

THE BIRDS OF THE SOUTH-WEST ISLANDS WETTER, ROMA, KISSER, LETTI AND MOA.

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THE Dutch have given the name of the South-West Islands to these and other islands to the north and east of Timor, and in this term include also Dammer, or Dama, in the Banda Sea. In a former article (*Nov. Zool.* 1900, pp. 12-24) I have described the birds from Dammer, therefore I do not mention them here again, and shall discuss only the birds of those islands where our indefatigable correspondent Heinrich Kühn has collected. He visited the islands of Wetter, Roma, Kisser, Moa and Letti. Unfortunately he was so far not able to go to Babber, which differs faunistically considerably from the more western islands, and to Sermatta, of which nothing is known at present. On the other hand he made by far the best collections ever brought together on Wetter, Letti and Kisser, and visited Roma and Moa as the first ornithological collector.

Our knowledge of the avifauna of these islands has hitherto been very imperfect. The first birds sent to a European museum were some collected by D. S. Hoedt, one of the famous collectors of the Leyden Museum, who visited Wetter, Letti and Kisser between 1863 and 1868. He discovered some very fine species, but the number of species collected by him was very small. A few birds were sent more recently to the Dresden Museum by J. G. Riedel from Wetter, Letti, Babber, Luang, and Dawelor. Luang is a small islet between Leikor and Sermatta, Dawelor close to Babber.

In 1896 and 1897 Karl Schädler sent large and fine collections to Leyden from Kisser (38 species), Wetter (54 species), and Babber (31 species), altogether 244 skins and 173 in spirits. This was indeed a large increase, and it seemed that not very much could be left on the three islands for a bird collector.

Nevertheless we induced Mr. Heinrich Kühn to try his luck; and not only did he send the first birds from Roma and Moa, but also on Letti, Kisser, and especially on Wetter, very many additions were made, among them some unexpected novelties, such as *Myzomela kuehni*, *Calornis kuehni*, and others.

As practically the whole material known until the beginning of this century (with the exception of the few specimens in the Dresden Museum) was preserved in Leyden, Dr. Finsch happily resolved to give a list of the birds known from all these islands, and wrote an excellent article: "Systematische Uebersicht der Vögel der Südwest Inseln," in vol. xxii. of the "Notes of the Leyden Museum," pp. 225—309, plates 3—5 (1901). This contained 123 species, including those from Dammer (52). From Wetter he enumerated 58, from Kisser 35, Letti 21, Babber 37. Needless to say, Dr. Finsch's account has been of the greatest value to me during my work, especially as he had so many types before him; still more needless to say that it is as conscientiously written as all the works of its author. Nevertheless my conclusions differ in various cases from his. Ornithologists will be aware without my statement that this is due to our different views of treatment of closely allied forms. Dr. Finsch acknowledges only species, and still raises the question: species or not species? I recognise not only species, but also subspecies (geographical forms).

Very slight differences are by Dr. Finsch not considered sufficient for "specific" separation, while for me no differences are too slight for "subspecific" separation, if connected with geographical separation. My subspecies (geographical representatives) are either disregarded by my opponents or treated as species. This difference is not one between Dr. Finsch and myself, but that between two schools of ornithologists, of which much has been said and more will be said in another place. But apart from my different mode of studying closely allied forms, the larger series collected by Mr. Kühn have sometimes given me the advantage over Dr. Finsch, who often had a few specimens only. Frequently where he had one or two I had before me six, eight or more, and where he had four, five or six, I had twenty-nine, thirty or forty specimens or more, and from several more islands. From Wetter Kühn sent 84 species (an increase of 26 to those known), from Letti 57 (an increase of 36), from Roma 60 (none known before), Moa 58 (none known before), and also from Kisser many more than formerly were registered.

Wetter (Weeter or Weeta) is the largest of the islands visited. It is not much more than forty kilometres north of E. Timor. Its fauna is mostly Timorese, but there are some very striking peculiar forms, such as *Alopecoenas hoedti*, *Sphecotheres hypoleucus*, *Stigmatops notabilis*, *Myzomela kuehni*, and some very strongly marked subspecies. Wetter is apparently of very old volcanic origin, with high and partly bare mountains. A great portion of the island is covered with tamarind-trees, mixed with a tall tree with smooth white stems and very small leaves; under the trees grow grass and many thorny creepers. Kühn says that he never saw a country with so many thorny creepers, trees and bushes. They were a great trouble. The rare *Charaxes* was always found among the thickest thorn bushes, and it was almost impossible to catch them on account of the thorns, which stopped progress of man and net. The steep hills resemble heaped-up masses of *débris*, and are mostly but thinly covered with green, though in the valleys and on the more sheltered slopes grow many kinds of lemons, sweet citrons and mandarines. In April should have been the rainy season, but rain fell only a few times, so that there was great drought. In addition to this affliction, locusts were devastating the plantations and smallpox was decimating the natives. On Kisser the latter disease killed 1200 of 8000 inhabitants. Wax and honey from the numerous wild bees, sandalwood, lemons, goats and buffalo-horns are exported. Mr. Kühn was very unlucky on Wetter. The drought caused scarcity of food and the dust was most disagreeable. The northern side of the island could not possibly be visited, on account of the hostility of the head-hunters, who are very strong and indomitable and were not attacked by the smallpox. The first collection, made in April 1901, of 516 skins and 600 lepidoptera, was entirely lost in shipwreck, but the result of the second stay in September and October 1902 was similar as regards birds, though lepidoptera were then very scarce. Fever attacked Mr. Kühn and all his men very severely, and one of the latter died afterwards. Besides the species sent, Mr. Kühn saw, but failed to obtain: (1) a kind of swallow; (2) *Haliastur indus intermedius*; (3) a *Cuculus* (? *intermedius*); (4) a gull; (5) a *Monarcha* (? *inornatus*); (6) the *Strix* from Kisser; (7) the *Munia* from Kisser; (8) a kind of *Dicaeum* (?); (9) a large white heron; (10) *Scythrops novaehollandiae*; (11) a grey heron; (12) a light grey heron with black edges to the wings. According to native reports a small parrot, *Hypocharmosyna* or *Nasiterna* (?) occurs, but this seems very doubtful.

Roma (Romah or Teralta) lies about 27 miles E. of Wetter, 21 miles N.N.E.

of Kisser, and is about twelve miles long. It is very mountainous, and Kühn thinks it consists of several ancient volcanoes. He found several warm and even hot sulphurous springs. Sulphur occurs in some places. Kühn says he came across basaltic and trachytic pillars; while in other parts of the isle, especially on the south side, coralline limestone predominates. Ferruginous sand or iserine and large shingles or boulders of sulphide of lead are frequent along the shore. Roma is well wooded and fertile. The greater part of the population are Christians, the rest are devoted to the "opolare" or cult of the ancestors. The men wear mostly only a belt, the women (at least the heathens) only the Malayan "sarong" and a short blackish blue jacket ("kabaya"), dyed with indigo. All the women are experts in weaving. Tortoiseshell, copra, green snail-shells and wax are exported. Of mammals Kühn noticed only wild pigs, cuscus, a paradoxurus, rats and mice. Of reptiles many large pythons, a green poisonous snake, several harmless snakes, and some lizards—among them a flying one—were seen. In addition to the birds sent, *Haliastur indus intermedius*, *Haliaëtus leucogaster*, and a large owl were noticed. Very few insects were about, on account of the continued drought.

Kisser (Kissa) lies south-eastward of the east end of Wetter, and about 15 miles north of the east end of Timor, and is about five miles long and four miles wide. Its summit is about 805 ft. high. It is fertile and well inhabited.

Letti is about 23 miles E.N.E. of the East Cape of Timor, 35 miles S.E. by E. from Roma, and about eight miles in extent. It is fertile and well wooded, though sometimes suffering from drought.

Moa is separated from Letti by a channel four miles in width; it is about twenty miles long. On the N.E. part of the island is a high mountain 4100 ft. high; the rest is generally flat and coralline, with little cultivation on the S. and S.E. sides.

As I have said before, collections were unfortunately not made on the more eastern islands, Sermatta and Babber. This is the more regrettable as the avifauna of Babber differs considerably from that of the more western islands, being, in fact, in many instances very similar to that of Tenimber. Needless to say, the islands nearest to Timor have more Timorese forms than those farther east. The following list will show what is found on the various islands. It would seem that the avifauna of the islands visited by Kühn is now fairly well known, and I hope that he will, when recovered from his attack of malaria, also visit Sermatta and Babber.

GALLINACEAE.

1. *Megapodius duperreyi* Less. & Garn.

Megapodius duperreyi Lesson et Garn., *Bull. Sci. Nat.* viii. p. 113 (1826: Dorey, New Guinea); Finsch, *Notes Leyden Mus.* xxii. p. 302 (Wetter, Babber).

Mr. Kühn sent 4 from Wetter, collected in September and October 1902 (Nos. 5701, 5701a, 5775, 5853) and 12 from Roma, July, August 1902. (Nos. 5247, 5248, 5249, 5330, 5385, 5386, 5387, 5388 and 4 without numbers.) "Iris coffee-brown (dull and bright), feet orange-red with brown on top of toes (yellowish vermilion with brown toes), bill dirty orange (dirty yellow)."

2. *Gallus ferrugineus* (Gm.).

Wild fowls were met with in great numbers on Wetter, but the great variation in the males and the geographical distribution at once suggest that

they are feral. Some of these birds, in fact the majority, are indistinguishable from *Gallus ferrugineus* from India and China, though some have very short tarsi. Probably either wild-caught *G. ferrugineus* have been introduced, or more likely a race of domestic fowl descendant from *Gallus ferrugineus* has run wild and thus the jungles of Wetter are inhabited by an apparently quite wild fowl.

About the nomenclature of this species see *Nov. Zool.* 1902, p. 218, and "Aus den Wanderjahren eines Naturforschers," p. 196.

3. *Synoicus raaltenii* (S. Müll.).

Perdix Raaltenii S. Müller, *Verh. Nat. Gesch. Ned. Bez., Land- en Volkenkunde*, p. 158 (1839-44 : Timor).

Synoicus Raalteni Finsch, *Notes Leyden Mus.* xxii. p. 302 (Kisser).

Common on Letti, November 1902. (Nos. 5904—5906, 5967, 6055, 6087, 6088, 6423—6426.) "Iris ♂ ♀ burnt-sienna red (dark burnt-sienna red, dark chocolate red), feet yellowish ochreous, bill ash-grey with black tip."

Moa, 4 ♂ ♀, December 1902. (Nos. 6301, 6302, 6409, 6410.)

Wetter, 6 ♂ ♀, September—October 1902. (Nos. 5579, 5580, 5720, 5871—5873.) 1 ♀, 16. iv. 1901. (No. 3751.)

Kisser, 7 ad. 2 pull., April—May 1901. (Nos. 3877, 4029, 4030, 4031, 4033, 4076, two pulli without numbers.)

The latter are above brown, each feather with a buffy white shaft-stripe, a brown-black subterminal bar and some such spots nearer the base, head and neck uniform brown, underside paler, and with smaller, more spot-like blackish markings.

All these birds belong to the typical *raaltenii*, not to the pale Savu form.

HEMIPODII.

4. *Turnix maculosus* (Temm.).

Hemipodius maculosus Temminck, *Pig. et Gallin.* iii. pp. 631, 757 (Australia).

New to these islands. Dr. Finsch has predicted its occurrence.

7 ♂ ♀ ad., Wetter, April 1901, September, October 1902. (Nos. 3763, 5577, 5578, 5719, 5859, 5868, 5869.) "Iris brownish white (yellowish white, whitish ochreous, naples yellow), feet ochreous, bill below and often basal portion above yellowish, rest blackish brown."

1 ♂, Kisser, 5. v. 1901. (No. 4010.)

4 ♂ ♀, Moa, November—December 1902. (Nos. 6202, 6203, 6306, 6307.)

COLUMBAE.

5. *Ptilinopus cincta cincta* (Knip & Temm.).

Columba Cincta Knip and Temm., *Pigeons* i. p. 58. pl. 23 (1808—1811; locality uncertain. We must accept Timor as the typical locality, this being the only island where it was obtained, except later on on Wetter).

Ptilopus cinctus Finsch, *Notes Leyd. Mus.* xxii. p. 292 (Wetter).

Very common on Roma and Wetter.

