "Habitat in Europa & America," restricted type-locality, Sweden; Butler, Ibis, 1905, p. 344.

Caprimulgus europæus europæus Hartert, Vög. pal. Faun. p. 846.

[B. coll.] 3 Khartoum Sept. 9–Oct. 25.

Caprimulgus europæus unwini.

Caprimulgus unwini Hume, Ibis, 1871, p. 406: west of Kashmir.

Caprimulgus europæus unwini Hartert, Vög. pal. Faun. p. 849.

[B. coll.] 3 Khartoum Oct. 21 & 24.

Both these forms of the Common Nightjar winter in the Sudan, but we have no evidence of two other subspecies recognized by Hartert, *C. e. meridionalis* and *C. e. sarudnyi*, both of which might be presumed to come to the Sudan in winter.

Another Nightjar, marked "♂ Khartoum 18/x./07," is rather different from the others, being a good deal smaller, wing 165 mm., against 178 and over in *C. e. unwini*. It

has, however, the appearance of youth and matches very closely, except for size, an example of *C. e. unwini* from Sirsa in the Punjab now in the Museum. We can only provisionally identify it with this species. Dr. Hartert has also examined this bird and writes, "If not a young *C. e. unwini*—and I do not think it is, being so very small—it must be an unknown species or a hybrid, for it is not any other known species."

***Caprimulgus inornatus*.**

Caprimulgus inornatus Heuglin, Orn. Nordost-Afr. i. 1869, p. 129: Bogosland.

[Chr. coll.] 1 Meridi Jan., 3 Mt. Baginzi Mch. B.G.

This Nightjar was met with by Mr. Butler in the Kaji Kaji plateau, but is not represented in the collection in the Museum.

One of Dr. Christy's examples is in the grey phase and three are in the red phase. This latter, judging by the series in the Museum, is more usually met with to the westward, while the birds from Bogosland and Somaliland are more usually in the grey phase; but some of these latter approach the reddish phase, though the colour is never so rich as in the West African examples. A nestling from Mt. Elgon collected by R. Kemp is distinctly in the red phase.

***Caprimulgus natalensis chadensis*.**

Caprimulgus chadensis Alexander, Bull. B. O. C. xxi. 1908, p. 90: Lake Chad.

Caprimulgus natalensis chadensis Claude Grant, Ibis, 1915, p. 303.

[B. coll.] 1 west of Tonga Mch. U.N.

[C. & L. coll.] 1 Lake No Feb.; 5 White Nile lat. $9\frac{1}{2}^{\circ}$ N. long. 31° E. Feb. U.N.

We have followed Claude Grant in his revision of the races of this Nightjar, though we have grave doubts as to whether this subspecies is really separable from *C. n. natalensis*. The wings of our specimen measures ♂ ♂ 154, 156, 160, 161 mm., ♀ ♀ 149, 152 mm.

Caprimulgus eximius.

Caprimulgus eximius Temminck, Pl. Col. livr. 67, 1826, pl. 398 : Sennar ; Butler, Ibis, 1905, p. 344, 1908, p. 239.

[B. coll.] 1 Shendi Mch. **Ber.**

[Gurney coll.] 1 Meroë Feb. **Ber.**

Butler has written at length on the distribution and breeding of this Nightjar in the Sudan.

Caprimulgus ægyptius ægyptius.

Caprimulgus ægyptius Lichtenstein, Verz. Doubl. Mus. Berlin, 1823, p. 59 : Upper Egypt ; Reichw. V. A. ii. p. 361 ; Butler, Ibis, 1905, p. 345, 1908, p. 239.

[B. coll.] 3 Shendi Mch. **Ber.** ; 1 Khartoum Dec. ; 1 Junction of Bahr el Homar and Bahr el Ghazal Mch. **B.G.**

[C. & L. coll.] 2 Kamisa Dec. **Sen.** ; 2 Lake No, Feb. **B.G.**

Caprimulgus nubicus nubicus.

Caprimulgus nubicus Licht. Verz. Doubl. Mus. Berlin, 1823, p. 59 : Nubia.

Caprimulgus nubicus nubicus Hartert, Vög. pal. Faun. p. 851.

There are two examples of this, the typical form, in the Museum collected by the Hon. C. N. Rothschild at Nakheila and Shereik in the Berber province. There are no specimens in the present collections.

Caprimulgus nubicus tamaricis.

Caprimulgus tamaricis Tristram, Proc. Zool. Soc. London, 1864, pp. 170, 430 : Dead Sea Basin.

Caprimulgus nubicus tamaricis Hartert, Vög. pal. Faun. p. 852.

Caprimulgus nubicus apud Butler, Ibis, 1908, p. 400.

[B. coll.] 1 Khor Arbat May, **R.S.**

This example differs considerably from the Berber specimens in the distinctly greyer and less sandy tone of the

upper surface, and resembles closely a series from the Aden district, and one from Zoulla on the shores of the Red Sea near Massowah collected by Blanford. The Arabian birds are referred by Hartert to Tristram's species. We have seen Palestine examples in the Tring Museum and are in agreement with this view.

Caprimulgus trimaculatus tristigma.

Caprimulgus tristigma Rüppell, Neue Wirbelt. 1840, p. 105 : Gondar.

Caprimulgus trimaculatus tristigma Claude Grant, Ibis, 1915, p. 307.

[B. coll.] 1 Jebel Fazogli May, Sen.

Claude Grant has monographed this group of Nightjars in 'The Ibis,' 1915, pp. 306-308, and we agree with his conclusions. In the Proceedings of the Biological Society of Washington, xxvi. 1913, p. 167, Dr. J. C. Phillips describes a new Nightjar under the name of *Caprimulgus eleonora* from Fazogli. Mr. A. L. Butler, Ibis, 1915, p. 181, who has seen Dr. Phillips' coloured plate, unhesitatingly identifies it with the above species.

Scotornis climacurus.

Caprimulgus climacurus Vieill. Gal. Ois. i. 1825, p. 195, pl. 122 : Senegal.

Scotornis climacurus (Vieill.) ; Reichw. V. A. ii. p. 368 ; Butler, Ibis, 1905, p. 347, 1908, p. 240, 1909, p. 84.

[B. coll.] 1 Shendi Mch. Ber. ; 1 Kamlin Mch. B.N. ;
1 Hillet Abbas Dec. W.N. ; 1 Renk Mch. U.N.

[C. & L. coll.] 1 Senga Dec. Sen. ; 1 Jebel Ahmed
Agha Mch., 1 White Nile lat. 12° N. Mch., 2 Tonga
Mch. U.N.

[Chr. coll.] 1 Meridi Jan. B.G.

This little long-tailed Nightjar, according to Mr. Butler probably the commonest of its family in the Sudan, has a remarkable range of variations. These variations are generally geographically constant, but not always. They cannot therefore be regarded as subspecies, unless one

admits a large percentage of wanderers from other districts. The explanation probably lies in the colour or nature of the soil. In Senegal and again in northern Nigeria round Lake Chad the palest form occurs. This is a bird of which the general tone is pale grey and yellow. Next, from Gambia round the coast to Southern Nigeria and along the Shari comes a form with a distinctly rufous or vinous tinge, which is particularly noticeable on the shoulders and wing-coverts. Thirdly, from the upper Welle and western Lado Enclave comes a form of which the prevailing tinge is rich rufous, almost chocolate. A fourth form from the White Nile below Kaka and from the Blue Nile is most like the Senegal form, but the yellow is richer and the scapulars more boldly marked. The last form and the most distinct of all is very dark grey, almost black, and comes from the country east of Lake No to the Sobat river and about as far north as Kaka on the White Nile.

Of the examples in the present collections most of the birds belong to the fourth form alluded to above, but the two from Tonga in the Chapman & Lynes collection are very richly coloured specimens of the fifth and last-mentioned group, while the Meridi bird approaches the rufous form from the upper Welle and Lado.

***Macrodipteryx longipennis*.**

Caprimulgus longipennis Shaw, Nat. Misc. viii. 1796, pl. 265: Sierra Leone.

Macrodipteryx macrodipterus (Afz.); Reichw. V. A. ii. p. 370.

Macrodipteryx longipennis (Shaw); Butler, Ibis, 1905, p. 345, 1908, p. 239, 1909, p. 84; C. Grant, Ibis, 1915, p. 302.

[B. coll.] 1 Gedaref May, **Kas.**; 1 Gardain Apl., 1 Tonj Jan. **B.G.**; 1 Mongalla, summer.

[Chr. coll.] 1 Meridi Jan. **B.G.**

Mr. Butler has written at some length on this species, which is a resident and known to breed in the Sudan.

Cosmetornis vexillarius.

Semeiophorus vexillarius Gould, Icon. Av. ii. 1838, pl. xiii. :
Sierra Leone.*

Macrodipteryx vexillarius (Gd.) : Reichw. V. A. ii. p. 371.

[B. coll.] 2 Mongalla (one a wing only), summer, Mon.

[Chr. coll.] 1 Wau Aug., 1 Mt. Baginzi Mch. B.G.

Mr. Chapin (Bull. Amer. Mus. N. Y. xxxv. 1916, pp. 73-78) has recently written a very interesting account of the transequatorial migrations of this Nightjar. His conclusions are that it breeds in southern Africa only between the months of September and November, and migrates northwards in February to the grass country of the Welle, the Sudan, and Nigeria. An examination of the material in the Museum confirms Mr. Chapin's statements as to dates, but the bird does not appear to come north of Lake No.

Family MEROPIDÆ.

Merops apiaster.

Merops apiaster Linn. Syst. Nat. 10th ed. 1758, p. 117 :
southern Europe ; Reichw. V. A. ii. p. 320 ; Butler, Ibis,
1905, p. 350, 1909, p. 490.

[B. coll.] 2 Shendi 2 May, Ber. ; 2 Khartoum 15 & 25
Apl. ; 2 Gedaref 29 Apl. Kas.

[C. & L. coll.] 2 Erkowit 5 Apl. R.S. ("from a flock of
30 flying north"—W. C. Lowe).

"An abundant cold weather migrant" (*A. L. B.*).

* In Gould's original description he writes "Little is known respecting this singular species further than that it inhabits the islands lying between those of Bourbon and Madagascar ; that it is numerous on the shores of the Red Sea and in the Island of Scutra (? Socotra)." In the National collection there is an old dismantled specimen with the following on the ticket : "Jas. Barlow Esq., Sierra Leone. Orig. descr. J. Gould Esq., under the name of *Caprimulgus vexilla* copied from under stand of bird which was mounted in bird-gallery." This specimen, Mus. reg. no. 55/12/19/63, was purchased at the disposal of the Zoological Society's Museum. Curiously enough it is omitted in the Cat. Bds. B. M. xvi. p. 598 ; but we see no reason why it should not be accepted as the type of the species and the locality accepted as the type-locality, especially as the bird is not known from Madagascar, Bourbon, or the intervening islands.

Merops persicus persicus.

Merops persica Pallas. Reise versch. Prov. russ. Reichs, ii. 1773, p. 78 : Caspian sea ; Butler, Ibis, 1905, p. 351, 1909, p. 400 ; Reichw. V. A. ii. p. 322.

[B. coll.] 1 Khor Arbat May 16, **R.S.** ; 1 ♀ imm. Khartoum May 21 ; 1 Kenisa Jan. 21, **Mon.** ; 1 Lado Feb. 10, **L.E.**

[C. & L. coll.] 6 near Lake No. Feb. Meh. **U.N.**

[Chr. coll.] 3 Yambio Meh. **B.G.**

The Persian Bee-eater is a common winter bird throughout the greater part of Africa. Young birds are exceedingly difficult to distinguish from those of the allied species *M. superciliosus*, of which there is a large series in the Museum from Madagascar, East Africa, Uganda, Nyasaland, and Angola, and a single example from Abyssinia. The young bird from Khartoum taken on 21 May might possibly be referred to this species, and there seems to be no valid reason why it should not be found in the Sudan.

Merops lamark viridissimus.

Merops viridissimus Swainson, Birds W. Afr. ii. 1837, p. 82 : Senegal.

Merops viridis apud Butler, Ibis, 1905, p. 351, 1908, p. 242, 1909, p. 85.

[B. coll.] 6 Khartoum Feb. & May ; 1 Kaka May, **U.N.**

[C. & L. coll.] 4 Sinkat Meh. **R.S.** ; 1 Kamisa Dec. **Sen.** ; 1 Jebelein Jan. **W.N.**

This race appears to range from Senegal to the Sudan. We have no specimens from Senegal, but a small series from Lake Chad collected by Alexander average slightly smaller than the Sudan birds, wing 87 mm. against 91.5.

Parrot, O. M. xviii. 1910, p. 13, describes a race from Eritrea as *M. viridis reichenowi*, and it is probable that the Sudan birds are intermediate if this latter race proves to be recognizable.