Mr. Kühn sent 7 from Wetter, 30 from Roma, the former collected in October, the latter in July. (Nos. 5119—5123 and 5181—5186, from Roma, 5559, 5560, 5709—5713 from Wetter, the rest without numbers.) "Iris burnt-

sienna red (dark vermilion), feet bluish crimson (pale violet, dirty violet), bill sulphureous." All these specimens appear to be indistinguishable from those from Timor, though of the latter I could only compare six specimens.

6. *Ptilinopus cincta lettiensis* Schleg.

Ptilinopus cinctus lettiensis Schlegel, *Nederl. Tijdschr. Dierk.* iv. p. 9 (1871 : Letti).

Ptilinopus lettiensis Finsch, *Notes Leyden Mus.* xxii. p. 293 (partim : Letti only, not Babber).

P. c. lettiensis is evidently only known from Letti and Moa, as well as from Luang, according to Meyer. The birds from Babber and Dammer, as we shall see, are different, while the locality Timorlaut is quite doubtful ; Meyer described a young specimen received from there through Riedel, but not a second specimen has come to hand from Timorlaut of this rather conspicuous bird, therefore the locality is most likely erroneous. Kühn sent: 7 ♂ ♀ ad. from Moa, November 1902 (Nos. 6145—6150, 6158) ; 9 ♂ ♀ ad. from Letti, November 1902 (Nos. 6021—6024, 6047, 6048, 6081—6083). "Iris burnt-sienna red, eyelid chromeous, feet purple, bill yellow."

7. *Ptilinopus cincta ottonis* subsp. nov.

Differs from *P. c. lettiensis* at a glance by the colour of the tail, which has the slate-coloured basal portion less extended, not sharply separated in a straight line from the yellowish-white terminal portion, but more or less irregularly, gradually merging into the latter, which is thus more extended. The rump and upper tail-coverts are olive-green instead of slate-grey with a greenish tinge, as in *P. c. lettiensis*.

Hab. Dammer and Babber. *Type*, ♂ ad. Woeloer, Dammer I., 4. xi. 1898 (No. 953 H. Kühn coll.). Named in honour of Dr. Otto Finsch.

When writing about the birds of Dammer Island, *Nov. Zool.* 1900. p. 21, I united the Dammer specimens with *P. c. lettiensis* on the strength of a male from Babber (Bebber), received as *P. c. lettiensis* from the Leyden Museum. Dr. Finsch, *Notes Leyden Museum* xxii. p. 293, fully described the difference between the Babber and Letti specimens, but did not give a name to the former. It may be added that the extent of the dark and light colour on the tail as well as the colour of the rump varies, and that some of the specimens are somewhat intermediate and not easy to name without knowledge of the locality, but they are only a few, and a close examination always shows where they belong, at least one of the distinguishing characters being nearly always well marked.

The seven forms of *Ptilinopus* with attenuated first primary, blue-black or black pectoral band and pale apical band to the rectrices are of one "type," agreeing in their principal features, and replace each other on various islands of the east. They are in my opinion best treated as subspecies of *P. cincta*. They may be distinguished as follows :—

1. { Breast, neck and head white with more
or less yellow or buff tinge or powdered with pale grey : 2.
1. { Breast, neck and head bluish grey, only
upper throat and band separating the
blue-black pectoral band white : 6.

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| 2. | { | Abdomen blue-grey | <i>P. c. alligator</i> Collett, <i>P. Z. S.</i> 1898, p. 354 : Alligator River, N.W. Australia.* |
| | { | Abdomen yellowish olive-green : 3. | |
| 3. | { | Breast and neck peppered with grey : . | <i>P. c. everetti</i> Rothsch., <i>Bull. B. O. C.</i> 1898, p. 34 : Alor and Pantar. |
| | { | Breast and neck white with lemon tinge : 4. | |
| 4. | { | Terminal bar to tail slate grey, only about 2 cm. wide | <i>P. c. cincta</i> (Temm.), <i>Pigeons</i> i. p. 58 : Timor, Wetter and Romah. |
| | { | Terminal bar to tail greyish white, over 3 cm. wide : 5. | |
| 5. | { | Rump slaty, tinged with greeny, pale tip to tail sharply separated | <i>P. c. lettiensis</i> Schl., <i>Ned. Tijdschr. Dierk.</i> iv. p. 9 : Letti and Moa. |
| | { | Rump olive-greeny, pale tip to tail more extended and not sharply separated . | <i>P. c. ottonis</i> Hart., Dammer and Babber. |
| 6. | { | Slightly larger, wings more blue-black . | <i>P. c. albocinctus</i> Wall., <i>P. Z. S.</i> 1863, p. 496 : Flores, Sumbawa, Lombok. |
| | { | Slightly smaller, wings more greenish . | <i>P. c. baliensis</i> Hart., <i>Nov. Zool.</i> iii. p. 553 : Bali. |

P. c. everetti is not so closely allied to *P. c. lettiensis* as Dr. Finsch (*Notes Leyden Mus.* xxii. p. 294) appears to think, the band to the tail being less wide and darker grey ; the peppered grey neck and chest make it distinct enough to be called a "good species" by those who are not very generously disposed towards subspecies.

8. *Ptilinopus xanthogaster roseipileum* subsp. nov.

[*Columba Xanthogaster* Wagler, *Syst. Av.*, *Columba* spec. 29 (1827 : Ex Temminck "Celebes" errore. I accept Banda as the typical locality, as Temminck originally described 3 from Celebes and 3 from Banda).]

Ptilopus xanthogaster Finsch, *Notes Leyden Museum* xxii. p. 291. (Kisser, Wetter : errore, non *P. xanthogaster xanthogaster*).

All specimens from the islands of Roma, Moa, Kisser, Letti and Wetter differ from *P. x. xanthogaster* from Banda, Key, Dammer, Taam, Teoor, Manggoer, Koer and Timorlaut in the following characters :—

The pileum, instead of being light lavender-grey, is of a light cream-colour, in fine specimens beautifully tinged with rosy, the concealed median portions of the feathers pale yellow. The middle of the throat is of a paler lemon-yellow, the narrow yellow line bordering the pileum extends more distinctly to the

* With the exception of the two type specimens in Norway our specimen seems to be the only one in Europe.

lores and lower jaw, the foreneck does not seem to become so light as in very adult typical *xanthogaster*.

(Type: No. 5384 Roma, 11. viii. 1902. H. Kühn coll.)

9 ♂ ♀, Roma, July, August 1902. (Nos. 5173, 5372—5375, 5380, 5384, 5406.)

5 ♂ ♀, Kisser, April, May, June 1901. (Not numbered.)

7 ♂ ♀, Moa, November, December 1902. (Nos. 6138—6140, 6271, 6272, 6319, 6320.)

8 ♂ ♀, Letti, October, November 1902. (Nos. 5893—5895, 6068, 6084—6086, 6496.)

7 ♂ ♀, Wetter, October 1902. (Nos. 5702—5708.)

"Iris orange (ochreous, yellowish ochreous, reddish ochreous, dull orange), feet olive-grey (plumbeous grey, olivaceous), bill dirty green (pale green, olive-green, dull blackish, base below light)."

Young birds have the head and neck more or less greenish grey, as in *P. x. xanthogaster*.

I have not seen examples from Babber, but I suppose they might belong to the typical *xanthogaster*, the birds of Babber being often the same as those of Timorlaut or Dammer, while different from those of the more western islands (Letti, Kisser, Moa, Roma*). (Dr. Riedal obtained *Ptilinopus wallacei* on Babber. Cf. Meyer, *Abh. Isis* 1884.)

9. *Carpophaga cineracea* (Temm.).

Columba cineracea Temminck, *Pl. Col.* 563 (1835: Timor).

Six specimens were collected on Wetter in April 1901 and September 1902. (Nos. 3749, 3757, 3775, 5548, 5549, 5550.) "Iris whitish yellow (chromeous), feet reddish dark grey (greyish black, reddish black), bill slate-black (slate-grey), greyish or slaty below."

This rare pigeon has hitherto only been known from Timor. We have no Timor specimens to compare. Sexes alike.

10. *Carpophaga rosacea* (Temm.).

Columba rosacea Temminck, *Pl. Col.* 578 (1835: Timor).

Carpophaga rosacea Finsch, *Notes Leyden Museum* xxii. p. 295 (Wetter, Kisser, Letti, Babber).

Mr. Kühn found this wide-spread pigeon common on Romah, Moa, Letti, Wetter and Kisser.

15 ♂ ♀, Roma, July 1902. (Nos. 5025, 5230, 5236—5239, 5247, 6418, the rest without numbers.)

6 ♂ ♀, Moa, November—December 1902. (Nos. 6207, 6233—6235, 6377, 6417.)

7 ♂ ♀, Letti, November—December 1902. (Nos. 6045, 6095, 6098, 6478—6481.)

7 ♂ ♀, Wetter, April 1901, September—October 1902. (Nos. 5542—5547, 3750.)

10 ♂ ♀, Kisser, April—June 1901. (Nos. 3885, 3886, 3969—3972, 4055, 4079, 4084, 4085.)

"Iris burnt-sienna red (dark scarlet, scarlet), eyelids and nostrils crimson, feet bright crimson (brownish crimson, purple, pinkish crimson, pinkish purple), bill ash-grey (slate-grey)."

* In *Nov. Zool.* 1901, p. 93, under the heading of *Ptilinopus viridis*, I mentioned, among others, two females from Goram, Manowoka group, which, however, are females of *Ptilinopus rivolii prasinorrhous*, which is also found on the Key Islands, Teoor, Goram-laut, Kisoei and Kilsoein.

There is a great variation in the amount of vinous tinge and greyish hue underneath, and the specimens from Kisser are nearly all lighter. They are, however, mostly in very fresh plumage, and geographically there can be no reason for a different race to inhabit Kisser.

11. *Carpophaga concinna concinna* Wall.

Carpophaga concinna Wallace, *Ibis* 1865, p. 383 (Matabello, Sangir, Banda Ké); Finsch, *Notes Leyden Museum* xxii. p. 294 (Babber).

Kühn found the typical *C. concinna* common on Roma, in the month of July (Nos. 5242—5246, four without numbers), and Moa in December 1902 (Nos. 6370—6376, 6419). "Iris chromeous (chromeous orange), feet pink (bright crimson, crimson), bill black (slaty black, slate-black)."

It is curious that Kühn shot only *females*, with the exception of one immature *male*.

I disagree entirely with Dr. Finsch, who must be mistaken, saying that specimens from Goram and the Key Islands are underneath lighter and have been separated by me as *C. concinna separata*. The birds from Goram are typical *concinna*, while those from Key were named by me *separata*, because they differ very conspicuously, though single individuals are sometimes, but very rarely, a little difficult to recognize. The two forms are typical subspecies (geographical races). (Cf. Hartert, *Nov. Zool.* 1896, p. 180; 1901, pp. 93, 94, 112.)

12. *Columba metallica* Temm.

Columba metallica Temminck, *Pl. Col.* 562 (1835: Timor); Finsch, *Notes Leyden Museum* xxii p. 226 (Babber, Wetter, Timor, Dammer).

This species was formerly only known from Timor, but Doherty, Everett and Kühn have discovered it on Sumbawa, Lombok and Dammer, Schädler on Babber and Wetter. Kühn has now sent a series from Moa, December 1902. (Nos. 6399—6403.) "Iris orange, eyelids and bare spot round eye crimson; feet purple, bill crimson, tip of upper bill whitish."

I have not seen specimens from Babber, but the variations mentioned by Dr. Finsch are found on the same islands among our series, and—especially as the bird is also found on Dammer—I have therefore no doubt that the Babber form is also typical *C. metallica*.

13. *Turacoena modesta* (Temm.).

Columba modesta Temminck, *Pl. Col.* 552 (1835: Timor); Finsch, *Notes Leyden Museum* xxii. p. 297 (Wetter).

Mr. Kühn sent seven specimens from Wetter, 1 ♀ 15. iv. 1901, 2 ♂♂, 4 ♀♀, September—October 1902. (Nos. 3758, 5425—5428, 5850.) "Iris a narrow yellow ring with a blackish crimson line around it; bill and feet black."

All these examples are immature or in very worn plumage, and this probably accounts for a less glossy neck and somewhat small size. Dr. Finsch says that Wetter specimens do not differ from Timor ones.

14. *Macropygia magna* Wall.*

Macropygia magna Wallace, *P. Z. S.* 1863, p. 497 (Timor) ; Finsch, *Notes Leyden Museum* xxii. p. 298 (Timor, Wetter, Letti).

Mr. Kühn sent a large series, as follows :—

25 ♂ ♀, Roma, July 1902. (Nos. 5112—5115, 5195—5202, the rest without numbers.)

4 ♂ ♀, Letti, November, December 1902. (Nos. 6050, 6474—6476.)

5 ♂ ♀, Kisser, April, May 1901. (Nos. 3878, 4039, 4040, 4081, 4092.)

7 ♂ ♀, Wetter; 1 ♀, 16. i. 1901, 6 ♂ ♀, September, October 1902. (Nos. 3752, 5655, 5787—5791.)

7 ♂ ♀, Moa, November, December 1902. (Nos. 6122, 6123, 6221—6223, 6342, 6343.)

“Iris bluish grey with pale crimson outer ring; feet crimson (pale crimson, bright crimson, pinky flesh, brownish crimson, brownish purple, purple-brown), bill blackish (brownish, brown or black, tip of under mandible whitish or pale horn-colour.”

15. *Turtur tigrina* (Temm. & Knip).

Columba tigrina Temm. & Knip, *Pigeons* i. pl. 43, p. 94 (Java, Timor, etc. : 1811).

Turtur tigrina Finsch, *Notes Leyden Museum* xxii. p. 298 (Letti, Kisser, Wetter, Dawelor).

11 ♂ ♀, Roma, July, August 1902. (Nos. 5125, 5174, 5318—5320, 5377—5382, two without numbers.)

11 ♂ ♀, Letti, November, December 1902. (Nos. 5881—5886, 6490—6493.)

8 ♂ ♀, Wetter, September, October 1902. (Nos. 5475—5478, 5648—5650, 5852.)

4 ♂ ♀, Moa, November, December 1902. (Nos. 6218, 6232, 6337, 6384.)

6 ♂ ♀, Kisser, April, May 1901. (Nos. 3868, 3784—3786, 3870, 3884.)

16. *Geopelia maugeus* (Temm. & Knip).

Columba Maugeus Temm. & Knip, *Pigeons* i. p. 115, pl. 52 (1808—1811 : “les îles de l'Australie-Asie.” I accept Timor as the original habitat).

Geopelia Maugei Finsch, *Notes Leyden Mus.* xxii. p. 299 (Letti, Wetter, Kisser, Babber).

5 ad., Kisser, April, May, June 1901. (Nos. 3802, 4051, 4052, 4106, 4107.)

4 ad. and immat., Wetter, September, October 1902. (Nos. 5604—5607.)

8 ad., Letti, November, December 1902. (Nos. 5888—5892, 5966, 6494, 6495.)

6 ad., Moa, November, December 1902. (Nos. 6128—6132, 6385.)

14 ad. and immat., Roma, July, August 1902. (Nos. 5076, 5077, 5124, 5143—5146, 5251—5254, three without numbers.)

“Iris bright bluish grey (bluish grey), eyelids chromeous, feet greyish violet (purple-violet, violet), bill dark ash-grey, tip brighter, (bluish grey or grey with greenish base).”

Geopelia striata is said to occur on Babber and Dawelor (Meyer, *Verh. Zool. Bot. Ges. Wien* 1881, p. 772).

* Among the birds collected by the late A. Everett in South Flores I find there is a specimen of *Macropygia unchall* (= *leptogrammica*), a ♀, October 1896, shot at an altitude of about 3500 feet. This species is new to Flores. When recording Mr. Everett's collections, *Nov. Zool.* 1898, I mentioned (p. 49) only *Macropygia emiliana*, of which several were sent. The single specimen of *M. unchall* was apparently overlooked. About the name *unchall* see *Nov. Zool.* 1901, p. 119.

17. *Chalcophaps chrysochlora timorensis* Bp.

[*Columba chrysochlora* Wagler, *Syst. Av.*, *Columba* spec. 79 (1827 : Synonyms partly and habitat ("Ceylon, Java, Sumatra, China") erroneous! Description solely referable to the Australian, etc., form. I accept Australia as the typical habitat!)]

Chalcophaps timorensis Bonaparte, *Comptes Rend.* xliii. pp. 948, 949 (1856 : Timor).

Chalcophaps chrysochlora Finsch, *Notes Leyden Mus.* xxii. p. 299 (Letti, Wetter, Kisser, Babber).

It is difficult to understand why recent authors have "lumped" the true *chrysochlora* and *timorensis*. The former is found in Australia, New Guinea, and small islands near it, New Hebrides, New Caledonia, the latter over the South-West Islands, and on the Timor groups of islands. True *chrysochlora* has the head, neck and upper back vinous, even in the oldest *males*; with or without a grey wash on the occiput, and only a band across the shoulder, formed by the tips of some of the lesser coverts, greyish white. Adult *males* of true *timorensis*, on the other hand, have the hinder crown (from about the eyes), the occiput and a continuous wide stripe along the hind-neck together with the upper back bluish grey, and more white on the lesser wing-coverts, the white occupying nearly the whole lesser upper wing-coverts and forming a large patch. Thus far the two forms are as distinct as possible, only immature *males* being less easily recognisable, and should by all ornithologists of the "species-or-not-species-period" be recognised as two different species, but this has generally been overlooked. Nowadays, in the "subspecies-as-well-as-species-period," we look upon these representative forms as subspecies and name them trinomially. Moreover the birds from the South-East Islands (Koer and Manggoer) seem to be intermediate: they have the large white patch on the shoulders as in *timorensis*, but there is not much grey on the head, neck and back. Our series of adult *males* is, however, very small, and I therefore do not name this form. From the Timorlaut and the Key Islands we have only one adult *male* each. The former looks like those from Koer and Manggoer, the latter more like *chrysochlora*, with an apparently small white shoulder-stripe, as in the latter.

All our examples from the South-West Islands are true typical *timorensis*. They are as follows:—

12 ♂ ♀, Kisser, April, May, June 1901. (Nos. 3873—3875, 3879, 3952, 4057, 4060, 4061, the rest without numbers.)

4 ♂ ♀, Moa, November, December 1902. (Nos. 6316—6318, 6404.)

7 ♂ ♀, Wetter, September, October 1902. (Nos. 5714—5718, 5656, 5657.)

7 ♂ ♀, Letti, November, December 1902. (Nos. 5926, 5959, 5960, 6043 6487—6489.)

21 ♂ ♀, Roma, July, August, 1902. (Nos. 5187—5191, 5216—5220, 5327, 5328, nine without numbers.)

Two of the Roma birds have some white feathers on the back and middle wing-coverts, one also some on the breast, the other one white rectrix and one of the under tail-coverts white. A *male* from Kisser (3879) has the lower flank-feathers very pale bluish grey, and on one of them a glossy coppery spot. One from Wetter has several round coppery spots on the abdomen. "Iris (dark) coffee-brown (dark brown), feet purplish (violet, pale purple, crimson, in young birds pale purplish, blackish brown and greyish brown), bill coral-red, base purplish, in very young birds brown or blackish."

18. *Alopecoenas hoedtii* (Schleg.).

Leptoptila Hoedtii Schlegel, *Nederl. Tijdschr. Dierk.* iv. p. 30 (1871: Wetter).

Alopecoenas Hoedti Finsch, *Notes Leyden Mus.* xxii. p. 300, pl. 5.

This remarkable pigeon is only found on Wetter. It is of course not a *Leptoptila* (a purely American genus), nor a *Phlegoenas*, and must be placed in a special genus: *Alopecoenas* Finsch.

Mr. Kühn sent 11 ♂♂ and 8 ♀♀, shot on Wetter in April 1901 and October 1902. (Nos. 3754, 5744—5752, 5699, the rest without numbers.)

♂: "Iris dark coffee-brown, feet purplish (violet, reddish violet, brownish violet, purple), bill black."

♀: "Iris dark coffee-brown (brownish black), feet violet (pinkish crimson, crimson), bill black."

Hitherto only known from the two specimens in the Leyden Museum, and not even obtained by Schädler.

RALLIDAE.

19. *Rallina fasciatus* (Raffl.).

Rallus fasciatus Raffles, *Trans. Linn. Soc.* xiii. p. 328 (1822: Sumatra).

♀ ad., Kisser, 22. iv. 1901 (No. 3799). "Iris burnt ochreous red, eyelid bright crimson; feet brownish red; bill dull black."

(*Rallina tricolor victa* Hart. is found on Dammer.)

20. *Amaurornis phoenicurus leucomelaena* (Müll.).

[*Rallus phoenicurus* Forster, *Zool. Ind.* p. 19, pl. 9 (1789: Ceylon).]

Gallinula leucomelaena G. Müller, *Verh. Nat. Gesch. Ned. Ind., Land- en Volkenkunde*, p. 158 (1839-44: Timor).

Amaurornis phoenicura (errore) Finsch, *Notes Leyden Mus.* xxii. p. 304 (Wetter).

A mistake has been made by Legge, Sharpe, Finsch and others in uniting the form *leucomelaena* with Indian *phoenicurus*. It is perfectly true that young *A. ph. phoenicurus* have not so much white in the face as adult ones, but one must not compare the young of one form with the adult of another, or *vice versa*; and altogether old birds show differences generally better than young. If comparing the proper material we find that fully adult *A. ph. phoenicurus* have a white forehead, *A. ph. leucomelaena* never; that adult *A. ph. phoenicurus* have the lores, a line above the eye and sides of neck white, while adult *A. ph. leucomelaena* have the lores, all the space above the eye, a wide stripe below the eye and the sides of the neck to about the middle dark slate-colour, the lores and face sometimes spotted with white; and that *A. ph. phoenicurus* has the breast and abdomen white, the sides only slate-colour, while *A. ph. leucomelaena* has these parts slate-colour, near the white rather darker, only a wide white band along the centre. This last difference is even seen in young birds, which have much more white along the middle of the underside in *A. ph. phoenicurus*. The young of both forms have the dark portions on the under surface brownish, the white shaded with dusky edges to the feathers. We must distinguish three subspecies:

1. *Amaurornis phoenicurus phoenicurus*: adult birds with forehead, lores and sides of head white, breast and abdomen mostly white. *Hab.* Indian Peninsula

and Ceylon, through the Burmese countries to Southern China, and through the Malay Peninsula to the Sunda Islands as far as Sumbawa, also Celebes.

2. *Amaurornis phoenicurus insularis*: adult birds with forehead, lores and sides of head white as in No. 1, but breast and abdomen deep slaty black, nearly black, with a white line along the middle. *Hab.* Andamans and Nicobars.

3. *Amaurornis phoenicurus leucomelaena*: adult birds with forehead, lores and sides of head white, breast and abdomen slate-colour, white along the middle. *Hab.* Timor group of islands from Flores, Timor, Wetter, Roma, and Tukan-Besi Islands south of Celebes, the latter somewhat intermediate, as are apparently also some specimens from Flores, though they are certainly not true *phoenicurus*.

Mr. Kühn sent the following specimens from the S.W. Islands: 2 ♂♂, 1 ♀, Roma, July 1902. (Nos. 5129, 5130, 5329.) 2 ♂ ad., 1 ♂ juv., 3 ♀♀, Wetter, September, October 1902. (Nos. 5437, 5666, 5767—5770.)

“Iris burnt-sienna red (chocolate, scarlet, coffee-brown), feet dull brown (pale ochreous, brownish ochreous, olive-brown), bill green with red frontal shield and nostrils (dirty olivaceous with vermilion base, bright green below).”

21. *Poliolimnas cinereus* (Vieill.)

Porphyrio cinereus Vieillot, *Nouv. Dict.* xxviii. p. 29 (1819: no locality).

♂ ad., Wetter, 27. x. 1902 (No. 5875).

22. *Porphyrio melanotus* Temm.

Porphyrio melanotus Temminck, *Man. d'Orn.* ii. p. 701 (1820: “Nouvelle Hollande”).

1 ♀ ad., Wetter, 13. x. 1902 (No. 5774). “Iris scarlet; feet reddish flesh-colour with greyish joints; bill vermilion.”

This bird seems to agree fully with typical *melanotus* from Australia.