There is also a race breeding in Egypt, *M. l. cleopatra*

Nicoll, Bull. B. O. C. xxvii. 1910, p. 11 : Mazghouna near Cairo, of which Nicoll has seen specimens from the Sudan. It is distinguished by its greener, less golden colour, wing-measurement of British Museum examples averaging 63 mm. We cannot, however, find any Sudanese birds in these or the British Museum collections which we can definitely assign to this race.

Dr. Hartert points out (Nov. Zool. xvii. 1910, p. 482) that this species must now be known as *M. lamark* Cuvier.

Merops nubicus nubicus.

Merops nubicus Gmelin, Syst. Nat. i. pt. 1, 1788, p. 464 : Nubia ; Reichw. V. A. ii. p. 329 ; Butler, Ibis, 1905, p. 352, 1908, p. 242, 1909, p. 85.

[B. coll.] 1 Gallabat, 1 Setit R. May, **Kas.** ; 1 Blue Nile. "winter," 1 Sherif Yakub June, **Sen.** ; 2 Bahr el Zeraf June, **U.N.** ; 2 Mongalla "summer" ; 1 Raffali Feb., 1 nr. Kojali Mch, 3 Tembura Mch. & May, **B.G.**

[C. & L. coll.] 2 Singa Dec. **Sen.**

[Chr. coll.] 6 Meridi Jan. & Feb., 1 Mt. Baginzi Mch. **B.G.**

Abundant and widely distributed (*A. L. B.*).

Merops albicollis.

Merops albicollis Vieill. Nouv. Dict. xiv. 1817, p. 15 : Senegal ; Butler, Ibis, 1905, p. 351.

Merops albicollis Reichw. V. A. ii. p. 317.

[B. coll.] 1 Setit R. May, 1 Ummat Rumeila June, **Kas.** ; 1 Fou Wells May, **Sen.** ; 4 Lado Feb. **L.E.**

[Chr. coll.] 2 Yambio Mch. **B.G.** ; 2 Yei Nov. **L.E.**

A widely distributed species in the Sudan. In the O. M. xviii. 1910, p. 12, Parrot distinguishes the eastern and north-eastern birds under the name of *Merops albicollis major* from the north-west African form, on account of their

wider black throat-band and larger size. We cannot think these differences sufficient to uphold this race.

In the very large series before us it is true that wider throat-bands appear in the north-east than in the north-west, but only exceptionally ; while the wing-measurements also seem to us insufficient grounds for separation. They are as follows for series of 20 adults from each locality :—Northern West Africa av. 97·7 ; Sudan and Uganda av. 99·7 ; north-east Africa and Arabia av. 102·7.

Melittophagus pusillus meridionalis.

Melittophagus meridionalis Sharpe, Cat. Bds. Brit. Mus. xvii. 1892, p. 45 : Natal.

Melittophagus pusillus ocularis Reichw. O. M. 1900, p. 86 : Nubia.

Melittophagus pusillus apud Butler, Ibis, 1905, p. 349, 1908, p. 242, 1909, p. 85.

[B. coll.] 1 Roseires Sept. **Sen.** ; 14 Khartoum Jan. Feb. May Sept. Oct. Nov. Dec. ; 2 Gardain May, **B.G.** ; 4 Mongalla, July–Sept.

[C. & L. coll.] 4 Senga Dec., 1 20 miles above Sennar Jan. **Sen.** ; 1 Melut Jan., 1 Renk Mch., 1 Lake No Feb. **U.N.**

[Chr. coll.] 3 Yei Dec. **L.E.**

We have followed C. Grant (Ibis, 1915, p. 295) in regarding this, the Sudanese form of the Little Bee-eater, as identical with that of South Africa.

Melittophagus variegatus variegatus.

Merops variegatus Vieill. Nouv. Dict. xiv. 1817, p. 25 : Malimbe, Congo (ex Levaillant).

Melittophagus variegatus Reichw. V. A. ii. p. 304.

This species is mentioned by Reichenow as having been secured at Meshra el Rek, **B.G.**, by Bohudorff and Schweinfurth. It is not represented in these collections, nor can we find any other record of its occurrence within our limits. There are specimens in the Museum from the headwaters of

the Welle (*Alexander*) and from Lake Albert (*Blaine* and others), but we cannot admit it to the Sudanese list without further evidence.

Melittophagus bullocki frenatus.

Merops frenatus Hartl. J. f. O. 1854, p. 257 : Sennar.

Melittophagus frenatus Butler, Ibis, 1905, p. 349, 1908, p. 241, 1909, p. 85.

Melittophagus bullocki frenatus Claude Grant, Ibis, 1915, p. 298.

[B. coll.] 2 Rahad R. Apl., 1 Roseires Aug. Sen.;
1 Pongo R., 1 Chak Chak, 1 nr. Kojali Feb., 1 Wau
Mch. B.G.; 1 Lado Feb. L.E.

[C. & L. coll.] 1 Eneikliba, 4 Kamisa Dec. Sen.

[Chr. coll.] 10 Meridi Jan. & Feb., 1 Wau July, B.G.

Apparently a common bird in the southern parts of the Sudan.

We have no hesitation in regarding *Merops boleslawskii* v. Pelz. Sitz. Ak. Wien, 1858, p. 320 : Senegal, which has been recorded by Heuglin and others from the Sudan, as simply a yellow-throated phase of this species.

Dicrocercus hirundineus heuglini.

Dicrocercus hirundineus heuglini Neumann, Bull. B. O. C. xvi. 1906, p. 113 : Bongo, B.G.

Dicrocercus furcatus (nec Stanley), Reichw. V. A. ii. p. 316 ; Butler, Ibis, 1908, p. 241, 1909, p. 85.

[B. coll.] 1 Mongalla, 1 Sheik Tombé May, Mon.;
3 Pongo river Feb., 1 S. of Kojali Mch. B.G.

[Chr. coll.] 2 Yambio Mch. B.G.; 3 Yei Nov. Dec. L.E.

As regards this form we agree with what C. Grant (Ibis, 1915, p. 293) has written.

Family IRRISORIDÆ.

Irrisor erythrorhynchus niloticus.

Irrisor erythrorhynchus niloticus Neumann, O. M. 1903, p. 181 : Goz abu Guma, W.N.; Claude Grant, Ibis, 1915, p. 284.

Irrisor erythrorhynchus (nec Lath.), Butler, Ibis, 1905, p. 352, 1908, p. 242, 1909, p. 85, 1909, p. 401.

[B. coll.] 4 Roseires Apl. Aug. Sept. Sen. ; 4 Wau Jan. & Apl. B.G.

[Chr. coll.] 3 Mt. Baginzi Mch. B.G. ; 1 Yei Nov. L.E.

We have followed Claude Grant in his revision of the genus (Ibis, 1915, pp. 281-289), but we should remark in passing that in our Sudan specimens the size of the tail-spots is not constant, three birds collected by Christy at Mt. Baginzi having very small spots, while the rest of the Bahr el Ghazal birds have large ones. We can see no difference between Bahr el Ghazal and Roseires birds.

Rhinopomastus cabanisi.

Irrisor cabanisi De Filippi, Rev. et Mag. Zool. 1853, p. 289 : White Nile, 4° & 3° N. lat.

Rhinopomastus cabanisi Reichw. V. A. ii. p. 348.

[B. coll.] 2 Mongalla "summer" & Jan. ; 1 Rejaf, Feb. L.E.

A scarce bird (*A. L. B.*).

Scoptelus aterrimus emini.

Scoptelus aterrimus emini Neumann, J. f. O. 1905, p. 197 : Njangabo, W. of Lake Albert.

Scoptelus notatus apud Butler, Ibis, 1905, p. 353, 1908, p. 242.

Scoptelus aterrimus apud Butler, Ibis, 1909, p. 85.

[B. coll.] 1 Disa Apl., 1 Roseires May, Sen. ; 1 El Duem Sept. W.N. ; 1 Malakal June, U.N. ; 1 Mongalla, "summer," 3 Sheik Tombé "summer" & Jan. Mon. ; 1 Raffali Feb., 1 nr. Tonj Jan. B.G. ; 1 Iado Feb. L.E.

[C. & L. coll.] 7 Kamisa Dec., 2 nr. Sennar Dec. & Jan. Sen. ; 1 Jebel Ahmed Agha, 1 White Nile lat. 9½° N. long. 30° 40' E. Feb. U.N.

[Chr. coll.] 1 Mt. Baginzi Mch. B.G.

Neumann has separated the forms of *Scopelus aterrimus* as follows :—

S. a. aterrimus. Senegal to Togoland.

S. a. emini. White Nile district to Lake Albert.

S. a. notatus. Bogos, north and central Abyssinia, etc.

S. a. major. S. Abyssinian Lake district.

S. a. anchietæ. Angola.

The differences on which these races are based are chiefly those of variation of metallic gloss and the absence or amount of white in the tail-feathers. As regards the former, we cannot from the material before us consider it as sufficiently constant to separate subspecies, but the second characteristic is more constant. In Senegal *S. a. aterrimus* never has any white in the tail, in Eritrea *S. a. notatus* always has. In our Sudanese specimens, the young birds almost always have white, the adults, males at any rate, apparently never. In other words they are as nearly as possible intermediate, but inasmuch as they have been named already by Neumann, it seems the best course to keep them distinct for the present.

Family UPUPIDÆ.

Upupa epops epops.

Upupa epops Linn. Syst. Nat. 10th ed. 1758, p. 117 : woods of Europe, restricted type-locality : Sweden ; Butler, Ibis, 1905, p. 352, 1908, p. 242, 1909, p. 401.

Upupa epops epops Hartert, Vög. pal. Faun. p. 867.

[B. coll.] 7 Khartoum, 7 April–24 May.

[C. & L. coll.] 2 Kamisa Dec. Sen. ; 1 White Nile lat. 14° N., W.N. ; 2 Jebel Ahmed Agha Jan., 2 Lake No Feb. U.N.

[Gurney coll.] 1 Meroë Feb. Ber.

A winter migrant to the whole of the Sudan and from Gambia to British East Africa.

Upupa epops senegalensis.

Upupa senegalensis Swainson, Birds W. Afr. ii. 1837, p. 114 : Senegal ; Claude Grant, Ibis, 1915, p. 276.

Upupa butleri Madarász, Ann. Mus. Nat. Hung. ix. 1911, p. 339.

Upupa epops apud Butler, Ibis, 1909, p. 85.

[B. coll.] 1 Roseires Aug. **Sen.**; 1 Raffali Feb. **B.G.**

[Chr. coll.] 1 Mt. Baginzi Meh. **B.G.**

We have followed Claude Grant in his revision of the African Hoopoes, Ibis, 1915, pp. 276-281. *U. e. senegalensis* is distinguished from *U. e. epops*, which is a winter migrant, by its richer red back and generally by the absence of white in the crest, though this latter character is not invariable. We regard it as a resident African race of *U. epops*. There is also a resident race, *U. e. major* Nicoll, in Egypt, but we can find no occurrences outside Egypt.

Madarász, *op. cit.*, described *U. butleri* from the Blue Nile and distinguished it from *U. e. epops* by its smaller size and from *U. senegalensis* by the presence of white in the crest. This last character, as we have said, is by no means invariable in *U. e. senegalensis*, and we have examples before us from localities as far apart as Lake Chad and Somaliland which show distinct traces of white. The size of Madarász' bird is certainly small, wing 125 mm.; the Butler birds before us measuring ♂ 132, ♀ 129, and the Christy bird 131 mm. Typical West African *U. senegalensis* before us measure 132-135 mm., while Swainson's type was only 5 inches = 127 mm. We regret therefore that we can only regard *U. butleri* as a synonym of *U. e. senegalensis*.

Family BUCEROTIDÆ.

Lophoceros nasutus nasutus.

Buceros nasutus Linn. Syst. Nat. 12th ed. 1766, p. 154: Senegal.

Lophoceros nasutus Butler, Ibis, 1905, p. 354, 1908, p. 243, 1909, p. 85.

Lophoceros nasutus nasutus Claude Grant, Ibis, 1915, p. 270.

[B. coll.] 1 Musjid Apl. **B.N.**; 2 Malakal June, **U.N.**; 1 Mongalla "summer" **Mon.**; 1 Raffali Meh., 1 Wau Apl. **B.G.**

[C. & L. coll.] 1 Kamisa Dec. **Sen.** ; 1 Jebel Ahmed Agha Jan. **U.N.**

[Chr. coll.] 2 Wau July & Aug. **B.G.**

[Gurney coll.] 1 Meroë Jan. **Ber.**

Both Claude Grant *op. cit.* and Selater, *Ibis*, 1917, p. 175, have remarked on the variation in size of this species, and, as the latter suggests, it is probable that the Sudan form is intermediate between *L. n. nasutus* of Senegal and *L. n. forskalii* of Arabia. We think on the whole, however, it is best to unite it for the present with the typical form.

Lophoceros erythrorhynchus erythrorhynchus.

Buceros erythrorhynchus Temm. Pl. Col. livr. 36, 1823, sp. 19 : Senegal.

Lophoceros erythrorhynchus Butler, *Ibis*, 1905, p. 394, 1908, p. 243, 1909, p. 36.

Lophoceros erythrorhynchus erythrorhynchus Claude Grant, *Ibis*, 1915, p. 272.

[B. coll.] 1 Roseires Sept. **Sen.** ; 1 El Ein Mch. **Kor.** ;
1 Tawela June, **U.N.** ; 1 Mongalla "summer," **Mon.** ;
1 Wau Apl. **B.G.**

[C. & L. coll.] 2 Kamisa Dec., 1 nr. Sennar Jan. **Sen.** ;
1 White Nile lat. 13° N. Jan. **W.N.**

Widely distributed (*A. L. B.*).

Bycanistes subcylindricus.

Buceros subcylindricus P. L. Selater, P. Z. S. 1870, p. 668, pl. 39 : West Africa.

Mr. Butler mentions in his notes that he saw a large black *Bycanistes* with wings apparently mostly white at Kajo Kaji and Lado Nyepo in the Lado Enclave. He did not secure one, but is inclined to attribute those he saw to this species, which has been recorded from Uganda and the upper Welle.

Bucorvus abyssinicus.

Buceros abyssinicus Bodd. Tabl. Pl. Enl. 1783, p. 48 : Abyssinia.

Bucorvus abyssinicus Reichw. V. A. ii. p. 234; Butler, Ibis, 1905, p. 353, 1908, p. 242.

[B. coll.] 1 Upper Nile Feb.

Generally distributed throughout the Sudan (A. L. B.).

Family ALCEDINIDÆ.

Ceryle rudis rudis.

Alcedo rudis Linn. Syst. Nat. 10th ed. 1758, p. 116 : Egypt.

Ceryle rudis rudis Hartert, Vög. pal. Faun. p. 877.

Ceryle rudis Butler, Ibis, 1905, p. 354, 1908, p. 243, 1909, p. 86.

[B. coll.] 3 Khartoum May & Nov.; 1 Malakal May, U.N.; 1 Mongalla, 2 Bor "summer," Mon.; 1 Raffali Feb. B.G.

[C. & L. coll.] 2 Hassania Island, Jan. W.N.

Widely distributed on all rivers in the Sudan (A. L. B.).

Ceryle maxima.

Alcedo maxima Pallas, Spic. Zool. fasc. vi. 1769, p. 14 : Cape of Good Hope.

Ceryle maxima Reichw. V. A. ii. p. 299 : Butler, Ibis, 1905, p. 354, 1908, p. 243.

[B. coll.] 1 Gallabat Apl. Kas.

Apparently, from Mr. Butler's notes, a not uncommon bird on the rivers of the Sudan, but we have only seen two Sudanese examples besides the present one.

Corythornis cristata.

Alcedo cristata Vroeg, Cat. Adumb. 1764, no. 55 : Cape of Good Hope.

Corythornis cristata Claude Grant, Ibis, 1915, p. 263.

Corythornis cyanostigma (Rüpp.); Butler, Ibis, 1905, p. 354, 1908, p. 243, 1909, p. 86.

[B. coll.] 1 Gallabat May, Kas.; 1 Roseires Jan. Sen.; 2 Mongalla "summer"; 1 Chak Chak Feb., 1 Wau Apl. B.G.

[C. & L. coll.] 1 White Nile lat. 12° N. Jan., 1 Tonga Feb., 1 White Nile lat. $9\frac{1}{2}^{\circ}$ N., long. $30^{\circ} 40'$ E., Mch. **U.N.**

[Chr. coll.] 1 Yambio Mch. **B.G.**

Widely distributed on almost all rivers and streams in the Sudan south of the more northern parts of the White and Blue Niles, when the banks are without sedge or cover (*A. L. B.*).

Claude Grant, *op. cit.*, shows that Vroeg's name if adopted preoccupies *A. cristata* of Linnæus from Madagascar (the Madagascar bird must then be called *C. vintsioides* (Eyd. & Gerv.)), and antedates *A. cyanostigma* Rüppell from Abyssinia.

Ispidina picta picta.

Todus pictus Bodd. Tabl. Pl. Enl. 1783, p. 49: "Juida," Africa.

Ispidina picta Reichw. V. A. ii. p. 286: Butler, Ibis, 1905, p. 355, 1909, p. 86.

[B. coll.] 1 Gallabat, 1 Setit R. May, **Kas.**; 1 Roseires May, **Sen.**; 1 Abu Kika May, **Mon.**; 1 Tembura Mch. **B.G.**

[Chr. coll.] 4 Meridi Jan. & Feb., 1 Yambio Mch. **B.G.**

Also a widely distributed species.

Halcyon malimbicus prenticei.

Halcyon malimbicus prenticei Mearns, Proc. U.S. Nat. Mus. vol. 48, 1915, p. 392: Sesse Is., Victoria Nyanza.

Halcyon malimbicus apud Butler, Ibis, 1909, p. 86.

[Chr. coll.] 1 Tembura Apl. **B.G.**

Mr. Butler's example of this Kingfisher is not in the collection presented to the Museum.

We have examined the Kingfishers of this group in the Museum and our conclusions are similar to those of Dr. Sharpe (Cat. Bds. Brit. Mus. xvii. p. 246), except that an additional race inhabiting Uganda, the upper Welle, and Bahr el Ghazal must be recognized.

We have then :—

1. HALCYON MALIMBICUS MALIMBICUS.

Alcedo malimbica Shaw, Gen. Zool. viii. pt. 1, 1812, p. 66 :
“Malimba,” i. e. Gaboon.

In this form the head is blue, of almost the same shade as the back.

Distr. Gaboon south to north Angola, north to southern Cameroon (*Bates*).

2. HALCYON MALIMBICUS PRENTICEI.

Halcyon malimbicus prenticei supra.

Slightly larger, wing 118 against about 115 mm., the blue slightly paler and the crown rather darker than the neck.

Distr. Uganda north to the upper Welle (*Bohndorff* & *Alexander*), and the Bahr el Ghazal.

3. HALCYON MALIMBICUS DRYAS.

Halcyon dryas Hartlaub, J. f. O. 1854, p. 2 : St. Thomas I.
A larger bird with a longer bill.

Distr. The islands in the Gulf of Guinea—Sao Thomé, Principe, and Fernando Po. There is one bird in the Museum labelled Gaboon (*Ausell*). We cannot help thinking there is a mistake in regard to the locality of this specimen.

4. HALCYON MALIMBICUS FORBESI.

Halcyon forbesi Sharpe, Cat. Bds. B. M. xvii. 1892, p. 247, pl. 6, fig. 2 : Shonga on the Niger.

Crown ashy brown washed with greenish.

Distr. West Africa from Gambia to Cameroon Mt., and inland to northern Nigeria.

5. HALCYON MALIMBICUS TORQUATUS.

Halcyon torquatus Swainson, Bds. W. Africa, ii. 1837, p. 99 : Senegal.

Crown a dull brown sharply defined from the blue back.

Distr. Senegal.

Halcyon cyanoleucus.

Alcedo cyanoleuca Vicill. Nouv. Dict. xix. 1818, p. 401 :
Coast of Angola.

[B. coll.] 1 Bahr el Zeraf June, U.N. ; 1 Mongalla,
4 Giggling May, Mon.

The races of this group have been discussed at length by

Sharpe, Ogilvie-Grant, Mearns, and Claude Grant. *Halcyon cyanoleucus* from South Africa is distinguished by its bluish head and the black line being continued over the ear-coverts behind the eye; while *H. senegalensis* from northern West Africa has a more or less dusky head, and is without the black line behind the eye.

The range of *H. senegalensis* extends from northern Angola to Senegal, the southern birds having duskier crowns, and possibly distinguishable as *H. s. fuscopileus* Reichw.; the range of *H. cyanoleucus* extends from south Angola and Damaraland through the Transvaal and northwards (but not to Natal), and both the forms are found mingled in Uganda, the interior of British East Africa, the Sudan, and Eritrea. Whether under these circumstances we should call them subspecies or species must be determined later. We have little doubt that they interbreed.

Of the birds before us six, from south of Lake No, appear to be indistinguishable from typical South African *H. cyanoleucus*.

There are also birds in the Museum collection from the White Nile below Lake No, and one from Tonga in the present collection, which are apparently typical or nearly typical *H. senegalensis*.

We are of the opinion therefore, that while there are two definite species in their respective type localities, in the Sudan they cannot be invariably distinguished.

***Halcyon chelicuti*.**

Alcedo chelicuti Stanley in Salt's Abyss. 1814, p. lvi: Chelicut, Abyssinia.

Halcyon chelicuti Reichw. V. A. ii. p. 271.

Halcyon chelicutensis Butler, Ibis, 1905, p. 356, 1908, p. 243, 1909, p. 86.

[B. coll.] 1 Fazogli, May, Sen.; 2 Kaka Feb. & May, U.N.; 2 Giggling May, 1 Sheik Tombé "summer," Mon.; 1 Chak Chak, Feb. B.G.; 1 Kajo Kaji, Mch. L.E.

[C. & L. coll.] 2 Kamisa Dec. Sen.

[Chr. coll.] 2 Mt. Baginzi Mch. B.G.; 5 Yei Nov. & Dec. L.E.

***Halycon leucocephala leucocephala*.**

Alcedo leucocephala P. L. S. Müller, Linn. Nat. Syst. Suppl. 1776, p. 94: Senegal.

Halycon leucocephala leucocephala Claude Grant, Ibis, 1915, p. 265.

Halycon semiciruleus apud Butler, Ibis, 1905, p. 355, 1908, p. 243, 1909, p. 86.

[B. coll.] 1 Setit R., 1 Gallabat May, **Kas.**; 3 Roseires Apl. & Sept., 1 Abu Sheneina Apl. **Sen.**; 1 Bahr el Zeraf June, **U.N.**; 2 Mongalla "summer," **Mon.**; 1 Raffali Feb. **B.G.**

[Chr. coll.] 3 Meridi Feb., 1 Mt. Baginzi Mch., 1 & 1 juv., Tembura Apl. **B.G.**; 5 Yei Nov. & Dec. **L.E.**

We have followed Claude Grant, *op. cit.*, in his revision of the races of this group and, like him, we cannot appreciate the distinctness of Neumann's *H. l. centralis* from Uganda, to which race, if accepted, it is probable that some of our specimens would belong. Mr. Butler remarks that this species is widely distributed, especially in the rains.

Family CORACIIDÆ.

***Coracias garrulus*.**

Coracias garrulus Linn. Syst. Nat. 10th ed. 1758, p. 107: Europe, restricted type-locality: S. Sweden.

Coracias garrulus garrulus Hartert, Vög. pal. Faun. p. 872; Butler, Ibis, 1905, p. 348, 1908, p. 241.

[B. coll.] 1 Khartoum 14 Oct.

An autumn and spring migrant through the Sudan, apparently not often wintering there.

***Coracias abyssinus abyssinus*.**

Coracias abyssinus Bodd. Tabl. Pl. Enl. 1783, p. 38: Abyssinia; Reichw. V. A. ii. p. 219.

Coracias abyssinicus Butler, Ibis, 1905, p. 349, 1908, p. 241, 1909, p. 84.

[B. coll.] 1 Gedaref May, **Kas.**; 3 Khartoum May, Aug. Oct.; 1 Fachi Shoya Nov. **W.N.**; 2 west of Tonj Jan., 1 Tembura Mch., 1 Wau Mch. **B.G.**

[C. & L. coll.] 1 Senga Dec., 1 nr. Lake No Feb.
U.N.

[Chr. coll.] 6 Meridi Jan. & Feb., 2 Mt. Baginzi Mch.,
1 Yambio Mch. B.G.

[Gurney coll.] 1 Metemmah Feb. Ber.

We are by no means certain whether the north-west African race distinguished by Reichenow, O. M. 1899, p. 191, as *C. a. senegalensis* can really be upheld. At certain times, mostly between November and February, the crown becomes distinctly greener than is usual with the north-east African race, but at other times they are indistinguishable.

Coracias nœvia nœvia.

Coracias nœvia Daudin, Traité, ii. 1800, p. 258 : Senegal.

Coracias nœvia nœvia Claude Grant, Ibis, 1915, p. 262.

Coracias nœvius Butler, Ibis, 1908, p. 241.

[B. coll.] 1 Pongo river Feb. B.G. ; 1 Kajo Kaji Mch.
L.E.

Only found in the more southern parts of the Sudan.

Eurystomus afer æthiopicus.

Eurystomus afer æthiopicus Neumann, J. f. O. 1905, p. 184 : Upper Gelo, Abyssinia.

Eurystomus afer apud Butler, Ibis, 1905, p. 348, 1908, p. 240.

[B. coll.] 12 nr. Roseires Apl. June July Aug. Sept.,
1 Famaka May, Sen. ; 1 Khor Gitté, Mch. B.G.

[Chr. coll.] 2 Mt. Baginzi, 2 Yambio Mch. B.G.

We agree in the main with Neumann's subdivision of this group, J. f. O. 1905, pp. 184-6.