A specimen recorded by me under the name of “*P. smaragdinus*” from St. Aignan belongs to *P. melanotus*. Dr. Sharpe (*Cat. B.* xxiii.) distinguishes between “*P. calvus*” and “*P. smaragdinus*.” It is, however, clear that *P. calvus*, *P. indicus* Horsf. and *P. smaragdinus* are synonyms of the Java-Sumatra form. The birds called *calvus* have the thighs greenish, and in both sexes and all ages a verditer-blue chest patch, while in the birds I call *P. melanotus* only the male seems to have this differently coloured patch, and the thighs are not greenish blue, but blackish blue or purplish blue-black, like the flanks. If this view is correct there are two subspecies:

1. *P. calvus calvus* 1819 (*indicus* and *smaragdinus* synonyms): Java, Sumatra, Borneo to Celebes.

2. *P. calvus melanotus* 1820 (*smaragdinus* Sharpe, *Cat. B.*, but not Temm. (!) synonym): Moluccas and Timor group of islands to Australia, New Guinea, New Zealand, and perhaps Fiji and New Hebrides.

LARIDAE.

23. *Sterna bergii* Licht.

Sterna bergii Lichtenstein, *Verz. Doubl.* p. 80 (1823: Cape of Good Hope).

5 ♂♀ ad., Moa, November 1902. (Nos. 6361—6365.)

2 ♂♀, Letti, November 1902. (Nos. 6041, 6042.)

LIMICOLAE.

24. *Morinella interpres* (L.).

Tringa Interpres Linnaeus, *Syst. Nat.* ed. x. (1758) p. 148.

♀, Letti, 4. xi. 1902. (No. 5931.)

The generic name *Morinella* (1810) has the priority over *Strepsilas*, which dates from 1811. Brisson's "generic names" being inadmissible, *Arenaria* cannot be used, dating from 1819 (Vieillot).

Labiranellus miles is mentioned by Barchewitz in 1751 as occurring on Letti. (Cf. Finsch, *Notes Leyden Mus.* xxii. p. 305.)

25. *Charadrius squatarola* (L.).

Tringa squatarola Linnaeus, *Syst. Nat.* ed. x. p. 149 (1758).

Squatarola subtridactyla Finsch., *Notes Leyden Mus.* xxii. p. 305 (ex Hasselquist 1757 !!) (Kisser).

5 ♀, Letti, November, December 1902. (Nos. 6507—6510, 6079.)

1 ♀, Moa, November 1902. (No. 6273.)

26. *Charadrius dominicus fulvus* (Gm.).

5 ♂ ♀, Letti, November, December 1902. (Nos. 5954, 5955, 5957, 5958, 6511.)

5 ♂ ♀, Moa, November, December 1902. (Nos. 6272, 6327—6329, 6412.)

27. *Ochthodromus mongolus* (Pall.).

Charadrius mongolus Pallas, *Reise d. versch. Prov. Russ. R.* iii. p. 700 (1776: Salt Lakes of Mongolia).

4 ♂ ♀, Letti, November 1902. (Nos. 5934—5936, 6064.)

2 ♂ ♀, Moa, November, December 1902. (Nos. 6268, 6350.)

1 ♀, Roma, 26. viii. 1902. (No. 6346.) This specimen has a rather thick and short bill.

28. *Ochthodromus geoffroyi* (Wagl.).

Charadrius geoffroyi Wagler, *Syst. Av.*, *Charadrius* no. 19 (1827).

Ochthodromus Geoffroyi Finsch, *Notes Leyden Mus.* xxii. p. 305 (Kisser).

8 ♂ ♀, Letti, November 1902. (Nos. 5932, 5933, 5937, 6062, 6063, 6066, 6067, 6093.)

6 ♂ ♀, Moa, November, December 1902. (Nos. 6214, 6269, 6348, 6349, 6420, 6551.)

2 ♂ ♀, Wetter, September 1902. (Nos. 5469, 5470.)

1 ♀, Roma, 10. viii. 1902. (No. 5402.)

29. *Himantopus leucocephalus* Gould.

Himantopus leucocephalus Gould, *P. Z. S.* 1837, p. 26; Finsch, *Notes Leyden Mus.* xxii. p. 306 (Kisser).

♂ ad., Roma, 28. vii. 1902. (No. 5266.) "Iris scarlet, feet pink, bill black."

♂ ad., Letti, 12. xi. 1902. (No. 6078.)

30. *Numenius phaeopus variegatus* (Scop.).

Tantalus variegatus Scopoli, *Del. Faun. Flor. Insubr.* ii. p. 92, 1786 (ex Sonnerat, Luzon).

2 ♂ ♀, Moa, November 1902. (Nos. 6154, 6360.)

1 ♀, Letti, November 1902. (No. 6080.)

31. *Limosa lapponica novaezealandiae* Gray.

2 ♂♂, 1 ♀, Letti, November 1902. (Nos. 5927, 5928, 6077.)

32. *Totanus stagnatilis* Bechst.

Totanus stagnatilis Bechstein, *Orn. Taschenb.* ii. p. 292 (Germany).

5 ♂♀, Letti, November 1902. (Nos. 5950—5953, 6046.)

33. *Totanus glareola* (Gm.).

2 ♂♂, Wetter, October 1902. (Nos. 5829, 5877.)

1 ♂, 1 ♀, Letti, November 1902. (Nos. 5938, 5939.)

34. *Tringoides hypoleucus* (L.).

8 ♂♀, Letti, November, December 1902. (Nos. 5940—5944, 6059, 6089, 6506.)

3 ♂♀, Moa, November, December 1902. (Nos. 6270, 6347, 6421.)

5 ♂♀, Wetter, 16. iv. 1901, October 1902. (Nos. 3744, 5730, 5731, 5828, 5878.)

5 ♂♀, Roma, August 1902. (Nos. 5367, 5370, 5403—5405.)

1 ♀, Kisser, 3. ix. 1902. (No. 5869.)

Dr. Finsch recorded it from Kisser, Wetter, and Babber.

35. *Heteractitis brevipes* (Vieill.).

2 ♂♂, Wetter, September 1902. (Nos. 5471, 5472.)

36. *Terekia cinerea* (Güld.).

Scolopax cinerea GÜLDENST., *Nov. Comm. Petrop.* xix. p. 473, pl. 19 (1774).

6 ♂♂, Letti, November 1902. (Nos. 5945—5949, 6057.)

"Iris dark brown (blackish), feet chromeous (orange), bill black, base pale orange (dirty yellowish, pale orange.)"

37. *Limonites ruficollis* (Pall.).

5 ♂♀, Letti, November 1902. (Nos. 5919—5921, 6060, 6061.)

1 ♀, Wetter, 25. x. 1902. (No. 5827.)

"Iris brown (blackish brown), bill and feet black."

38. *Heteropygia acuminatus* (Horsf.).

Totanus acuminatus Horsfield, *Trans. Linn. Soc. Lond.*, xiii. p. 192 (1821: Java).

2 ♀♀, Letti, November 1902. (Nos. 5937, 6052.)

39. *Tringa crassirostris* Temm. & Schl.

Tringa crassirostris Temminck & Schlegel, *Fauna Japon.* p. 107. pl. 64 (1847: Japan).

♂♀, Moa, December 1902. (Nos. 6330, 6346.)

40. *Esacus magnirostris* (Vieill.).

Oedicnemus magnirostris Vieillot, *Nouv. Dict. d'Hist. Nat.* xxiii. p. 231 ("La Nouvelle Hollande").

♂, Roma, 25. viii. 1902. (No. 5409.)

2 ♂♂, Moa, November, December 1902. (Nos. 6274, 6378.)

♀, Letti, 18. xii. 1902. (No. 6497.)

Barchewitz described in 1751 a bird from Letti, which was evidently *Lobivanellus miles* (Bodd.). Cf. Finsch, *Notes Leyden Mus.* xxii. p. 305.

PLATALEAE.

41. *Platalea regia* Gould.

Platalea regia Gould, *P.Z.S.*, 1837, p. 106 (Australia).

Platalea intermedia Grant, *Ibis*, 1889, p. 52 (Port Moresby, New Guinea).

♀, Wetter, 29. x. 1902. (No. 6099.) "Iris chestnut brown, feet black, bill black with pale tip."

ARDEIDAE.

42. *Ardea sumatrana* Raffl.

Ardea sumatrana Raffles, *Trans. Linn. Soc. Lond.*, xiii. p. 325 (1822 : Sumatra).

♂ ad., Roma, 20. viii. 1902. (No. 5407.) "Iris golden yellow, feet pale chromeous, bill black, laterally greenish, pale greenish along the bottom."

43. *Notophox novaehollandiae* (Lath.).

Ardea novaehollandiae Latham, *Ind. Orn.* ii. p. 701 (1790 : Australia).

♀ ad., Roma, 14. vii. 1902. (No. 5141.) "Iris whitish yellow, feet ochreous yellow, bill black, dirty white below towards base."

44. *Nycticorax caledonica* (Gm.).

Ardea caledonica Gmelin, *Syst. Nat.* i. p. 626 (1788 : New Caledonia).

Nycticorax caledonicus, Finsch, *Notes Leyden Mus.* xxii. p. 308 (Kisser).

♂ ad., ♀ ad., ♀ juv., Moa, December 1902. (Nos. 6353—6355.)

♂ ♀ ad., Roma, 20, 27. viii. 1902. (Nos. 5408, 5826.)

45. *Demiegretta sacra* (Gm.).

Ardea sacra Gmelin, *Syst. Nat.* i. p. 640 (1788 : ex Latham, Tahiti insulisque vicinis); Finsch, *Notes Leyden Mus.* xxii. p. 308 (Kisser, Babber).

1 ♂ (slate), 2 ♀ ♀ (white), 1 ♀ (slate), Kisser, May 1901. (Nos. 3973, 3974, 4096, 4097.)

1 ♀ (white), 1 ♀ (slate), Roma, July 1902. (Nos. 5203, 5204.)

1 ♀ (slate), Wetter, 27. ix. 1902. (No. 5700.)

2 ♂ ♂ (white), 2 ♂ ♂ (slate), 4 ♀ ♀ (slate), 1 ♀ (white), 1 unsexed (white), Moa, November, December 1902. (Nos. 5265, 6276—6278, 6356—6359, 6415, 6416.)

46. *Bubulcus coromanda* (Bodd.).

Canceroma coromanda Boddaert, *Tabl. Pl. Enl.* p. 54 (1783 : ex Daubenton, Coromandel coast).

♂, Wetter, 26. x. 1902. (No. 5879.) "Iris whitish sulphureous, with black outer ring, feet black, bill yellow."

♂, Moa, 25. xi. 1902. (No. 6275.)

ANATIDAE.

47. *Anas gibberifrons* S. Müll.

Anas gibberifrons S. Müll., *Verh. Nat. Gesch. Ned. Ind., Land- en Volkenkunde*, p. 159 (Celebes).

2 ♂ ad., Wetter, 14. x. 1902. (Nos. 5771, 5772.) "Iris chocolate red."

STEGANOPODES.

48. *Phalacrocorax melanoleucos* (Vieill.).

Hydrocorax melanoleucos Vieillot, *Nouv. Dict. d'Hist. Nat.* viii. p. 8 (1817 : Australia).

2 ♀ ♀, Letti, 11, 12. xi. 1902. (Nos. 6038, 6039.) "Iris whitish grey, feet black, bill dirty orange, with blackish culmen."

49. *Sula sula* (L.).

Pelecanus Sula Linn., *Syst. Nat.* ed. xii., i. p. 218 (1766 : ex Brown, Sloane, Brisson, Catesby, "Habitat in Pelago indico." Typical locality West Indies—Jamaica : ex Brown, Sloane).

♀ imm., Letti, 8. xi. 1902. (No. 6040.)

RAPACES.

50. *Spizaetus limnaetus floris* Hart.

Spizaetus limnaetus floris Hartert, *Nov. Zool.* v. p. 46 (1898 : Flores).

One specimen, marked ♂, Wetter, 14. x. 1902. "Iris pale brownish yellow with darker veins, feet yellowish white, bill ash-grey with black tip." (No. 5867.)