We recognize :—

1. E. A. AFER (Lath.)

Under surface and cheeks strongly washed with lilac ; central tail-coverts brown, outer ones blue ; back a dark earth-brown.

Range. Senegal to Congo.

2. *E. A. ÆTHIOPICUS* Neum.

Separable with difficulty from the preceding.
Under surface and tail-coverts similar, but
back distinctly lighter brown.

Range. N. Abyssinia, Eritrea, and the Sudan.
Bahr el Ghazal birds are intermediate between
this race and *E. a. afer*.

3. *E. A. RUFOBUCALIS* Reichw.

Under surface and cheeks much less noticeably
washed with lilac; back possibly a richer red;
tail-coverts similar.

Range. Uganda and Mt. Elgon.

4. *E. A. SUAHELICUS* Neum.

Under surface and cheeks as in *afer* or *æthiopicus*,
but tail-coverts all blue.

Range. British East Africa to the Zambesi,
Nyasaland, and eastern Congo.

5. *E. A. PULCHERRIMUS* Neum.

Under surface and cheeks even more strongly
lilac than *E. a. afer* or *E. a. suahelicus*. Tail-
coverts all blue as in the latter, but more blue
on the central tail-feathers and back a deeper
red.

Range. N. Angola.

We believe this bird to be an extensive local migrant and therefore doubt how far each of these races is restricted to the range indicated.

A single specimen in the Museum, collected by the Blundell-Lovat Expedition at Quatti in north-west Abyssinia, has the tail-coverts almost black and the central tail-feathers quite black. It will probably prove to be a distinct race when more material is available.

Eurystomus glaucurus S. Müll., from Madagascar and south-east Africa to Nyasaland, is a much larger bird, wing 200 mm. against 160–185 in *E. afer*, and is quite a distinct species.

Family PSITTACIDÆ.

Psittacus erithacus.

Psittacus erithacus Linn. Syst. Nat. 10th ed. 1758, p. 99 : Guinea.

Heuglin, Orn. Nordost-Afr. p. 745, records this species as occurring in the Niam Niam country in the western watershed of the White Nile, *i.e.*, the western Bahr el Ghazal or Lado Enclave, but we do not know of any definite occurrences. It occurs so close to our limits, however, that we have little doubt it will presently be found within them.

Palæornis krameri krameri.

Psittacus krameri Scopoli, Annus I. Hist. Nat. 1769, p. 31 : Senegal; *cf.* Neumann, O. M. xxiii. 1915, p. 178.

Palæornis docilis auct., Butler, Ibis, 1908, p. 249, 1909, p. 89.

[B. coll.] 1 El Ein Mch. Kor.; 2 Mongalla summer & Jan. Mon.; 1 Wau Apl., 1 Amien May, B.G.

[Chr. coll.] 1 Wau July, B.G.

We cannot from the material before us appreciate the distinctness of *P. k. centralis* Neum. O. M. xxiii. 1915, p. 73, to which race these birds would belong. The colour and size of the bill varies considerably, and we cannot distinguish our examples from Senegal birds, though no doubt there must be in the Sudan intermediate forms between this race and *P. k. parvirostris* from Abyssinia and the Blue Nile.

Palæornis krameri parvirostris.

Palæornis parvirostris Souancé, Rev. et Mag. Zool. 1856, p. 157 : Abyssinia.

[B. coll.] 2 Roseires Aug. & Sept. Sen.

[C. & L. coll.] 2 Kamisa Dec. Sen.

This race is easily distinguishable by the greener, less yellow coloration of the head and cheeks, and by the smaller, brighter red bill.

Poicephalus meyeri meyeri.

Psittacus meyeri Cretzschmar, Atlas, 1826, p. 18, pl. xi.: Kordofan.

Poicephalus meyeri Butler, Ibis, 1905, p. 360, 1908, p. 249, 1909, p. 88.

[B. coll.] 7 Roseires July–Sept. Sen.; 2 Jebel Melbis Apl. Kor.; 1 Chak Chak Feb., 1 Wau Apl. B.G.

The races of *P. meyeri* have been discussed at length by Neumann, Nov. Zool. 1903, pp. 383–385, and by Claude Grant, Ibis, 1915, pp. 258–260. The two specimens from Kordofan are interesting as very little material has been obtained from there since Rüppell's time. At first sight these birds appear to differ markedly from Sennar or Bahr el Ghazal birds, but on closer inspection there is nothing that could not be accounted for by their undoubtedly worn condition. The yellow of the forehead is very pale indeed, and the rump is a good deal more blue than in other Sudan birds, as are also the feathers of the breast, while the back is greyer. All this, however, might be due to worn plumage, and while we ourselves suspect that more material will prove them to be a distinct race, at present we prefer to unite them with the rest of the Sudanese examples.

Poicephalus crassus.

Pionias crassus Sharpe, Journ. Linn. Soc. xvii. 1884, p. 429: Ndoruma, Niam Niam country.

[Chr. coll.] 1 Yambio Meh. B.G.

This very interesting bird is, in our opinion, in all probability the young of a race of *P. flavifrons*, as suggested by Reichenow and others. Neumann, however, in the J. f. O. for 1904, p. 376, and again in the Nov. Zool. xv. p. 382, strongly maintains that it is nothing of the sort.

This example, which appears to be only the second known, is an almost exact replica of the type, but it lacks the one or two yellow feathers in the forehead possessed by that bird. We have no young examples of *P. flavifrons* to compare it with, but Neumann, who has examined it, says it is markedly distinct in many respects. We conclude,

therefore, that if it is *P. flavifrons*, it belongs to a very distinct race. There is an excellent description in the Catalogue of Birds, xx. p. 369. Reichenow gives "Kutschugali (*i. e.* Kojali, B.G.) Bohndorff" as another locality, but we have no knowledge of specimens from there.

Agapornis pullarius ugandæ.

Agapornis pullarius ugandæ Neumann, Nov. Zool. xv. 1908, p. 388: Entebbe, Uganda.

[Chr. coll.] 4 Yambio Mch., 2 Tembura Apl., 1 Mt. Baginzi Mch., 2 Meridi Jan. B.G.

Neumann, Nov. Zool. xv. 1908, p. 388, has described the Uganda race, to which our birds belong, as distinct from the West African, and we agree in this definition. He fixes the type locality of Linnæus' *A. pullarius* as Upper Guinea, as the bird is not known to occur in Æthiopia, *i. e.* Nubia, as given by Linnæus.

Mr. Butler notes that he met with this species in the Bahr el Ghazal and Lado Enclave, but we have not seen any of his specimens.

Family BUBONIDÆ.

Asio flammeus flammeus.

Strix flammea Pontoppidan, Danske Atlas, i. 1763, p. 617, pl. xxv.: Denmark.

Asio flammea flammea Hartert, Vög. pal. Faun. p. 987.

Asio accipitrinus auct., Butler, Ibis, 1905, p. 360.

[B. coll.] 1 Kambin Mch. B.N.

The Short-eared Owl is a winter visitor, but apparently not in any great numbers. Mr. Butler records it also from Khartoum and near Omdurman.

Asio capensis near tingitanus.

Phasmoptynx capensis a. tingitanus Loche, Expl. Scient. de l'Algérie, Ois. i. 1867, p. 99: Algeria.

Asio capensis tingitanus Hartert, Vög. pal. Faun. p. 991.

Asio capensis Butler, Ibis, 1905, p. 360, 1908, p. 249.

[B. coll.] 1 Bahr el Ghazal Apl.

[C. & L. coll.] 1 Tonga Mch. U.N.

We are not certain to which race of *A. capensis* these birds should be assigned. According to all precepts we should expect them to be nearer the South African than the northern form. As a matter of fact they are certainly nearer the latter, being distinctly redder and less grey than South African examples. They agree well with a series of five, collected by Alexander near Lake Chad, a single example from Nyasaland, and four from various localities in East Africa. As apparently the sole difference between *A. c. capensis* and *A. c. tingitanus* is one of a slight tinge of colour, we should not like to say without a great deal more material where one ended and the other began.

"A swamp owl, in the sudd of the Bahr el Jebel" (*A. L. B.*).

Bubo ascalaphus desertorum.

Bubo ascalaphus desertorum Erlanger, O. M. 1897, p. 192: South Tunisia.

There are two specimens of this desert form of *B. ascalaphus* in the Museum, one from Shendi (Rothschild and Wollaston), and one from Jebel um Durragh in Kordofan, collected by Dunn. There is also in the Tring Museum a specimen from Shendi, and all three birds are unmistakably the pale form. Whether *B. a. ascalaphus* also occurs we cannot tell.

Bubo africanus cinerascens.

Bubo cinerascens Guérin, Rev. et Mag. Zool. 1843, p. 321: Abyssinia; Butler, Ibis, 1905, p. 362, 1908, p. 250.

Bubo africanus cinerascens Neumann, J. f. O. 1914, pp. 37, 38.

[B. coll.] 2 Gedaref May, **Kas.**; 1 Khartoum Sept.;
1 Renk, 1 White Nile Mch. **U.N.**; 1 Abu Kika May,
1 Mongalla "summer," **Mon.**; 1 Chak Chak Feb.,
1 Kojali Mch. **B.G.**

[C. & L. coll.] 1 Sinkat Mch. **R.S.**; 2 Kaka, 1 Marbeit
Mch., 1 Bahr el Zeraf Feb. **U.N.**

There has been a certain amount of confusion in the

nomenclature of this group, most of which has been corrected by Neumann, J. f. O. 1914, pp. 36-39. This species also has a rufous, or partially rufous, phase in dry countries, *e. g.*, south-west Africa, Somaliland, and in the White Nile district. This red phase was confused by Sharpe, Ibis, 1898, p. 289, and referred to by O.-Grant, Ibis, 1902, p. 438, as *Bubo abyssinicus* (Guérin). This is, however, a strikingly distinct species of *Asio* and has no connection with this group.

The races of this species are:—

1. *B. a. africanus* Temm. South Africa to Angola and Nyasaland; East African and Uganda birds are intermediate with the next form.
2. *B. a. cinerascens* Guér. N.W. & N.E. Africa and the Sudan.
3. *B. a. milesi* Sharpe. S. Arabia.

It seems possible that *Asio maculosus amerimnus* Oberholser, P. U.S. N. M. xxviii. 1905, p. 856, Durban, may have to be recognized as a paler, greyer race which extends to British East Africa, but there is such variation in the large series in the Museum that for the present we prefer to unite it with the typical race.

Bubo lacteus.

Strix lactea Temm. Pl. Col. livr. 1, 1820, pl. 4: Senegal.

Bubo lacteus Reichw. V. A. i. p. 650.

[B. coll.] 1 Blue Nile Nov.; 1 Roseires July, Sen.;

1 Tawela June, U.N.

[C. & L. coll.] 1 Kamisa Dec. Sen.; 1 White Nile, lat. 12° N., Jan. U.N.

[Chr. coll.] 1 Yambio Meh. B.G.

There do not appear to be any recognizable races of this Owl, though there is much individual variation in size and a certain amount in coloration. On the whole, south African birds are large, as are Abyssinian, and north-west African and east African are smaller, while Nyasaland and Uganda birds are darker in colour.

Otus scops scops.

Strix scops Linn. Syst. Nat. 10th ed. 1758, p. 92 : Europe, restricted type-locality: Italy.

Otus scops scops Hartert, Vög. pal. Faun. p. 978.

There are no examples of this race in the present collections, but there are several records from the Sudan which undoubtedly refer to this race as well as the following. A single specimen before us from Suakim (Capt. R. H. Penton), with a wing-measurement of 147 mm., we are inclined to assign to the typical race.

Otus scops pulchellus.

Stryx pulchella Pallas, Reise versch. Prov. Russ. Reichs, i. 1801, p. 456 : Volga, S. Russia.

Otus scops pulchellus Hartert, Vög. pal. Faun. p. 980.

[B. coll.] 1 Khartoum 22 Oct. ; 1 Taufikia Apl. U.N.

These two specimens, with wing-measurements of 161 and 162 mm., we consider undoubtedly belong to the greyer and longer-winged eastern form of the Scops Owl.

Otus capensis.

Scops capensis A. Smith, S. A. Quart. Journ. ii. 1834, p. 314: S. Africa.

[B. coll.] 2 near Roseires Apl. Sen.; 1 Chak Chak Feb. B.G.

[C. & L. coll.] 1 Kamisa Dec. Sen.

There are many named races of this Owl. The series in the Museum collection show such great variation that we shall not attempt to enter into the subspecies with only some fifty examples from the whole of Africa before us.

This species has frequently been confused with *O. scops*. One of the quickest methods of identification is that the first primary, in *O. scops* about equal to the fifth, is considerably shorter than the sixth in this species, while the wing is shorter, under 140 in this species, over 140 mm. in *O. scops*.

We know nothing of *Scops königseggi* Madarász, O. M. xx.