This bird must be my *S. l. floris*, or a still larger subspecies. It is in an immature dress, presumably in its second or third year. The upper surface is deep brown and white, the feathers being dark brown, paler towards the base, those of the hind-neck and back white with large deep brown tips. Tail brown with blackish-brown bars, primaries blackish brown, the inner webs irregularly barred and mottled with white and brown towards the bases. Underside white with blackish-brown shaft-stripes, the feathers of the thighs deep brown, spotted, some almost barred, with white. Under wing-coverts blackish with a few white spots, axillaries black-brown, bases and some spots and patches white. Dimensions very large, larger than in the two adult types of *S. l. floris*. Wings 495 (or nearly 500), tail 270, middle toe without claw 65, metatarsus 95, bill from cere to tip in a straight line 35 mm.

51. *Haliaetus leucogaster* (Gm.).

Dr. Finsch mentions it as coming from Kisser. We have received no specimens, I might almost say "fortunately," considering how common a bird it is and how much space it takes up in the drawers.

52. *Haliastur indus intermedius* Gurney.

Haliastur intermedius Gurney, *Ibis*, 1865, p. 28 (Java).

Dr. Finsch mentions Kisser, Babber and Wetter. We received it from Kisser, Moa and Letti, all typical *intermedius*, underneath white with narrow black shaft-lines, like hair-streaks.

Kisser, 4 ad., 1 med., April—May 1901. (Nos. 4044, 4046, 4047, 4103, 4121.) Letti, 1 ♂ ad., 10. xi. 1902. (No. 6094.) Moa, 1 ♂ ad., 2 juv., November—December 1902. (Nos. 6261, 6264, 6414.)

"Iris dark brown in young and old."

53. *Astur torquatus wallacii* Sharpe.

Astur wallacii Sharpe, *Cat. B. Brit. Mus.* i. p. 128. pl. V. (1874 : typ. loc. Lombok. Cf. *Nov. Zool.* 1903, p. 20).

Astur torquatus Finsch, *Notes Leyden Mus.* xxii. p. 239.

Astur torquatus Temm., *Pl. Col.* 43 (1821 : I accept Timor as the typical loc. See *Nov. Zool.* 1903, p. 20).

Wetter : ♂ ♀ adult, 3 ♂, 2 ♀ juv., September, October 1902. ♂ ♀ ad. : " Iris sulphureous (chromeous), feet ochreous yellow (ochreous), bill black with ashy base, cere yellow." (Nos. 5430, 5431, 5658, 5659, 5660, 5661, 5773.)

Letti : 6 ♂, 3 ♀ ad., 3 ♀, 2 ♂ juv., November—December 1902. (Nos. 5962, 6049, 6069, 6071, 6072, 6074, 6482, 6483, 6484, 6485.)

Moa : 4 ♀, 2 ♂ ad., 2 juv., November, December 1902. (Nos. 6152, 6260, 6340, 6366, 6367, 6388, 6397.) Juv. : " Iris dark brown (brown, sulphureous), feet wax-yellow, bill black with ashy base."

I cannot do otherwise than unite these birds under the name of *A. t. wallacii*. They agree perfectly with the series of that form from other countries, as opposed to the typical *A. t. torquatus* from the Timor group. It is very peculiar that the latter is also found on Alor (*Nov. Zool.* 1903, p. 20), but the specimens from there agree with *A. t. torquatus* and not with *A. t. wallacii*. The two adult Wetter birds are less reddish, somewhat more pointing to *A. t. torquatus*, but not quite typical. In my article quoted above I have stated how the various forms of *A. t. torquatus* differ, and I do not desire to follow the convenient course of uniting them. In no case, however, is *A. t. sumbaensis* more distinct than *wallacii*.

54. *Tinnunculus moluccensis occidentalis* Mey. & Wigl.

[*Tinnunculus moluccensis* Bonaparte, *Consp. Av.* i. (1850) p. 27 (ex Hombron & Jacqu. : Amboina).] *Tinnunculus moluccensis occidentalis* Meyer & Wigglesw., *Abh. and Ber. Mus. Dresden*, 1896-7, No. 2, p. 8 (Celebes—typ. loc.—Timor, Sumba, Flores).

Kisser, common, April—June 1901. (Nos. 3850, 3881, 3954, 3955, 4041.) Wetter, 1 ♀, 17. x. 1902 (No. 5851). Letti, 4 " ♂♂ " November—December 1902. (Nos. 6036, 6037, 6076, 6486.) Moa, November—December 1902. (Nos. 6152, 6236, 6237, 6341, 6394, 6395, 6553.)

T. m. occidentalis is very distinct from *T. m. moluccensis*. All the above birds are very light.

55. *Falco peregrinus melanogenys* Gould.

Falco melanogenys Gould, *P. Z. S.* 1837, p. 139 (Australia).

1 ♀ juv., Wetter, 5. iv. 1901. " Iris black, feet sulphureous, bill grey with black tip and pale yellow nostrils."

There can be no doubt that *melanogenys* is the Australian form of *F. peregrinus*, and it is only consistent to name it trinomially.

STRIGES.

56. *Pisorhina manadensis tempestatis* subsp. nov.

The Scops-Owl from the island of Wetter forms a distinct race by itself. It differs at a glance from *P. m. albiventris* by the greater uniformity of the underside in the greyish-brown phase, the abdomen not differing from the breast, while in *P. m. albiventris* the abdomen is more or less white, contrasting with the rufous breast, and by the finer markings on the upperside, where the black markings in the middle of the feathers are not so bold. It thus resembles *P. m. manadensis* much more, and in fact differs (in the greyish-brown phase) from the latter almost

only in the finer, less bold black markings on the upper surface. But there is another peculiarity: while in the other forms (*P. m. manadensis* and *P. m. albiventris*) fox-red specimens are very rare (of *P. m. manadensis* only on record two in the Leyden Museum and a few in Dresden) or unknown (I find no record of a fox-red *P. m. albiventris*), they are evidently as numerous as the brown ones on Wetter. Of four specimens from Wetter in Leyden two belong to it, and of nine sent by Kühn four are fox-red. These four red specimens from Wetter are as different as two species can be from the brown ones, being bright fox-red above with narrow black shaft-lines and spots, the breast pale cinnamon, with heavy brown-black spots in the middle of the feathers, the abdomen beautifully mottled with white, cinnamon and blackish. How these fox-red examples differ from those of *S. m. manadensis* I cannot say, but according to Dr. Finsch they are not essentially different. Mr. Kühn sent four brown males, one brown female, two fox-red males, and two fox-red females, according to his sexing. They were obtained in September and October 1902. "Iris sulphureous, feet dirty grey or pale greyish flesh-colour, bill black, blackish or dark horn-colour, lower mandible pale (or dirty) horn-colour." (Nos. 5778—5784, 5786, 5781a.)

Type: No. 5782, Wetter, 15. x. 1902. H. Kühn coll.

Dr. Finsch unites (*Notes Leyden Mus.* xx. pp. 173—177) *P. m. manadensis* and *P. m. albiventris*, but if a series is compared the differences are conspicuous enough. In *Notes Leyden Mus.* xx. p. 177 he seems to cast doubts on my *P. alfredi* from Flores, which, however, must be kept specifically separate, because *P. m. albiventris* occurs also on Flores—though *alfredi* may be the mountain form. *P. alfredi* (as shown in my description and figure, *Nov. Zool.* 1898. pl. I.) differs from the various forms of *P. manadensis* by its almost uniform foxy-cinnamon upperside with large white marks on the scapulars, very fine mottlings on the abdomen, a smaller and yellow bill (while in the red as well as in the brown *P. manadensis* and *P. tempestatis* the upper bill is blackish, the lower whitish or horn-colour), and the bareness of the lower part of the tarsus, this last character not being shown in the plate but stated in the description.

57. *Ninox ocellata* subsp.?

The *Ninox* of the islands of Moa, Letti and Roma are very difficult to understand. They are closely allied and, in fact (with the sole exception of a little brighter rufous markings underneath), indistinguishable from the *Ninox* of Savu, near Timor, which I have called *N. ocellata* (cf. *Nov. Zool.* 1897, pp. 263, 264, 269). They are, however, all exactly alike in coloration and markings, and differ only slightly in dimensions. They are above cinnamon-brown, the hind-neck distinctly spotted with buff, scapulars and wing-coverts with the usual markings of *Ninox boobook* and *ocellata*. The underside is white with rufous, or rather cinnamon-brown markings. The wings measure 208 to 225, mostly about 215 mm. The iris is described by Mr. Kühn as "whitish yellow (whitish pale brown, yellowish with brown tinge, yellowish brown, dull brown)," the feet as "ash-grey," the bill as black with grey base (bright grey with black sides)." Generally they are smaller than *ocellata* from Queensland; but these forms are very difficult, and there seems to be a gradual merging from the birds called "*boobook*" into those called "*ocellata*," and of both there seem to be some more local races in *Australia*—for example, a very reddish one in West Australia.

2 ♂♂, 2 ♀♀, Moa, November—December 1902. (Nos. 6252, 6279, 6368, 6369.)

2 ♂♂, 2 ♀♀, Letti, November 1902. (Nos. 5963, 5964, 5965, 6097.)

1 ♂, Roma, 12. vii. 1902. (No. 5128.)

Dr. Finsch (*Notes Leyden Mus.* xxii. p. 244) mentions *Ninox scutulata* from Wetter; but probably the bird belongs to another race, either the same as I have before me from Moa, Letti, Roma, or another one again. Large series are wanted for a complete study of these owls, and single specimens often cannot be named with certainty. The very much darker, less reddish *N. scutulata* is not known to us as far east as the South-West Islands, and is rather different from *ocellata*, though finally they may all be looked upon as subspecies of one form. *Ninox fusca* of Timor is a very distinct form with greyish pale ear-coverts.

58. *Strix flammea javanica* Gm. an subsp. nov.?

Mr. Kühn sent three examples from Kisser. They agree with one sent by Mr. Everett from Atapupu in Timor in 1897, which I have recorded as *Strix flammea* subsp., without saying to which form it belonged, this being, in the genus *Strix*, often quite impossible without a series. The owls from Kisser and Atapupu agree with *S. f. javanica* in their size, powerful bill and very large feet, the latter, if anything, being inclined to be more powerful still. The markings are also the same; but many of the *javanica* are more yellowish, less greyish, and the black and white spots are strikingly larger in the birds from Kisser and Atapupu. On this account they will probably one day be separated subspecifically, but the material at my disposal seems not numerous enough to warrant my separating it already.

The Kisser birds are probably all males, two being marked so, the third doubtful. On Kisser they nest on the rocks on the coast. The specimens were shot in May and June 1901. "Iris dark brown, feet dirty white or yellowish white, bill whitish. (Nos. 4120, 4103, 4103a.)

PSITTACI.

59. *Trichoglossus haematodus haematodus* (L.).

Psittacus haematodus Linn., *Mant. Plant.* p. 524 (1771: partim. We have to regard Timor as the typical locality).

We have received a fine series from Wetter and Roma. Specimens from these islands are not separable from the Timor form, although it is remarkable (as already noticed by Dr. Finsch, *Notes Leyden Mus.* xxii. p. 285) that they have less frequently well-developed yellow concealed patches to the feathers of the upper mantle, and hardly ever orange ones. Nevertheless, many specimens are absolutely identical with Timor ones. On the other hand, *Trichoglossus haematodus fortis* (Nov. Zool. 1898, p. 120) from Sumba is a well-marked subspecies, distinguishable by its larger bill and general size (wing), and, if a series is carefully compared, also by some slight colour-differences, as mentioned in my original description.

27 ♂♀ ad., Roma, July, August 1902. (Nos. 5085—5097, twelve without numbers.)

14 ♂♀, Wetter, April 1901, September 1902. (Nos. 3741—3745, 3747, 5438—5443, 5623.)

"Iris dark brown with orange outer ring (blackish, blackish brown, with brownish yellow, orange, or orange-yellow ring), feet blackish grey (dark ash-grey, bright grey, olive-black), bill vermilion."

Some specimens have single orange and yellow feathers on the throat and crown.

T. h. haematodus is only known from Timor, Wetter and Roma; *T. h. fortis* only from Sumba.

60. *Trichoglossus haematodus rubritorquis* Vig. & Horsf. (? introduced).

Trichoglossus rubritorquis Vig. & Horsfield, *Trans. Linn. Soc. Lond.* xv. p. 291 (1826 : Australia).

2 ♀ ad., Kisser, 10. v. 1901. (Nos. 4034, 4035.) "Iris orange-red with brown inner ring, feet pale olive-grey, bill vermilion."