1912, p. 81, from the upper Blue Nile, but from its wing formula and size, it does not appear to belong to the *Otus scops* group but to the *Otus capensis*, and as he does not compare it with the latter we cannot offer an opinion.

Otus leucotis leucotis.

Strix leucotis Temm. Pl. Col. livr. 3, 1824, pl. 16 : Senegal.

Otus leucotis leucotis Claude Grant, Ibis, 1915, p. 254.

Scops leucotis Butler, Ibis, 1905, p. 361, 1908, p. 249.

[B. coll.] 1 Athara May, Ber. ; 1 Khartoum Dec. ; 1 Bara Nov. Kor.

We cannot separate Sudanese examples of the White-faced Scops Owl from typical north-west African specimens. The amount of black on the head varies with age, though of course the adults invariably have more than there is in *O. l. granti* (Kollibay) from South Africa.

Carine noctua spilogaster.

Athene spilogastra Heuglin, J. f. O. 1862, p. 14 : near Massaua.

Athene noctua spilogaster Butler, Ibis, 1909, p. 401.

[B. coll.] 1 Jebel Bawati May, R.S.

[C. & L. coll.] 1 Sinkat Mch. R.S.

This Little Owl has frequently been recorded from Somaliland by various authors and collectors, but as shown by Reichenow (V. A. iii. p. 822) the Somaliland bird is totally distinct, the striped head of the present race distinguishing it at once from the plain brown or slightly spotted head of the Somaliland form. The latter must be known as *C. n. somaliensis* Reichw. (Vög. Afr. iii. 1905, p. 822). These two specimens of *C. n. spilogaster* are the first to reach the British Museum.

Glaucidium perlatum.

Strix perlata Vieill. Nouv. Dict. vii. 1817, p. 26 : Senegal.

Glaucidium perlatum Claude Grant, Ibis, 1915, p. 256 ; Butler, Ibis, 1905, p. 361, 1908, p. 249, 1909, p. 86.

[B. coll.] 5 Roseires Apl.—Sept., 1 Abu Sheneina Apl.
Sen.; 2 Jebil Melbis Apl. Kor.; 2 Wau Jan. &
Apl. B.G.

[C. & L. coll.] 2 Kamisa Dec. Sen.

We have examined the fairly representative series of some eighty-five skins of this species in the British Museum, and are strongly in agreement with Claude Grant that no races should at present be recognized.

Family TYTONIDÆ.

Tyto alba affinis.

Strix affinis Layard, Birds S. Afr. 1867, p. 42: Cape of Good Hope.

Strix flammea apud Butler, Ibis, 1905, p. 360.

Tyto alba affinis Claude Grant, Ibis, 1915, p. 258.

[B. coll.] 1 Khartoum Meh.; 1 Bahr el Zeraf June, U.N.;
1 "Sudan."

[C. & L. coll.] 2 Jebel Zeraf Feb. U.N.

We cannot separate these Sudanese specimens from typical *T. a. affinis* (Layard) from South Africa. Whether or not any other form ever occurs in the northern parts of the Sudan, we cannot say as we have no material. In examining the whole series of Barn-Owls from Africa in the Museum collection, we found very little variation from any part of the continent, except that two birds—one from Sierra Leone, and the other from Jarko, Upper Nigeria—were rather distinct and apparently much more like *T. a. alba* from southern Europe.

Family FALCONIDÆ.

Falco peregrinus peregrinus.

Falco peregrinus Tunstall, Orn. Brit. 1771, p. 1: Great Britain.

Falco peregrinus peregrinus Hartert, Vög. pal. Faun. p. 1043.

[C. & L. coll.] 1 Marbeit Jan. U.N.

We have no doubt that this is a specimen of the typical Northern European Peregrine, although it is a long way out

of its known range and is probably merely a wanderer. The broad black cheek-stripe distinguishes it from *F. p. calidus*, which also occurs in the Sudan. It is an adult female with a wing-measurement of 359 mm.

Falco peregrinus calidus.

Falco calidus Latham, Ind. Orn. i. 1790, p. 41 : India.

Falco peregrinus calidus Hartert, Vög. pal. Faun. p. 1046.

[B. coll.] 1 Khartoum Dec.

Another northern race visiting the Sudan in winter. The breeding-grounds of this bird are to the east of those of the ordinary Peregrine, and its usual winter quarters are India, the East India islands, and southern China.

Falco peregrinus babylonicus.

Falco babylonicus P. L. Selater, Ibis, 1861, p. 218, pl. 7 : Oudh.

Falco peregrinus babylonicus Hartert, Vög. pal. Faun. p. 1053.

[B. coll.] 4 Khartoum Oct. Jan. & July 29 ; 1 Ruffaa June 19, B.N.

[Gurney coll.] 1 Meroë Feb. Ber.

The majority of these Falcons have been examined by Dr. Hartert and we have followed his identification. There is a little doubt as to whether two of the birds listed above (both quite immature) are this race or the next, but it is certainly interesting to find both forms occurring in the Sudan as well as two of the more northern races. This race breeds in western Asia.

Falco peregrinus pelegrinoides.

Falco pelegrinoides Temminck, Pl. Col. livr. 81, 1829, pl. 479 : Nubia.

Falco peregrinus pelegrinoides Hartert, Vög. pal. Faun. p. 1051.

[B. coll.] 4 Khartoum Nov. Dec. Feb.

This form, known as the Barbary Falcon, inhabits northern Africa and visits the Sudan in winter, possibly also breeding.

Falco peregrinus minor.

Falco minor Schlegel, Abh. Geb. Zool. & Vergl. Anat. pt. 2, iii. 1844, p. 20: "Mountains of Cape of Good Hope."

Falco peregrinus minor Hartert, Vög. pal. Faun. p. 1050.

Mr. Butler records this species as breeding at Jebel Fazogli in Sennar, and one or more of his specimens are in the Tring Museum. This is the African Peregrine, and we believe this to be the most northern record. (Cf. Hartert, "Notes on Falcons," Nov. Zool. xxii. 1915, p. 173.)

Falco biarmicus abyssinicus.

Falco biarmicus abyssinicus Neumann, J. f. O. 1904, p. 369: Shoa; Hartert, Vög. pal. Faun. p. 1056.

[B. coll.] 4 Roseires Apl., 1 Dinder river Mch., 1 Barankur, Apl., 1 Abd el Karim Nov., 1 Abu Hejar Apl. Sen.; 1 Khartoum Dec.; 1 Bara Apl. Kor.; 1 Kaka Jan., 1 Meshra Rom Feb. U.N.; 1 Rejaf Hill Apl. L.E.

[C. & L. coll.] 2 Kodok (Fashoda) Jan. & Mch., 1 Renk Mch., 1 near mouth of Bahr el Zeraf Mch., 1 Tonga Feb. U.N.

This is undoubtedly the common form of the Lanner in the Sudan. Dr. Hartert was kind enough to look over all these Falcons for us and we entirely agree with his conclusions. For the distinctions of all the races of the Peregrine and Lanner we may refer to his "Notes on Falcons," Nov. Zool. xxii. 1915, pp. 167-185.

Falco biarmicus tanypterus.

Falco tanypterus Schlegel, Krit. Übers. ii. 1844, p. 11: Nubia; Butler, Ibis, 1905, p. 364, 1908, p. 250.

Falco biarmicus tanypterus Hartert, Vög. pal. Faun. p. 1056.

[B. coll.] 2 Khartoum Jan.

A much rarer bird than the last race, and we have only these two specimens from the Sudan that we can definitely assign to this race.

Falco subbuteo subbuteo.

Falco subbuteo Linn. Syst. Nat. 10th ed. 1758, p. 89 : Europe, restricted type-locality : Sweden.

Falco subbuteo subbuteo Hartert. Vög. pal. Faun. p. 1071.

[B. coll.] 2 Khartoum Oct. 17 & 19.

A regular winter migrant to tropical Africa, passing through the Sudan in spring and autumn.

Falco subbuteo cuvieri.

Falco cuvieri A. Smith, S. A. Quart. Journ. i. 1830, p. 392 : Kei river, E. Cape Colony ; Reichw. V. A. i. p. 630.

[Chr. coll.] 3 Mt. Baginzi Meh. **B.G.**

There is in the Museum collection an example of this species collected by Emin at Lado ; otherwise these are the first specimens from the Sudan. We see no reason why the African Hobby should not be regarded as a race of the European. One of the birds apparently not fully adult has two well-marked red patches on the sides of the nape.

Falco concolor.

Falco concolor Temm. Pl. Col. 1825, pl. 330 : text not figure : (Senegal errore !) coasts of Barbary ; Reichw. V. A. i. p. 629.

An example of this species is believed to have been obtained by Hemprich and Ehrenberg at Ambukol in Dongola, and was described by them as *Falco schistaceus*. According to Zedlitz, J. f. O. 1914, p. 674, this is a synonym of *F. concolor*. We know of no other Sudanese examples.

Falco ruficollis.

Falco ruficollis Swainson, Birds W. Afr. i. 1837, p. 107, pl. 2 : Senegal ; Reich. V. A. i. p. 631 ; Butler, Ibis, 1905, p. 364, 1908, p. 250, 1909, p. 89.

[B. coll.] 1 Roseires Feb. **Sen.** ; 1 Khartoum Aug. ; 4 Malakal May, 2 Taufikia Jan. & Apl. **U.N.** ; 1 Sheik Tombé, 1 Kenisa Jan. **Mon.** ; 1 Wau Meh. **B.G.**

[C. & L. coll.] 1 20 miles above Sennar Jan., 1 Kamisa Dec. **Sen.**; 1 Kaka Jan., 1 Kodok Jan., 1 mouth of Zeraf river Mch. **U.N.**

[Chr. coll.] 1 Wau July, **B.G.**

Widely distributed south of Khartoum on Blue Nile, White Nile, etc., its range largely coinciding with that of the Doleib Palm, its favourite tree (*A. L. B.*).

Hierofalco cherrug cherrug.

Falco cherrug Gray in Hardwicke's Ill. Ind. Zool. ii. 1833-34, pl. 25 : India.

Falco cherrug cherrug Hartert, Vög. pal. Faun. p. 1059.

Falco sacer auct., Butler, Ibis, 1905, p. 362.

[B. coll.] 3 Khartoum Nov. & Dec.

The Saker Falcon seems a rare winter visitor to the Sudan. Mr. Butler notes it as mainly occurring in the northern Sudan, but he saw one pair at Kajo Kaji in the Lado Enclave.

Tinnunculus tinnunculus tinnunculus.

Falco tinnunculus Linn. Syst. Nat. 10th ed. 1758, p. 90 : Europe, restricted type-locality : Sweden.

Falco tinnunculus tinnunculus Hartert, Vög. pal. Faun. p. 1082.

Tinnunculus alaudarius and *Cerchneis tinnunculus* Butler, Ibis, 1905, p. 365, 1908, p. 251.

[B. coll.] 5 Khartoum Feb. Mch. & Dec.; 1 Kajo Kaji Mch. **L.E.**

[C. & L. coll.] 1 Sinkat Mch. **R.S.**; 1 Senga, 1 Sennar Dec. **Sen.**; 1 White Nile lat. 15° N. Jan. **W.N.**; 1 Jebel Ahmed Agha Jan., 1 near Lake No Feb. **U.N.**

[Chr. coll.] 2 Meridi Feb. **B.G.**

It appears to us that all the Sudanese specimens before us belong to the typical European form, which, of course, is only a winter migrant to the Sudan. *T. t. rupicolæformis* from Egypt, so far as we know, does not occur in the Sudan, though we have very little material from the north of the country. It has distinctly a more reddish tinge on

the underside, and though some of our examples have an inclination in that direction, there are none that are as bright as typical Egyptian specimens.

Tinnunculus tinnunculus carlo.

Cerchneis tinnunculus carlo Hartert & Neumann, J. f. O. 1907, p. 592 : Bissidimo near Harar, Abyssinia.

This is the African resident form of the common Kestrel, and may be distinguished at a glance—in adult males at least—by its darker and richer coloration and by its tail, which always retains traces of the transverse black bars. We have seen no Sudanese examples, but as we have specimens in the Museum from Nigeria on one side and Abyssinia and Somaliland on the other, we have little doubt that it will be found to occur in the southern parts of our region.

Tinnunculus naumanni naumanni.

Falco naumanni Fleischer, Sylvan, 1818, part v. art. 10, p. 174 : Germany.

Falco naumanni naumanni Hartert, Vög. pal. Faun. p. 1080.

Tinnunculus cenchris Butler, Ibis, 1905, p. 365.

[B. coll.] 1 Gedaref Apl. **Kas.** ; 1 Abū Haraz Nov.,
1 Blue Nile "winter," **Sen.** ; 2 Shendi May 2 & 3,
Ber.

[C. & L. coll.] 1 White Nile lat. 10° N. Jan. **U.N.**

Widely distributed in winter in the Sudan. It is possible that the eastern form *T. n. pekinensis* also occurs, but we have no positive evidence of it. It is distinguished by the greater amount of blue on the wing-coverts of the male.

Tinnunculus alopex alopex.

Tinnunculus alopex Heuglin, Ibis, 1861, p. 69, pl. iii. : Gallabat.

Cerchneis alopex (Heugl.) ; Reichw. V. A. i. p. 638.

[B. coll.] 1 Jebel Zeraf Feb. **U.N.** (ex C. & L. coll.) ;
1 Rejaf Hill Apl. **L.E.**

[C. & L. coll.] 1 Jebelein Jan., 6 Jebel Zeraf Feb. **U.N.**

Widely distributed on granite hills from Kordofan southwards (*A. L. B.*).

Reichenow has described a paler form of this species from Mangu in the Gold Coast hinterland (O. M. 1899, p. 190) as *Cerchneis a. deserticola*. We have a specimen from Gambaga before us which is certainly slightly paler. It agrees almost exactly with the Jebelein specimen. It may be, therefore, that if this paler desert race is recognizable, it extends to the White Nile, but not to the Bahr el Ghazal.

***Erythropus vespertinus vespertinus*.**

Falco vespertinus Linn. Syst. Nat. 12th ed. 1766, p. 129: Ingria, e. g. Province of Petrograd.

Falco vespertinus vespertinus Hartert, Vög. pal. Faun. p. 1078.

Erythropus vespertinus Butler, Ibis, 1905, p. 365.

[B. coll.] 2 Khartoum Nov. & Jan.

Irregular in occurrence, abundant one winter and then not seen for years (*A. L. B.*).

The eastern form *F. v. amurensis*, which occurs in South Africa in winter, has not yet been recorded from the Sudan, and its migration route probably lies well to the east, though we should not be surprised if it did wander into our limits.

***Dissodectes ardosiaceus*.**

Falco ardosiaceus Vieill. Enc. Méthod. iii. 1823, p. 1238: Senegal.

Cerchneis ardosiacea Reichw. V. A. i. p. 636.

Cerchneis ardesiacus Butler, Ibis, 1908, p. 251, 1909, p. 89.

[B. coll.] 1 Roseires Apl. Sen. ; 1 Moyen Jan., 1 Tonj Jan. B.G.

[Chr. coll.] 1 Yei Nov. or Dec. L.E.

Rarely seen in the northern Sudan, commoner towards the south.

Poliohierax semitorquatus.

Falco semitorquata A. Smith, Report Exp. 1836, p. 44: Old Iatakoo, Bechuanaland.

Poliohierax semitorquatus Reichw. V. A. i. p. 645.

The African Falconet is reported by Heuglin from the upper Nile near Gondokoro, and from the Bahr el Ghazal Province. We know of no later examples.

Pernis apivorus apivorus.

Falco apivorus Linn. Syst. Nat. 10th ed. 1758, p. 91: Europe, restricted type-locality: Sweden.

Pernis apivorus apivorus Hartert, Vög. pal. Faun. p. 1181.

[B. coll.] 1 Erkowit Apl. 3, R.S.

A rare winter visitor to the eastern half of Africa. So far as we know this is the first record from the Sudan. Our specimen, a male, has a wing of 424 mm., and is presumably referable to the typical race.

Elanus caeruleus.

Falco caeruleus Desf. Hist. de l'Acad. R. des Sc. Paris, 1787-1789, p. 503, pl. xv.: Environs of Algiers.

Elanus caeruleus Reichw. V. A. i. p. 615; Butler, Ibis, 1905, p. 365, 1908, p. 251.

[B. coll.] 5 Mongolia July-Sept. Mon.; 1 Kajo Kaji Apl. L.E.

[C. & L. coll.] 1 nr. Lake No Mch. U.N.

[Chr. coll.] 1 Tembura Apl. B.G.

The range of the Black-shouldered Kite in its various forms is, except in cold climates, practically cosmopolitan.

Milvus migrans migrans.

Falco migrans Bodd. Tabl. Pl. Enl. 1783, p. 28: France (*apud* Hartert).

Milvus migrans migrans Hartert, Vög. pal. Faun. p. 1169.

The only definite Sudanese record we can trace is that of an example secured by Emin at Lado in April. This specimen, which we have examined, is an undoubted adult Black Kite. The adult is easily distinguishable from the

adult of both races of the Yellow-billed Kite by its black bill. The adult Black Kite is also distinguished from the young of the two yellow-billed races, which also have a black bill, by its whiter head combined with red-brown adult plumage. We should not like to give any distinctions between the young of all three races.

Milvus migrans aegyptius.

Falco aegyptius Gmelin, Syst. Nat. i. pt. 1, 1788, p. 261: Egypt.

Milvus migrans aegyptius Hartert, Vög. pal. Faun. p. 1171.

We have no evidence that the true Egyptian Kite ever occurs in the Sudan. It is distinguished from the common Kite of the Sudan, generally called "Egyptian," by its lighter, more reddish, colour and paler head; the tail also is usually a good deal more reddish. We agree with Hartert in treating the Yellow-billed Kites as subspecies of *M. migrans*. We include this species in our list as there is in the Museum collection an example from Kenia in British East Africa, which we cannot separate from the Egyptian form, and also because we have no Kites from the north of the Sudan and cannot therefore say where the dividing line between this race and the next comes.

Milvus migrans parasitus.

Falco parasitus Daudin, Traité, ii. 1800, p. 150: South Africa (ex Levaillant).

Milvus migrans parasitus Hartert, Vög. pal. Faun. p. 1172.

[C. & L. coll.] 1 Jebelein Jan., 1 White Nile, lat. $9\frac{1}{2}^{\circ}$ N.
long. $30^{\circ} 40'$ E. Mch. U.N.

[Chr. coll.] 1 Wau July, B.G.

From an examination of the Kites in the Museum collection, it is evident to us that the South African Kite ranges throughout Africa to Abyssinia, the Sudan, and north-west Africa to the Gold Coast and Gambia. Birds from Somaliland and south Arabia are almost exactly intermediate between this form and the last.

***Milvus migrans* subsp.?**

[C. & L. coll.] 5 Erkowit Apl. R.S.

These five Kites are in very worn plumage and are thus not very easy to determine. They have the crown of the head almost white with very narrow blackish central streaks, and in this respect resemble *M. m. migrans*, but one of the five has a yellow bill, which would be more characteristic of *M. m. aegyptius*. On the other hand, they are smaller than the typical Egyptian Kite, the wings averaging 405 mm. against 430 to 450 for the Egyptian bird. They agree best with other Kites from the Red Sea coast, Aden and Somaliland, and appear to be an intermediate race between *M. m. aegyptius* and *M. m. parasitus*, as is suggested by Hartert (Vög. pal. Faun. p. 1172).

***Chelictinia riocourii*.**

Elanoides riocourii Vieill. & Oud. Gal. Ois. i. 1823, p. 43, pl. 16: Senegal.

Nauclerus riocouri Reichw. V. A. i. p. 617; Butler, Ibis, 1905, p. 365.

[B. coll.] 1 Malakal, Jan. U.N. (ex C. & L. coll.).

[C. & L. coll.] 5 Malakal, Jan. U.N.

Mr. Butler saw the African Swallow-tailed Kite frequently in Kordofan and less frequently in the Blue Nile country. Messrs. Chapman, Lynes & Lowe came on a densely packed flock in a tree at Malakal and the above six specimens were killed with one shot.

The characteristic black patch on the under wing-coverts appears to be present only in the female and to constitute a sexual distinction. The under wing-coverts in the male are pure white. Of the series above, three are males with wing-measurements 223, 227, and 230 mm. respectively, and three females measuring 227, 240, and 245. The small series of this rare species in the British Museum, which includes Vieillot's type from the Riocour collection, confirms this sexual distinction. Salvadori (Ann. Mus. Civ. Genova, xxi. 1884, p. 59) commented on the presence or absence of the black patch on the under wing-coverts, and

believed it to be a matter of youth and age. We cannot help suspecting that Antinori's birds were not carefully sexed and that Salvadori was misled by this.

We find that the type of the genus *Nauclerus* Vigors (Zool. Journ. ii. 1825, p. 386) is undoubtedly (by subsequent designation of Gray, List Gen. Bds. 1840, p. 4) *Falco jorficatus* Linn., the American Swallow-tailed Kite, and is therefore a synonym of *Elanoides* of Vieillot. We are therefore forced to fall back on *Chelictinia* Lesson (Echo du Monde Savant, 1843, p. 6), the type of which is undoubtedly the present species.

Haliaëtus vocifer.

Falco vocifer Daudin, Traité, ii. 1800, p. 65: Coasts of Cape Colony (ex Levaillant).

Haliaëtus vocifer Reichw. V. A. i. p. 605; Butler, Ibis, 1905, p. 366, 1908, p. 251.

[B. coll.] 1 Sobat river May, **Kas.**

[C. & L. coll.] 1 Kamisa Dec. **Sen.**; 1 near Lake No Feb. **U.N.**

In the J. f. O. 1910, pp. 388–390, Zedlitz, following Brehm and Heuglin, has separated the race from the Sudan and north-east Africa, under the name *H. v. clamans* Brehm. His wing-measurements for this race are ♂ 505, ♀ 530 mm., while those for the east and south African race are given as ♂ 520–550, ♀ 563–580 mm. Our own adult specimens, both males, from the eastern Sudan measure 528 and 535 mm., and so come within the limits of the larger race. We therefore prefer to keep the two forms united at present.

Terathopius ecaudatus.

Falco ecaudatus Daudin, Traité, ii. 1800, p. 54: "Anteniquoi country," *i. e.* Knysna district, Cape Colony.

Helotarsus ecaudatus Reichw. V. A. i. p. 598; Butler, Ibis, 1905, p. 366, 1908, p. 251, 1909, p. 402.

[B. coll.] 1 Abu Sheneina May, **Sen.**

This is an old male of the light-backed form, known as *T. leuconotus* Rüpp., and is apparently only a variety or

plumage stage of the ordinary Bateleur. Mr. Butler records the red-backed form from throughout the entire Sudan, and the light-backed from Sennar, Kordofan, and the Lado Enclave. Reichenow believes that the light-backed phase is the plumage of very old birds. In this case it is interesting to note that Claude Grant while at Beira from November to February saw a large number of Bateleur Eagles, every one of which was the light-backed form.

Butastur rufipennis.

Poliornis rufipennis Sund. Cefv. Ak. Förh. 1850, p. 131 : near Khartoum.

Butastur rufipennis Reichw. V. A. i. p. 597 ; Butler, Ibis, 1905, p. 368, 1908, p. 253, 1909, p. 89.

[B. coll.] 1 Kodok Jan., 1 Malakal May, U.N. ; 1 Amien May, B.G.

[C. & L. coll.] 1 Taufikia, 3 near Kodok, 2 White Nile lat. 10° N. Jan. U.N.

[Chr. coll.] 1 Wau July, B.G.

Widely distributed in the Sudan and much given to local movements from time to time. The bird from Wau is probably immature, and is very much paler than any of the other specimens.

Circaëtus gallicus.

Falco gallicus Gmelin, Syst. Nat. i. pt. 1, 1788, p. 259 : Gallia (*i. e.* France).

Circaëtus gallicus Hartert, Vög. pal. Faun. p. 1189.

[B. coll.] 1 Sherif Yakub Oct. B.N.

[C. & L. coll.] 1 Fashoda (Kodok) Jan. U.N.

The Short-toed Eagle is a winter visitor from Europe and western Asia to the Sudan, and thereby differs from all the other members of the genus occurring there, which are residents in Africa. The bird from Sherif Yakub is less white and more brown on the chest than is usual, and in that respect approaches *C. beaulouini*, but the latter is more slaty-grey than brown and the barring of the underside is very much finer.

Circaëtus beaudouini.

Circaëtus beaudouini Verr. & Des Murs, Ibis, 1862, p. 212, pl. vii. : Bissao ; Reichw. V. A. i. p. 575.

We have seen no examples of this species from the Sudan, and it is possible that finely-marked examples of *C. gallicus* have been mistaken for it, but Heuglin's description (Orn. Nordost-Afr. i. p. 86 under *C. fasciatus*) is a very good one, and there is no reason why its range should not extend to Kordofan, as is stated by Heuglin.

Circaëtus pectoralis.

Circaëtus pectoralis A. Smith, S. A. Quart. Journ. 1830, p. 109 : South Africa ; Reichw. V. A. i. p. 572.

This is also a species of which we have no Sudanese, though several Abyssinian, examples, but as it is an easily recognizable bird and is recorded from the Blue and White Niles and elsewhere by Heuglin, we have no doubt that it may be admitted to our list.

Circaëtus cinereus.

Circaëtus cinereus Vieill. Nouv. Dict. xxiii. 1818, p. 445 : Senegal ; Reichw. V. A. i. p. 571.

[C. & L. coll.] 1 Kamisa Dec. Sen.

Previously recorded by Heuglin from the White and Blue Niles, but not obtained since within our limits so far as we know. We consider this to be quite a different species from *C. pectoralis* (cf. Selater, Ibis, 1912, p. 9).