The occurrence of this form, quite typical, only known from North-West Australia, on Kisser is very remarkable. It is, in my opinion, not possibly a regular inhabitant of Kisser, but probably brought there by men, or else reached the island as an exceptional visitor. It is, however, still more remarkable that we have a specimen from Roma, which is intermediate between *T. h. haematodus* and *rubritorquis*, though much closer to the latter. It was shot on Roma on July 17th, 1902, and marked ♂, No. 5142. "Iris dark brown with pale orange outer ring, feet olive-grey, bill vermilion." It is underneath everywhere like *rubritorquis*, the head is as blue as that of *rubritorquis*, only the hinder part of the crown is green, the collar on the hind-neck is yellow as in *haematodus*, only partly orange-red laterally, the upper back has the orange-red bases of *rubritorquis*, and is partially blue, partially green. What is now the explanation of this bird? Can it be an aberration of *T. h. haematodus*? According to its plumage, it is more likely a sport of *rubritorquis*; but how does that get to Roma? Or is it a hybrid of *T. h. haematodus* and *rubritorquis*? If we accept that theory, there remains the same question—How did *rubritorquis* get to Roma?

61. *Trichoglossus euteles* (Temm.).

Psittacus euteles Temminck, *Pl. Col.* 568 (1835 : Timor).

Trichoglossus euteles Finsch, *Notes Leyden Mus.* xxii. p. 286 (Letti, Wetter, Babber, Kisser).

(The genera *Trichoglossus* and *Psitteuteles* are inseparable. I quite agree with Dr. Finsch in this respect. Cf. *Bull. B. O. Club*, October 1903.)

I have tried to separate the birds from the various islands, but have not succeeded. The specimens from Wetter are rather small and their heads very greenish, but they are apparently not very old, and similar birds are common on several of the other islands. The bills of very young birds are tinged with brown.

20 ♂ ♀, Kisser, April, May 1901. (Nos. 3893—3900, 3944—3947, eight without numbers.)

Some of these birds have wide dark green tips to the feathers of the sides of the abdomen, forming distinct bars. Similar specimens were sent from other islands, but not frequently.

14 ♂ ♀, Wetter, 14. iv. 1901 (Nos. 3765—3767, three without numbers), September, October 1902 (Nos. 5520, 5521, 5526, 5624, 5756, 5757, two without numbers).

The variations in the colour of the crown are very strange. Some (? oldest

birds) have it bright olive-yellow, others olive-green, others again (younger birds) green.

6 ♂ ♀, Moa, November—December 1902. (Nos. 6215—6217, 6311, 6312, 6313.)

8 ♂ ♀, Letti, November 1902. (Nos. 5896—5903.)

Among these are the finest males, with olive-yellow crown and partly yellow abdomen.

16 ♂ ♀, Roma, July 1902. (Nos. 5131—5140, six without numbers.)

“Iris in adult birds orange (pale or reddish orange, pale sienna red, in the brightest yellow ♂, No. 5900, Letti, vermilion), in young birds (Wetter, etc.) greyish brown (brown, dark brown, greyish ochreous), bill vermilion (orange), in young birds dirty orange (pale orange), feet greyish, brownish.

62. *Neopsittacus iris* (Temm.).

Psittacus iris Temminck, *Pl. Col.* 567 (1835 : Timor).

Trichoglossus iris Finsch, *Notes Leyden Mus.* xxii. p. 287 (Wetter).

While fully agreeing with Dr. Finsch in uniting the pseudogenus *Psittenteles* with *Trichoglossus*, I cannot follow him in also putting into *Trichoglossus* the very different *Neopsittacus iris*. These birds do not have the elongated tail of *Trichoglossus*, and have a rather different bill (cf. Salvadori, *Cat. B.* xx.). As far as I can see at present, the genus *Neopsittacus* is well founded.

N. iris differs from *N. rubripileum* in being considerably larger (wing 122—131 mm. against 110—120 in *N. rubripileum*), in having the sides of the head generally more greenish, the patch behind the eyes as a rule more purplish, the hinder parts of the pileum with wide blue tips to the feathers, which are sometimes obsolete, while they are absent or greenish in *N. rubripileum*. No doubt the two forms will be found to represent each other in various parts of Timor, though their distribution is at present not clear.

All the Wetter specimens are typical *iris*.

16 ♂ ♀, Wetter, September 1902. (Nos. 5527—5536, six without numbers.)

“Iris orange-red (burnt-sienna red, yellowish orange), bill pale orange, yellow below, feet ash-grey.”

63. *Geoffroyus personatus personatus* (Shaw).

Psittacus personatus Shaw, *Gen. Zool.* viii. 2, p. 544 (1811 : ex Levaillant, “Nouvelle Hollande.”

I accept Timor as the typical locality).

Geoffroyus personatus Finsch, *Notes Leyden Mus.* xxii. p. 287 (Timor and Wetter).

Dr. Finsch, *l.c.*, declares that neither coloration nor size offers anything constant to separate *G. p. floresianus*, *sumbavensis*, and *tjindanae* from typical *personatus*. This statement is very surprising, and undoubtedly incorrect. Mr. Rothschild and I have (*Nov. Zool.* 1901, p. 83) stated the differences of these forms, and I can add that the *female* of *G. p. personatus* has never (judging from seven specimens) a red-brown head, as found in the *females* of *floresianus*, *sumbavensis* and *tjindanae*. In every way *G. p. personatus* is most distinct (smallest, lightest, the blue in the *male* not covering the nape), while *floresianus*, *sumbavensis* and *tjindanae* are darker and larger, the blue reaching farther down, covering the whole nape. It is true that *tjindanae* is in colour exactly like *G. p. sumbavensis*, but the wing is distinctly longer (11 specimens examined). *G. p. sumbavensis* differs from *floresianus* in being generally lighter, the under

wing-coverts slightly lighter, size similar or a little larger. This form is certainly not easy to distinguish, and if one is anxious to lump, *sumbavensis* and *tjindanae* might be united with *floresianus*; but we do not advocate such work, and in no case whatever can these forms be said to be the same as *G. p. personatus* from Timor and Wetter.

8 ♂♂, 5 ♀♀, Wetter; April 1901 (Nos. 3761, 3762, 3763), September, October 1902 (Nos. 5473, 5474, 5595, 5596, 5758—5760, three without numbers). ♂: "Iris sulphur yellow (whitish yellow), bill vermilion with yellowish tip, blackish brown below, feet bright grey." ♀: "Iris whitish sulphureous (whitish yellow), bill dull black (blackish), feet bright grey."

64. *Ptistes jonquillaceus wetterensis* Salvad.

[*Psittacus jonquillaceus* Vieillot, *Nouv. Dict.* xxv. p. 352 (1817: New Holland, errore. I accept Timor as the typical habitat).]

Ptistes wetterensis Salvadori, *Cat. B. Brit. Mus.* xx. p. 484 (1891: Wetter).

Platyercus jonquillaceus Finsch, *Notes Leyden Mus.* xxii. p. 291 (Timor and Wetter—errore).

The Wetter form must be distinguished subspecifically, as in the very adult *males* even the upper wing-coverts remain about as green as the back, while in the adult *males* of *P. j. jonquillaceus* the upper wing-coverts (except those nearest the shoulder-bent) are greenish golden yellow. The *females* of the latter also have a slightly more yellow tinge on the upper wing-coverts, and the adult *males* have generally a conspicuously larger red patch on the wings. On the whole *P. j. jonquillaceus* is slightly larger, wing about 1 cm. longer. When comparing wrongly—i.e., ♀ of one form with ♂ of another, young with old, and so on, one can deny these subspecies, but not otherwise.

I have compared 13 Wetter specimens with 6 from Timor. Mr. Kühn sent:

12 ♂♀, Wetter, September, October 1902. (Nos. 5444—5450, 5537, 5547, 5698, three without numbers.)

"Iris dirty yellowish brown (orange, burnt-sienna red, ochreous brown, dull yellowish brown, coffee-brown), bill orange or bright vermilion, tip and underside more yellowish, feet blackish."

A *female* of *Cacatua goffini* (Finsch) was shot on Kisser, but Mr. Kühn remarked on the label: "Does not occur here, probably escaped from a passing ship."

CORACIIDAE.

65. *Eurystomus orientalis australis* Sw.

Eurystomus australis Finsch, *Notes Leyden Mus.* xxii. p. 280 (Wetter).

8 ♂♀, Moa, November, December 1902. (Nos. 6126, 6127, 6224—6226, 6314, 6315, 6411.)

2 ♂♀, Letti, November 1902. (Nos. 6092, 6472.)

2 ♀♀, Kisser, April, May 1901. (Nos. 3953, 4036.)

1 ♂, Wetter, 29. x. 1902. (No. 6100.)

ALCEDINIDAE.

66. *Alcedo ispida floresiana* Sharpe.

Alcedo floresiana Sharpe, *Cat. B. Brit. Mus.* xvii. p. 151 (1892: Flores).

On p. 25, *Nov. Zool.* 1903, I gave a key to distinguish the familiar races of *Alcedo ispida*. This key holds good for the majority of specimens, but occasionally

specimens of *A. i. floresiana* are found which have the ear-coverts so much mixed with black that they cannot be separated from *A. i. hispidoides*, among which, on the other hand, individuals with the ear-coverts greatly mixed with rufous are not quite uncommon, though not frequent enough to throw doubt on the validity of the two forms.

On Wetter and Roma typical *A. i. floresiana* is common, only specimens 5180 and 5341 have unusually dark ear-coverts and closely resemble *A. i. hispidoides*.

6 ♂ ♀, Roma, July, August 1902. (Nos. 5074, 5075, 5180, 5324, 5341, 5389.) "Iris dark coffee-brown, bill in the *males* entirely black, in the *females* the upper jaw black, lower red (coral red), feet coral red (vermilion)."

2 ♂ ♂, 2 ♀ ♀, Wetter, September, October 1902. (Nos. 5501, 5622, 5679, 5680.) Soft parts as in the Roma specimens.

67. *Alcyone azurea yamdenae* Rothschild.

Alcyone azurea yamdenae Rothschild, *Bull. B. O. C.* xi. p. 65 (Yamdena, Timorlaut Is.).

♂ ♀, Roma, 24. vii. 1902. (Nos. 5289, 5290.) "Iris dark coffee-brown (blackish brown), feet coral red, bill black."

I believe these two birds must belong to the same form as the Tenimber (Timorlaut) bird, *A. a. yamdenae*. It is true that they are larger, wing fully 75 mm., thus being as large as *A. a. pulchra* from North Queensland, and that the tip of the bill is not so largely and conspicuously brownish rufous, but the purplish colour on the sides extends downwards to the flanks, and the coloration is altogether very rich. More material should be examined from the Tenimber group and from Roma.

68. *Halcyon sancta* Vig. & Horsf.

Halcyon sancta Vig. & Horsfield, *Trans. Linn. Soc. Lond.* xv. p. 206 (1826: Australia).

1 ♂, 2 ♀ ♀, Kisser, April, May, June 1901. (No numbers.)

5 ♂ ♀, Wetter, October 1902. (Nos. 5621, 5839—5841, 5870.)

♂ ♀, Roma, July 1902. (Nos. 5071, 5215.)

♂, Letti, 7. xi. 1902. (No. 5972.)

69. *Halcyon australasia australasia* (Vieill.).

Alcedo australasia Vieillot, *Nouv. Dict. d'Hist. Nat.* xix. p. 419 (1818: no locality given, but in *Enc. Méth.* i. p. 397 said to be from Australia! This is an error, and Timor, the oldest known locality, must be accepted as the typical habitat).

Halcyon australasiae Finsch, *Notes Leyden Mus.* xxii. p. 281 (Syn. partim!—Wetter).

The same form which inhabits the islands of Timor, Lombok, and Sumba (not yet recorded from, but doubtless found on, Sumbawa) occurs also on Wetter and Roma.

2 ♂ ♂, 3 ♀ ♀, Roma, July, August 1902. (Nos. 5178, 5179, 5321—5323.)

4 ♂ ♂, 4 ♀ ♀, Wetter, September, October 1902. (Nos. 5482—5487, 5625, 5626.) "Iris dark coffee-brown, feet dark grey, upper bill black, under bill white with blackish tip."

70. *Halcyon australasia interposita* subspec. nov.