Circaëtus cinerascens.

Circaëtus cinerascens J. W. von Müller, Naumannia, 1851, pt. iv. p. 27 : Sennar.

Circaëtus cinerascens Reichw. V. A. i. p. 573.

The type-locality of this species, also called *C. zonurus* by Heuglin, Ibis, 1860, p. 410, is Sennar on the Blue Nile. According to Heuglin also it was not uncommon. Emin obtained a specimen at Lado, and there is also an example in the Museum collected by him at Kabajendi on the boundary of the Lado Enclave.

Kaupifalco monogrammicus monogrammicus.

Falco monogrammicus Temm. Pl. Col. livr. 53, 1824, pl. 314 :
Senegal.

Kaupifalco monogrammicus Reichw. V. A. i. p. 547.

Asturina monogrammica Butler, Ibis, 1908, p. 253.

[B. coll.] 1 Roseires Sept. Sen.

[Chr. coll.] 2 Yambio Mch. B.G.

These birds undoubtedly belong to the typical Senegal race, though it appears, from an examination of the material in the Museum, that the southern form, separated by Reichenow as *K. m. meridionalis* (Hartl.), comes farther north than is generally supposed, and that British East African and Uganda examples approach it more closely than they do the present race. The size varies very considerably. The Roseires specimen has a wing of 217 mm., while the Yambio birds measure 234 and 247 mm. All are sexed female.

Lophoaëtus occipitalis.

Falco occipitalis Daudin, Traité, ii. 1800, p. 40 : "Anteni-
quoi country," *i. e.* Knysna district, Cape Colony.

Lophoaëtus occipitalis Reichw. V. A. i. p. 582 ; Butler,
Ibis, 1905, p. 367, 1908, p. 252.

[B. coll.] 2 Renk Mch., 1 Kaka June, U.N.

[C. & L. coll.] 1 Sennar Jan. Sen.; 1 Jebel Ahmed
Agha Jan., 1 White Nile lat. $9\frac{1}{2}^{\circ}$ N. long. 31° E. U.N.

[Chr. coll.] 1 Meridi Feb. B.G.

The eggs of this species were taken by Hawker at Fashoda
on March 21, 1901 (Ibis, 1902, p. 441).

Spizaëtus bellicosus.

Falco bellicosus Daudin, Traité, ii. 1800, p. 38 : Gt.
Namaqualand.

Spizaëtus bellicosus Reichw. V. A. i. p. 576.

There is no example in the present collections, but
Mr. Butler informs us it is common in the forest regions
of the Bahr el Ghazal, and we have a specimen in the
Museum shot by Mr. G. Blaine in that locality.

Hieraaëtus fasciatus spilogaster.

Spizaëtus spilogaster Bonaparte, Rev. et Mag. Zool. 1850, p. 487: Abyssinia.

Hieraaëtus spilogaster Reichw. V. A. i. p. 579.

This Eagle has been recorded by Antinori from Sennar and from several localities by Henglin, and there seems no reason why it should not occur in the Sudan, but it is not represented in the collections we have examined.

Hieraaëtus pennatus.

Falco pennatus Gmelin, Syst. Nat. i. pt. 1, 1788, p. 272 (ex Brisson): no type-locality indicated.

Hieraaëtus pennatus pennatus Hartert, Vög. pal. Faun. p. 1111.

The Booted Eagle has been several times recorded from the Sudan, though the Museum does not happen to possess any specimens. It is a winter visitor, but a rare one, to as far south as Natal. Mr. Willoughby Lowe informs us that a pair were collected by the Chapman-Lynes expedition on the Blue Nile near Sennar and were presented to the Khartoum Museum.

Hieraaëtus wahlbergi.

Aquila wahlbergi Sund. Öfv. Ak. Förh. 1850, p. 109: "Upper Kaffraria," i. e. Transvaal.

Hieraaëtus wahlbergi Reichw. V. A. i. p. 581.

[C. & L. coll.] 1 Blue Nile 20 miles above Sennar Jan. Sen.

This is the first specimen we have been able to examine from the Sudan. It has been twice previously recorded, from Roseires by Brehm and from Lado by Emin. There is also a specimen in the Museum from Eritrea.

Aquila heliaca heliaca.

Aquila heliaca Savigny, Descr. Egypte, Syst. Ois. 1809, p. 82, pl. 12: Upper Egypt.

Aquila heliaca heliaca Hartert, Vög. pal. Faun. p. 1092.

Aquila imperialis (Bechst.) ; Butler, Ibis, 1909, p. 402.

Mr. Butler, Ibis, 1909, p. 402, records his unsuccessful attempts to trap or shoot specimens of what he took to be this Eagle in the hills of the Red Sea Province. It has been recorded by Heuglin from Nubia and Kordofan.

Aquila rapax albicans.

Falco (Aquila) albicans Rüppell, Neue Wirbelt. 1836, p. 34, pl. 13: Simien, Abyssinia.

Aquila rapax albicans Hartert, Vög. pal. Faun. p. 1095.

Aquila rapax apud Butler, Ibis, 1905, p. 367, 1908, p. 252.

[B. coll.] 1 Khartoum Jan. ; 1 Um Dam May, Kor.

[C. & L. coll.] 1 Sinkat Meh, 1 Erkowit Apl. R.S.;
1 Senga, 2 near Kamisa Dec. Sen. ; 1 Kodok Meh.,
1 Jebelein Jan. U.N.

[Gurney coll.] 1 Meroë Feb. Ber.

This species has a very marked plumage change which according to Hartert it takes five or six years to undergo. He is of opinion that the darkest bird is the adult and the lightest the youngest. One of the Chapman-Lynes birds shot off a nest at Kodok is in what Hartert calls "Plumage 3," and it appears to us that the breast-feathers are certainly freshest where they are darkest, and that abrasion plays a very great part in the change.

Aquila nipalensis orientalis.

Aquila orientalis Cabanis, J. f. O. 1854, p. 369 note: near Sarepta, S.E. Russia.

Aquila nipalensis orientalis Hartert, Vög. pal. Faun. p. 1099.

[B. coll.] 3 Khartoum Feb.

[C. & L. coll.] 1 ♀ (nesting) Erkowit April 8, R.S.

These we believe to be the first definite records of this Eagle from Africa. It appears to be not uncommon according to Mr. Butler on the rubbish heaps outside Khartoum in the winter. A specimen obtained by Lt.-Col. Penton at Um Dam, Kordofan, is mentioned by Mr. Butler, Ibis, 1905, p. 367, under "*A. nipalensis?*" and we have

little doubt that it was this species. It is also of interest that a bird lent us for comparison by Col. Stephenson Clarke, C.B., and shot in the Loita Plains of southern British East Africa, is in our opinion undoubtedly an example of this species, and Mr. G. Archer, C.M.G., H.M.'s Commissioner for Somaliland, has recently found the same bird breeding in Somaliland. The bird appears, therefore, to have a fairly extensive range in Africa. It has probably been confused with *A. rapax*, and young birds are very difficult to separate from that species. It may be generally taken, however, that immature *A. n. orientalis* have the lowest upper tail-coverts and the tips of the inner secondaries white, and not fulvous as in *A. rapax*, and that they are also darker and less rufous than that species. They are also on the whole distinctly larger. The adults, which are very dark brown, have a patch of pointed light-coloured feathers on the nape. The Chapman and Lynes specimen from Erkowit is said to have been nesting.

Dr. Hartert is inclined to identify these birds with the Indian subspecies *A. n. nipalensis*; the distinctive characters of the two races are by no means well marked.

Aquila pomarina pomarina.

Aquila pomarina Brehm, Handb. Natur. Vög. Deutschl. 1831, p. 27: Pomerania.

Aquila pomarina pomarina Hartert, Vög. pal. Faun. p. 1104.

[B. coll.] 1 Khartoum Nov.

This is the first definite record we can trace for the Sudan and we believe the second only from the Ethiopian region, the first being secured in 1914 by the junior author in the Ithanga Hills of British East Africa (Ibis, 1917, p. 407).

Heuglin (Orn. Nordost-Afr. i. p. 47) records this species under the name of *A. naevia* from the Nile as far south as Sennar and Kordofan, but we do not know if any of his specimens are in existence. It is of course only a winter visitor.

***Gypaëtus barbatus* subsp. ?**

Mr. Willoughby Lowe informs us that he saw an undoubted Lammergeier in the Red Sea Province at Erkowit on April 1, 1914, and that another was seen by Commander Lynes on April 6 and on subsequent occasions. They were in all probability the Abyssinian form, which is believed to be identical with *G. b. meridionalis* Keys. & Blas. from South Africa.

***Buteo buteo rufiventer*.**

Buteo rufiventer Jerdon, Madras Journ. xiii. 1844, p. 165 : Nilgiri Hills.

Buteo buteo rufiventer Sclater, Ibis, 1919, p. 253.

Buteo desertorum auct., Butler, Ibis, 1905, p. 368, 1908, p. 253, 1909, p. 402 ; and *Buteo anceps* Brehm apud Hartert.

[B. coll.] 3 Khartoum Oct. & Nov.

[C. & L. coll.] 2 Sinkat Mch. R.S.

The Desert Buzzard seems a fairly common winter visitor to the Sudan and was seen by Mr. Butler in the Red Sea Province as late as May. For use of this name *cf.* Sclater, *op. cit.*

***Buteo ferox ferox*.**

Accipiter ferox S. G. Gmelin, Nov. Comm. Acad. Petrop. xv. 1770-1771, p. 442 : Astrakan.

Buteo ferox ferox Hartert, Vög. pal. Faun. p. 1115.

[B. coll.] 3 Khartoum Mch. 25, Dec. 3, 16.

A winter migrant to the Sudan, apparently only the northern portion.

***Buteo jakal augur*.**

Falco (Buteo) augur Rüpp. Neue Wirbelt. 1836, p. 38, pl. 16 : Abyssinia.

Buteo jakal augur Sclater, Ibis, 1919, p. 251.

Mr. Butler records this species from the Blue Nile and Erkowit. Heuglin also records it from the Blue Nile and Sennar. It is common in Abyssinia. There are no Sudanese examples in the Museum.

***Buteo auguralis*.**

Buteo auguralis Salvadori, Atti Soc. Ital. Milan, viii. 1865, p. 276 : Abyssinia ; Reichw. V. A. i. p. 593.

[B. coll.] 1 Sennar July, 1 Roseires Sept. Sen.

[Chr. coll.] 1 Yambio Mch. B.G.

Probably a resident species in the southern part of the Sudan. Recorded also from Kordofan by Antinori and Heuglin.

***Accipiter nisus nisus*.**

Falco nisus Linn. Syst. Nat. 10th ed. 1758, p. 92 : Europe, restricted type-locality : Sweden.

Accipiter nisus nisus Hartert, Vög. pal. Faun. p. 1151.

[B. coll.] 1 Barankwa Nov. 5, Sen.

[C. & L. coll.] 1 Erkowit Apl. 3, R.S.

The Sparrow-Hawk is apparently a rare winter visitor to the Sudan. Mr. Butler records it also from Khartoum, Flower from the Blue Nile, and Rüppell from Kordofan.

***Accipiter minullus intermedius*.**

Accipiter minullus intermedius Erlanger, J. f. O. 1904, p. 173 : Abela, Lake district of S. Abyssinia.

[B. coll.] 1 Roseires Nov. Sen.

On examining the material in the Museum we find we can recognize four races of *A. minullus*, viz. :—

A. m. minullus (Daudin). S. Africa, south of Zambesi.

A. m. tropicalis Reichw. Zambesi to British East Africa.

A. m. intermedius Erlanger. Abyssinia to Uganda and the Sudan.

A. m. erythropus Hartlaub. West Africa from the Gold Coast to Gaboon.

***Accipiter melanoleucus*.**

Accipiter melanoleucus Smith, S. A. Quart. Journ. i. pt. 3, 1830, p. 229 : Bavian's River, Cape Colony.

Astur melanoleucus Reichw. V. A. i. p. 551.

Heuglin (Orn. N.O.-Afr. i. p. 60) records a specimen of this Hawk taken at Fazogli (Sen.) by Duke Paul of Württemberg in 1840. We know of no other record.

Astur (Nisastur) badius sphenurus.

Falco (Nisus) sphenurus Rüppell, N. Wirbelt. 1835, p. 42 :
Dahlak I. near Massaua.

Accipiter badius sphenurus Rüpp. : Hartert, Vög. pal. Faun.
p. 1161.

Astur sphenurus Butler, Ibis, 1908, p. 253, 1909, p. 89.

[B. coll.] 2 near Roseires May, 1 Famaka May, Sen. ;

3 Khartoum Sept. & Oct. ; 3 Wau Jan. & Apl. B.G.

[Chr. coll.] 2 Meridi Feb., 1 Wau July, B.G.

Widely distributed.

Micronisus gabar.

Falco gabar Daudin, Traité, ii. 1800, p. 87 : interior of
South Africa (ex Levaillant).