Differs from its nearest ally *Halcyon australasia dammeriana* by a paler cinnamon-buff crown, hindneck and underside; the bluish-green patch in the middle

of the crown, which is small or large (though always smaller than in *H. australasia australasia*) in *H. a. dammeriana*, is never large, but only small or almost and sometimes quite (in four out of eleven) absent. Kühn found this form on Letti and Moa; and, judging from Dr. Finsch's note (*Notes Leyden Mus.* xxii. p. 282), the form from Babber, which he quotes as *H. a. dammeriana*, must belong to *interposita*. (Type of *H. a. interposita*, No. 6281, H. Kühn coll., Moa, 2. xii. 1902, ♂.)

♂ ♀, Letti, 27. xii. 1902. (Nos. 6504, 6505.)

6 ♂ ♂, 3 ♀ ♀, Moa, November, December 1902. (Nos. 6211—6213, 6247—6249, 6281, 6282, 6283.)

"Iris dark coffee-brown, bill above black, lower mandible white with blackish tip, feet dirty (blackish) grey."

We are thus now acquainted with four forms of *H. australasia* :—

1. *H. australasia australasia* (Vieill.). Of larger size, whole pileum green, cinnamon portions of plumage deep and rich. Timor, Lombok, Sumba, Wetter, Roma.

2. *H. australasia dammeriana* Hart. (*Nov. Zool.* 1900, p. 19). Same size, only a patch in middle of pileum blue, cinnamon parts as rich as in *H. a. australasia*. Dammer.

3. *H. australasia interposita* Hart. About same size, only small patch in middle of pileum blue, sometimes reduced to absence, cinnamon colour paler. Moa and Letti, ? Babber.

4. *H. australasia minor* A. B. Mey. Smaller, almost whole pileum blue, size less. Timorlaut.—It is a mistake to unite this form with *H. a. australasia*. Not only is the size less (wing about 1 cm. shorter), but the cinnamon colours are also much paler, apparently still paler than in *H. a. interposita*; but only four specimens have been examined by me. Dr. Finsch (*Notes Leyden Mus.*, xxii. pp. 281, 282) attempts to show by measurements that *H. a. minor*, of which he had no specimens, is not smaller than *H. a. australasia*. His method, however, is most objectionable, as he measures the specimens of *H. a. australasia* himself, and quotes those of *H. a. minor* as given by Meyer. This is apt to lead to erroneous conceptions, because two ornithologists do not, as a rule, measure equally. Moreover, the measurements thus confronted by Dr. Finsch do not conclusively prove that *H. a. minor* is of the same size as *H. a. australasia*; for of the former he quotes the wing 72—76, tail 50—52, bill 37—38 mm.; of the latter the wing 77—87, tail 53—61, bill 33—42 mm.—always a much larger average. Had all the specimens been measured by one person the differences would be more conspicuous. The geographical distribution also demands differences of the Timorlaut form, as between it and the typical *H. a. australasia* another form (or other forms) is (or are) found—i.e. *H. a. interposita* (and *H. a. dammeriana*).

71. *Halcyon chloris chloris* (Bodd.).

Alcedo chloris Boddaert, *Tabl. Pl. Enl.* p. 49 (Pl. 783, 2) (1783, ex Buffon (locality on plate erroneously Cape of Good Hope, but Buffon states that the correct locality is Buru), and Latham (locality Buru). Typical habitat: Buru!

Halcyon chloris, Finsch, *Notes Leyden Mus.* xxii. p. 280 (Wetter, Kisser, Babber, Letti).

The treatment of the *chloris* group of *Halcyon* in the *Cat. B. Brit. Mus.* xvii. is certainly very unsatisfactory, because it is split up into several species and subspecies. It must either be united under one name (a very simple method, but

not very scientific) or separated into a number of subspecies, each with a different geographical distribution (a very difficult and tedious treatment, but surely more scientific, though at present not approaching full exactness and finality). What I can least understand is why "*Halcyon davisoni*," the Andaman race, should be a subspecies of "*humii*" and not of *chloris*, and why these two are separated from *chloris* by *sordidus*, the more than doubtful *forsteni*, *solomonis*, and *suvensis*. Surely all these, as far as separable at all (also *sordidus*) are subspecies of *chloris*. There are frequent intermediate colorations between "*humii*" and *chloris* in the same countries !

At present I can recognise the following facts :—

1. Specimens from the Moluccan Islands : Buru, Batjan, Tukan-Besi Islands, Key Islands, South-East Islands, Banda, Tenimber (Timorlaut) Islands, Dammer, South-West Islands (Roma, Wetter, Letti, Kisser), Alor, the Timor group to Lombok, are generally (though not always) larger, have the ear-coverts more or less distinctly blackish, and connected with a wide blackish nuchal collar, the upperside somewhat duller and often rather darker greenish, the wings more blue, and thus more in contrast with the back, the crown very frequently tinged with brownish. As a rule the *females* are more brownish on head and back and have the ear-coverts purer black ; but there are exceptions, unless some specimens are wrongly sexed by the collector. This form is the *Halcyon chloris chloris* (Bodd.).

2. Specimens from the Greater Sunda Islands (Java, Borneo, Sumatra), the Malay Peninsula, and the Philippines are generally (though not always) smaller, have the ear-coverts greenish like the crown, or a little darker, but hardly ever blackish, are above more uniform and somewhat lighter greenish, the wings less in contrast with the back ; only a narrow blackish nuchal collar, or sometimes none at all. The *females* seem to be also duller, more brownish above, with generally darker ear-coverts. This form must be called *Halcyon chloris collaris* (Scop.).*

3. Some specimens from the Pelew Islands, collected by Kubary, are, as far as I can see, perfectly similar to Philippine *H. chloris collaris* (Scop.).

4. Specimens from the Abyssinian coast (Arafali, Dankali) are very close to *H. chloris collaris*, but are a shade more uniform above and a shade duller ; the tips of the wings, especially the tips of the inner webs of the primaries, are less blackish, but more pale greenish, the outside of the wings not bluish. There is no black nuchal collar, the ear-coverts are green ; but while the differences in the *males* are very slight, the *females* differ more, being strikingly different from the *males* ; the upper surface dull olive, the tail of a very pale, faint green. The name of this form is of course *Halcyon chloris abyssinica* (Licht.).

5. In one place only that we know of—*i.e.*, in the Talaut Islands, north of Celebes—occur two forms, rather large ones and small ones, both alike in colour. What is the meaning of this ? The difference is very great, and there are evidently no intermediate examples. Messrs. Meyer & Wigglesworth (*Birds of Celebes* i., pp. 293—295) came to the conclusion that the small specimens from Talaut were "young and not full-grown." This conclusion is erroneous. The young *H. chloris* is not "similar to the adult in coloration, recognisable as young

* *Alcedo collaris* Scopoli, *Del. Flor. et Faun. Insubr.* ii. p. 90, 1788, ex Sonnerat, Mart. pech. à collier blanc des Philippines—typ. hab. Philippines ! No doubt all the birds from the Philippines and Sanda Islands as far east of Java belong to this form, and, I think, also those from Celebes, though the Celebes birds are oscillating, sometimes more like typical *chloris*. Those from the Malay Peninsula may have to be separated, as among them occur the curious blue so-called *humii*. Andaman birds appear to be quite similar, and also those from the Sunderbunds.

by the small bill only," as Messrs. Meyer & Wigglesworth believed. Young birds have the feathers of the forehead edged with buff, the upper wing-coverts edged with buff, the feathers of the white collar, sides of throat, breast and abdomen, and the whole breast fringed with blackish brown, the latter also tinged with fulvous. Moreover, the bill is not only shorter, but differently shaped, the culmen less distinctly ridged, more rounded, the whole bill clumsier, less pointed in appearance, because not so long and yet thick at base. Nothing of all this is seen in the small Talaut birds, and I cannot understand how Messrs. Meyer & Wigglesworth could conclude that they were young, after first believing that they were "a race of *Halcyon sancta*." I can find only four specimens among our 237 examples which closely approach and partly reach the small Talaut birds in either bill or wing measurements. The eight **perfectly adult** small birds from Talaut (partly Cursham coll. and partly taken by Waterstradt's native collectors) have the bills 35—40 mm. long, against 45—50 mm. in normal *H. chloris*, the wing 94—98 mm. against 108—120 mm. in typical normal *H. chloris*. Whether this small form on Talaut is a geographical representative of *chloris* (though both are found on Talaut, one might only breed there, the other be an occasional immigrant), or a perfectly developed species co-existing with typical large *chloris*, or a local aberration—for it is only known on Talaut,—it will be desirable to have a name for it, and I therefore name it herewith :

***Halcyon enigma* nom. nov.**

Type: ♂ ad., Lirong, Talaut, April 1897, John Waterstradt's natives coll. No. 143 t.

6. *Halcyon sordidus* is also nothing more than a subspecies of *chloris*, being closely approached by some *females* of true *chloris*; and so is, of course, my *colonus*, which is just a small edition of *sordidus* with different distribution.

Mr. Kühn sent the following very typical *H. chloris chloris* from the South-West Islands :—

5 ♂ ♀, Kisser, April—May 1901. (Nos. 3912, 3963, 4048, two without numbers.)

14 ♂ ♀, Roma, July, August 1902. (Nos. 5072, 5177, 5073, 5177, 5213, 5214, 5321, the rest without numbers.)

1 ♂, Letti, 18. xii. 1902. (No. 6512.)

6 ♂ ♀, Wetter, October 1902. (Nos. 5619, 5620, 5854—5856, 5874.)

5 ♂ ♀, Moa, November, December, 1902. (Nos. 6209, 6210, 6326, 6345, 6413.)

CUCULI.

72. ***Chrysococcyx rufomerus* Hart. (?)**

Chrysococcyx rufomerus Hartert, *Nov. Zool.* vii. p. 21 (1900 : Dammer).

Chalcococcyx innominatus Finsch, *Notes Leyden Mus.* xxii. p. 94 (1900 : Kisser).

It is not easy to unravel the different supposed species of *Chrysococcyx*. Dr. Finsch and I described almost simultaneously (though my article appeared apparently at least a month earlier) a form which we named *rufomerus* resp. *innominatus*, from Dammer and Kisser, Finsch from a single specimen, I from a series of nine. I have no doubt that we have both described the same bird, for we both refer to the very dark pileum, wider dark barring of the underside, and absence of rufous-cinnamon in the tail. Now we have received

a series from Roma, Wetter, and Letti, twenty-five specimens in all. They are as puzzling as they can be. The majority from Roma and Letti agree perfectly with my *rufomerus*, but three from Wetter and some few from the other islands have the second rectrix on the inner web almost entirely rufous-cinnamon or for a great part of that colour. I would be willing to consider them more or less immature, as they do not seem quite adult (?), and there are intermediately coloured ones between them and those looking exactly like *rufomerus*. But there is one objection to this: our very young birds (without bars below) from Dammer have no rufous at all or only a trace of it in the tail. What have we now to conclude? I think these birds with rufous in the tail must belong to the same form as the adult ones looking like *rufomerus*, because the markings in the tail are absolutely the same; they cannot well be *poecilurus* (which Dr. Finsch records from Wetter), as that form has the outer rectrix differently marked—at least, all those before me. Are these birds the same as those from Dammer? If not, we should have two forms only distinguishable by their young, which is not probable!

(A) Form from Dammer: above very dark, bars below somewhat wide, no rufous in tail in adult and young: *rufomerus*.

(B) Form from Roma (Wetter?) and Letti: adult like that of *rufomerus*, younger birds with much rufous in the tail, first plumage not known. Probably the same as the Dammer form. The Kisser bird (*innominatus* Finsch) might belong to the Dammer one rather than to the Roma form?

(C) Form from the Malay Peninsula, Sumatra, Java, Borneo, Philippines, and Celebes: differs from (A) and (B) in the adult birds not losing the rufous in the tail, bars below generally narrower: *malayanus* Raffl.

(D) Form from North Australia, parts of New Guinea, etc., Aru, to Timor: with a great amount of rufous-cinnamon in the tail, even the outermost rectrix not without that colour: *poecilurus*.

C. basalis is very different. It has much rufous in the tail, is large and pale, the middle of the abdomen unbarred.

C. plagosus is also a large bird, but more widely barred below, with no rufous in the tail.

C. lucidus is merely a southern form of it and very much like the latter.

Of the bird I now call *C. rufomerus* Mr. Kühn sent the following specimens:—

2 ♂♂, Moa, 20, 30. xi. 1902. (Nos. 6255, 6308.) These two birds are like the adult Dammer birds, with wide bars below and hardly a shade of rufous on the edges of the white patches on the second rectrix.