Micronisus gabar Reichw. V. A. i. p. 565.

Melierax gabar Butler, Ibis, 1905, p. 369, 1908, p. 263,
1909, p. 89.

[B. coll.] 1 Disa Apl., 4 Roseires Feb. Apl. July, Sen. ;

4 Khartoum Apl. Sept. Oct. ; 1 Kosti May, 2 Goz abu
Guma Apl. May, W.N. ; 3 Mongalla summer ;

1 nr. Wau Jan., 1 Chak Chak Feb. B.G.

[C. & L. coll.] 6 Kamisa, 1 Sennar Dec. Sen. ; 1 Kosti
Meh. W.N.

[Chr. coll.] 1 Meridi Feb. B.G.

[Gurney coll.] 1 Meroë Jan. Ber.

Mr. Butler was, we believe, the first to point out that the black Hawk known as *Melierax niger* (Vieill.) was in all probability only a melanism of this species. We believe this to be undoubtedly the case, but to what degree the black form is "fixed" we have no idea. Mr. G. F. Archer, C.M.G., H.M.'s Commissioner of Somaliland, recently wrote to Colonel Stephenson Clarke, who had asked him to make a note of this point, that he had found black and grey nestlings in the same nest.

Melierax metabates metabates.

Melierax metabates Heuglin, Ibis, 1861, p. 72 : White
Nile between 6° and 7° N. lat.

Melierax canorus metabates Hartert, Vög. pal. Faun. p. 1164.

Melierax polyzonus (Rüpp.); Butler, Ibis, 1908, p. 253, 1909, p. 89.

[B. coll.] 6 Mongalla summer; 1 Wau Apl. B.G.

[Chr. coll.] 2 Yei Nov. & Dec. L.E.

***Melierax metabates neumanni*.**

Melierax canorus neumanni Hartert, Vög. pal. Faun. p. 1165; Arbub near Merowe, Dongola.

Melierax polyzonus apud Butler, Ibis, 1905, p. 368.

[B. coll.] 1 Erkowit Mch. R.S.; 1 Sherif Yakub Apl., 3 Roseires Sept. & Dec. Sen.; 1 Kosti May, W.N.; 1 Malakal May, U.N.

[C. & L. coll.] 1 Sinkat Mch. R.S.; 2 Kamisa Dec. Sen.; 1 Jebet Ahmed Agha Jan. U.N.

[Gurney coll.] 1 Meroë Feb. Ber.

This race differs from typical *M. m. metabates* in having the secondaries and wing-coverts more clearly barred with black and white and not grey barred with lighter grey. The tail-coverts are also not so closely barred and are often practically unbarred in the centre.

We take this to be a desert form of *M. metabates* and its range to be from northern Nigeria through the northern part of the Sudan to the Blue Nile and Red Sea Province, but all birds south of Khartoum and north of Lake No may be looked upon as intermediate. The range of *M. m. metabates* practically encircles that of *M. m. neumanni*, as it extends from Morocco through Gambia, Nigeria, and across to the Bahr el Ghazal, Mongolia, Abyssinia, and up to Eritrea and Arabia.

If, following Hartert, it is proposed to regard these birds as specifically identical with the white-rumped grey-shouldered *M. canorus* and *M. poliopterus*, the oldest specific name is *Falco musicus* Daudin, *Traité*, ii. 1800, p. 116 (Cape Colony ex Levaillant), which antedates *Falco canorus* Rislach, the description of which, though read in 1799, was not apparently published until 1801.

Circus pygargus.

Circus pygargus Linn. Syst. Nat. 10th ed. 1758, p. 89: England (ex Albin); Hartert, Vög. pal. Faun. p. 1143.

We have not seen any Sudanese examples of Montagu's Harrier, nor apparently did Mr. Butler meet with it while in the Sudan; but it has been recorded by Heuglin and others, and there are many specimens in the Museum from Abyssinia, Uganda, British East Africa, and farther south, so there can be no doubt of its occurrence on migration within our limits.

Circus cyaneus, the Hen-Harrier, is also recorded by Heuglin and Rüppell from the Sudan and Abyssinia, but there are no specimens in the Museum which would lead us to suppose that it ever came so far south.

Circus macrourus.

Accipiter macrourus S. G. Gmelin, Nov. Comm. Acad. Petrop. xv. 1771, p. 439, pls. 8 & 9: S.E. Russia.

Circus macrourus Hartert, Vög. pal. Faun. p. 1142; Butler, Ibis, 1905, p. 370, 1908, p. 254.

[B. coll.] 1 Roseires Nov. **Sen.**; 3 Khartoum Oct. and "winter."

[C. & L. coll.] 1 Sinkat Mch. **R.S.**; 1 Senga, 1 Kamisa Dec. **Sen.**; 1 Hassania Island, Jan. **W.N.**

The Pallid Harrier is abundant and widely distributed throughout the Sudan in winter.

Circus æruginosus æruginosus.

Falco æruginosus Linn. Syst. Nat. 10th ed. 1758, p. 91: Europe, restricted type-locality: Sweden:

Circus æruginosus æruginosus Hartert, Vög. pal. Faun. p. 1135; Butler, Ibis, 1905, p. 370, 1908, p. 254.

[B. coll.] 3 Khartoum Jan. Feb. Mch.; 1 Meshra Rom Feb. **U.N.**

[C. & L. coll.] 2 White Nile, lat. 15° N. Jan. **W.N.**; 1 Jebel Ahmed Agha Jan. **U.N.**

Gymnogenys typicus.

Polyboroides typicus Smith, S. Afr. Quart. Journ. i. 1830, p. 107 : Eastern Cape Colony ; Reichw. V. A. i. p. 531.

[B. coll.] 1 Abu Sheneina Apl. Sen.

According to Richmond (Auk, 1902, p. 92), Lesson's generic name *Gymnogenys*, published in February 1830, antedates the more familiar *Polyboroides* of Smith, published on April 1, 1830.

Family PANDIONIDÆ.

Pandion haliaëtus haliaëtus.

Falco haliaëtus Linn. Syst. Nat. 10th ed. 1758, p. 91 : Europe, restricted type-locality : Sweden.

Pandion haliaëtus haliaëtus Hartert, Vög. pal. Faun. p. 1191 ; Butler, Ibis, 1905, p. 362.

Not uncommon on the White and Blue Niles and also recorded by Mr. Butler from the Red Sea coast and the Bahr el Ghazal.

Family ÆGYPTIDÆ (=Vulturidæ auct.).

Ægyptius monachus.

Vultur monachus Linn. Syst. Nat. 12th ed. 1766, p. 122 : Arabia.

Ægyptius monachus Hartert, Vög. pal. Faun. p. 1208.

There is a specimen of this Vulture collected by Rüppell in "north-east Africa" in the Museum, and it has been occasionally recorded from Egypt. We think it quite possible that it may occur in the Sudan, but the evidence at present is not conclusive. Rothschild and Wollaston (Ibis, 1902, p. 22) record it as common at Shendi, but Butler in his notes is of the opinion that the birds seen were possibly examples of *Otogyps nubicus*, i.e. *Torgos tracheliotus nubicus*.

Gyps fulvus fulvescens ?

Gyps fulvescens Hume, Ibis, 1869, p. 356 : Gurgaon, Punjab.

Gyps fulvus fulvescens Hartert, Vög. pal. Faun. p. 1206.

[C. & L. coll.] 1 Sinkat-Erkowit Plain Meh., 1 Erkowit
Apl. R.S.

These two Vultures from the Red Sea Province are most certainly closer to the Indian form than they are to the European. We have unfortunately no specimens of *G. f. cinnamomeus* Reichw. from Turkestan with which to compare them, nor have we any specimens of *G. f. fulvus* from the type locality, north Persia. We should expect northern migrants in the Red Sea Province, judging from what we have so far seen, to come from the country between Russia to the west and western Turkestan to the east, but not from so far east as the Punjab. The fact remains, however, that we cannot separate these from Punjab examples. The typical race *G. f. fulvus* (*V. f. occidentalis* Schlegel of Heuglin) is said by Heuglin and others to have occurred in the Sudan, but we have no specimens before us.

Gyps rüppellii rüppellii.

Vultur rüppellii A. Brehm, Naumannia, 1852, pt. 3, p. 44 :
Khartoum.

Gyps rüppellii rüppellii Hartert, Vög. pal. Faun. p. 1206.

Gyps rueppelli Butler, Ibis, 1905, p. 370, 1908, p. 254,
1909, p. 402.

[C. & L. coll.] 1 Kamisa Dec. Sen.; 1 Marbeit Jan. U.N.

These two specimens are the first examples of this species to reach the British Museum. This is a lowland species as compared to the distinct and paler race *G. r. erlangeri* from the Abyssinian highlands. We think it very possible that this also occurs in the Sudan and may be the bird referred to by Butler, Ibis, 1905, p. 371, as *Gyps kolbii*, which it is not unlike. This latter occurs, however, only in South Africa.

Pseudogyps africanus.

Gyps africanus Salvadori, Not. Stor. R. Accad. Torino,
1865, p. 133 : Sennar.

Pseudogyps africanus Butler, Ibis, 1908, p. 254.

[C. & L. coll.] 1 Kamisa Dec. Sen.

Erlanger (J. f. O. 1904, pp. 150–152) divides this species into several races. We have not sufficient material in the Museum to confirm or dispute his conclusions. Apparently not an uncommon bird in the Sudan.

Torgos tracheliotus nubicus.

Vultur nubicus H. Smith in Griffith's Animal Kingdom, i. 1829, p. 164: Nubia.

Otogyps auricularis (nec Daud.), Butler, Ibis, 1905, p. 370.

Otogyps auricularis pt. Reichw. V. A. i. p. 512.

[C. & L. coll.] 1 Sennar Jan.

Not uncommon in the Sudan, but like all large Vultures not much sought after by collectors.

The generic name *Torgos* Kaup, Isis, xxi. 1828, p. 1144, is far anterior in date to *Otogyps* and must be accepted in its place. The specific name *tracheliotus* (J. R. Forster in Levaillant's 'Reise Afrikas,' iii. 1791, p. 362, pl. 12) also antedates *auricularis* Daudin, 1800, as has been pointed out by Richmond (P. U.S. Nat. Mus. xxxv. 1909, p. 646).

The entire absence of ear-lappets in all the north-east African examples appears to be quite sufficient to distinguish them from South African birds. We have no examples before us from East Africa.

Lophogyps occipitalis.

Vultur occipitalis Burchell, Travels, ii. 1824, p. 329: Makhwari River, nr. Kuruman, Bechuanaland.

Lophogyps occipitalis Reichw. V. A. i. p. 514; Butler, Ibis, 1908, p. 254.

[C. & L. coll.] 3 Kamisa Dec. Sen.; 1 Jebelein Jan. W.N.; 1 Tonga Feb. U.N.

A species occurring throughout the greater part of the Sudan.

Neophron percnopterus percnopterus.

Vultur perenopterus Linn. Syst. Nat. 10th ed. 1758, p. 87: Egypt.

Neophron percnopterus Reichw. V. A. i. p. 521; Butler, Ibis, 1905, p. 371, 1908, p. 254, 1909, p. 402.

We happen to have no Sudanese specimens before us, but Mr. Butler records the Egyptian Vulture as abundant in the northern part of the Sudan, becoming scarcer to the south.

Necrosyrtes monachus pileatus.

Vultur pileatus Burchell, Travels, ii. 1824, p. 195: between Graaff Reinet and the Orange river, *i. e.* Hopetown district of the Cape Province.

Neophron monachus apud Butler, Ibis, 1905, p. 371, 1908, p. 234.

[C. & L. coll.] 1 Senga Dec. Sen. ; 1 Bahr el Zeraf, Feb. U.N.

The difference between this race and the typical form from Senegal is merely that of size, the wing of the present race being over 470 mm. and generally over 500 mm., while that of the typical race is usually under 470. The north-east African birds agree with south African birds rather than with those of north-west Africa. This Vulture replaces to a great extent the Egyptian Vulture in the southern part of the Sudan.

Family SAGITTARIIDÆ.

Sagittarius serpentarius.

Falco serpentarius J. F. Miller, Var. subjects Nat. Hist. 1779, pl. 28: Cape of Good Hope.

Serpentarius serpentarius (Mill.); Reichw. V. A. i. p. 528; Claude Grant, Ibis, 1915, p. 236.

Serpentarius secretarius (Scop.); Butler, Ibis, 1905, p. 370, 1908, p. 254.

We agree with Claude Grant that at present we can see no reason for recognizing any races of the Secretary Bird. The material, however, is not extensive, and it is possible that more specimens may make separation necessary.

The generic name *Sagittarius* Hermann, Tab. Affin. Anim. 1783, pp. 136, 235, antedates *Serpentarius* Cuvier, Tabl. Elém. d'Hist. Nat. 1798, p. 254 (Richmond, P. U.S. Nat. Mus. liii. 1917, p. 622).

[To be continued.]