3 ♂♂, 1 ♀, Moa, November, December 1902. (Nos. 6309, 6310, 6391, 6392.) These four birds have narrower bars underneath and more or less, but mostly, a large amount of rufous in the tail.

4 ♂♂, Roma, August 1902. (Nos. 5334, 5354, 5368, 5368A). These birds have no rufous at all in the tail.

2 ♂♂, 2 ♀♀, Roma, August 1902. (Nos. 5029, 5332, 5333, 5335.) With more or less (much to almost none) rufous-cinnamon in the tail, bars hardly narrower.

4 ♂♂, Letti, December 1902. (Nos. 6431, 6433, 6435.) Without rufous in the tail, bars below wide.

1 ♂, Letti, 4. xi. 1902. (No. 5981.) Without rufous in the tail, but bars narrower, upper wing-coverts with pale edges (? immature). This specimen and

No. 5368A from Roma have the throat white, unbarred, all the others having bars across the throat.

1 ♂, Letti, 3. xi. 1902. (No. 5982.) Widely barred as in the (supposed) most adult birds, very dark above, but the inner webs of the rectrices (except those of the outermost and innermost pairs) mostly cinnamon-rufous.

1 ♂, 2 ♀♀, Letti, November, December 1902. (Nos. 5983, 6056, 6434.) These three birds have the upperside paler, somewhat more greyish, more narrowly barred underside and much rufous in the tail.

3 ♂♂, Wetter, 18. iv. 1901, 30. ix. 1902. (Nos. 3773, 5567, 5677.) Somewhat pale above, the inner rectrices (except the central) with much rufous, mostly almost quite rufous, bars not narrow.

"Iris varies (not in connection with the various plumages) from greyish brown to chocolate and dark scarlet, eyelids vermilion. Bill black, base of mandible greyish. Feet dark grey (greyish black)."

73. *Chrysococcyx plagosus* (Lath.).

Cuculus plagosus Latham, *Ind. Orn. Suppl.* p. xxxi. (1831 : Australia).

1 ♀ (?), Wetter, 4. x. 1902. (No. 5678.) "Iris greyish brown, eyelids yellowish, feet plumbeous, bill black." Very typical, very widely barred underneath, no rufous in the tail.

74. *Cacomantis variolosus* (Horsf.).

Cuculus variolosus Horsfield, *Trans. Linn. Soc.* xv. p. 300 (1826 : Australia).

1 ♀ juv., Kisser, 20. v. 1901. (No. 4062.)

75. *Misocalius palliolatus* (Lath.).

Cuculus palliolatus Latham, *Ind. Orn. Suppl.* ii. p. xxx. (1801 : Australia).

1 ♀ ad., Roma, 30. vii. 1902. (No. 5336.) "Iris black, bill black, feet dark grey."

76. *Cuculus saturatus* Blyth.

Cuculus saturatus Blyth, *Journ. As. Soc. Beng.* xii. p. 942 (1843 : ex Hodgson MS.).

Mr. Kühn sent six skins from Moa :

2 ♂ ad., 2 ♂ immat., 1 ♀ immat., 1 ♀ juv., Moa, November, December 1902. (Nos. 6288—6291, 6405, 6406.)

77. *Eudynamis orientalis everetti* Hart.

Eudynamis cyanocephala everetti Hartert, *Nov. Zool.* 1900, p. 231 (Typical locality : Sumba).

Eudynamis orientalis everetti Hartert, *ibid.* 1903. p. 237 (Sumba, Timor, Alor, Wetter, Moa, Key and S.E. Islands).

Eudynamis cyanocephalus (non Latham !) Finsch, *Notes Leyden Museum* xxii. p. 283 (Wetter).

1 ♂ ad., 1 "♀," Wetter, October 1902. (Nos. 5766, 5830.)

"♂♀, Iris scarlet, feet plumbeous, bill greenish horn-colour."

1 ♀, Moa, 4. xii. 1902. (No. 6293.)

78. *Centropus javanicus* (Dumont). (Cf. *Nov. Zool.* 1903, p. 24.)

Centropus bengalensis Finsch, *Notes Leyden Mus.* xxii. p. 284 (Letti, Wetter).

2 ♂ ad., 1 ♀ ad., 1 juv., Kisser, April—June 1901. (Nos. 3949, 3950, 4122, 4122 A.)

3 juv., Letti, November, December 1902. (Nos. 5969, 6473, 6477.)

1 ♀, juv., Moa, 6. xii. 1902. (No. 6292.)

2 juv., Wetter, September, October 1902. (Nos. 5696, 5697.)

6 juv., Roma, July, August 1902. (Nos. 5126, 5250, 5347—5350.)

MEROPIDAE.

79. *Merops ornatus* Lath.

Merops ornatus Latham, *Ind. Orn. Suppl.* p. xxxv. (1811 : Australia).

5 ♂ ♀ ad., in fine plumage, Kisser, April—June 1901. (No numbers.)

2 ♂ ♀ ad., very worn, 4 juv., without black praepectoral patch, in first plumage, Moa, November 1902. (Nos. 6133—6137, 6163.)

7 ♂ ♀ ad., in fine plumage, Wetter, September, October 1902. (Nos. 5519, 5642—5645, 5654, 5687.)

29 ♂ ♀ ad., in good plumage, Roma, July—August 1902. (Nos. 5099, 5175, 5255—5261, twenty without numbers.)

3 ♂ juv., in first plumage, Letti, November—December 1902. (Nos. 5979, 6462, 6463.)

CAPRIMULGIDAE.

80. *Eurostopus argus* Hart.

Eurostopus argus (ex Rosenberg nom. nud.) Hartert, *Cat. B. Brit. Mus.* xvi. p. 608 (Australia, Aru Is. : typ. loc. Aru Is., ex Rosenberg).

1 ♂ ad., Roma, 16. vii. 1902. (No. 5127.) "Iris black, bill black, feet reddish brown."

81. *Caprimulgus affinis* Horsf.

Caprimulgus affinis Horsfield, *Trans. Linn. Soc.* xiii. p. 142 (1821 : Java); Finsch, *Notes Leyden Mus.* xxii. p. 279 (Kisser).

3 ♂ ♂, 1 ♀, Kisser, May, June 1901, September 1902. (Nos. 3965, 3966, 4068, 5822.)

82. *Caprimulgus manillensis celebensis* Grant.

Caprimulgus celebensis Grant, *Ibis* 1894. p. 519; Hartert, *Ibis* 1896. p. 371; Hartert, *Tierreich Lief.* i. p. 53 (1897); Meyer & Wigglesworth, *B. Celebes* i. p. 320. Pl. XI.

Caprimulgus manillensis Finsch, *Notes Leyden Mus.* xxii. p. 279 (Wetter).

The southern form of *C. manillensis* is so closely allied to *C. manillensis manillensis* that it is best treated as a subspecies of the latter. It differs only in the white tips to the lateral rectrices in the adult *males* occupying both webs and being generally larger, the barring on the abdomen being generally coarser, and generally, but not always, the rictal bristles being somewhat longer and stronger. The immature birds, and apparently females, are hardly separable from *manillensis* without comparing several specimens. Besides Celebes (whence only two examples are known at present) this form is only known from Wetter, where Schädler got one *female*, recorded by Finsch as *manillensis*. Mr. Kühn sent :

1 ♂, 1 ♀, Wetter, October 1902. (Nos. 5777, 5847.) "Iris ♂ dark reddish brown (♀ dark brown), feet ♂ pale brown (♀ dull brown-red), bill black, brownish below."

The ♂ has the lateral rectrices white on both webs for over 3 cm., but some Philippine examples (No. A. 258 North Luzon, John Whitehead coll.) have nearly as much white, and only part of the tip of the outer web brown. The ♀ has the tip of the outer web of the lateral rectrices grey-brown, only buffy-white near the shaft, the inner white for $2\frac{1}{4}$ cm.

CYPSELIDAE.

83. *Collocalia esculenta neglecta* Gray.

Collocalia neglecta Gray, *Ann. and Mag. Nat. Hist.* xvii. p. 121 (Timor).

Collocalia neglecta Finsch, *Notes Leyden Mus.* xxii. p. 279 (Kisser and Wetter).

I think now that *C. neglecta* is best treated as the Timorese representative of *C. esculenta*. It differs from it at a glance by the colour of the upperside, which is not steel-blue, but brown-black with a greenish-blue gloss, in fresh plumage with conspicuous, in worn plumage indistinct or invisible whitish fringes to the feathers. Mr. Kühn sent :

2 ♂ ad., 2 ♀ ad., 2 pull., Kisser, April—May 1901. The young birds are paler, more greyish black, the whitish edges more conspicuous.

8 ♂ ♀, Wetter, October 1902. (Nos. 5581—5588.)

7 ♂ ♀, Roma, August 1902. (Nos. 5359—5365.)

Two nests from Wetter are entirely composed of a kind of olive greyish lichen, while one from Roma consists of black hair-like palm fibre with a few pieces of yellowish-green lichen. They are thus utterly inedible.

HIRUNDINIDAE.

84. *Hirundo rustica gutturalis* Scop.

Hirundo gutturalis Scopoli, *Del. Flor. et. Faun. Insubr.* ii. p. 96 (1786 : New Guinea).

One adult bird (No. 5590) shows the red widely interrupting the dark pectoral band, others (more or less immature) show an almost complete band.

8 ♂ ♀, Wetter, October 1902. (Nos. 5590, 5860—5865.)

85. *Hirundo javanica* Sparrm.

Hirundo javanica Sparrman, *Mus. Carls.* ii. Taf. 100 (1789 : Java) ; Finsch, *Notes Leyden Mus.* xxii. p. 274 (Kisser).

10 ♂ ♀, Kisser, May, June 1901, September 1902. (Nos. 4020—4024, 5815—5818, 5820.)

1 ♂, Wetter, 6. x. 1902. (No. 5591.)

1 ♂, Roma, 8. viii. 1902. (No. 5401.)

2 ♂ ad., 1 ♂ immat., Letti, November, December 1902. (Nos. 5977, 5978, 6436.)

1 ♂, 2 ♀ ♀, Moa, November, December 1902. (Nos. 6159, 6160, 6333.)

86. *Hirundo daurica striolata* Temm. & Schl.

Hirundo striolata Temm. & Schlegel, *Fauna Japonica, Aves*, p. 33 (1850 : Java).

3 ♂ ♂, 1 ♀, Wetter, October 1902. (Nos. 5589, 5664, 5665, 5722.) "Iris blackish brown, bill and feet blackish."

87. *Petrochelidon nigricans* (Vieillot).

Hirundo nigricans Vieillot, *Nouv. Dict. d'Hist. Nat.* xiv. p. 523 (1817: New Holland).

1 ♂, 1 ♂? Roma, August 1902. (Nos. 5366, 5383.) "Iris, feet and bill blackish."

MUSCICAPIDAE.

88. *Muscicapa griseisticta* (Swinh.).

Hemichelidon griseisticta Swinhoe, *Ibis* 1861 p. 330 (China: terra typica Amoy).

1 ♀, Wetter, 22. x. 1902. (No. 5838.)

1 ♀, Letti, 10. xi. 1902. (No. 5980.)

89. *Cyornis hyacinthina kühni* subspec. nov.

[*Muscicapa hyacinthina* Temminck, *Pl. Col.* xxx. (Timor, Mus. Paris).]

Cyornis hyacinthina Finsch, *Notes Leyden Mus.* xxii. p. 261 (Wetter—errore).

♂ like the ♂ of *C. hyac. hyacinthina*, but the forehead and feathers above the eye of a very different colour: not of a bright blue with a slight purplish tinge, but light sky-blue with an almost whitish tinge; ear-coverts lighter, more blue, wing-coverts and outer edges of quills also different, of a much lighter blue: abdomen a shade darker rufous cinnamon. ♀ like that of *C. hyac. hyacinthina*, but lines across forehead and lores to above the middle of the eye rufous-cinnamon like the underside, which is a shade darker than in the Timor form. Dimensions similar.

Type ♂ No. 5467, Wetter, 24. ix. 1902. Kühn coll. (Mus. Tring).

Mr. Kühn, who discovered this fine subspecies, and in whose honour it is named, sent

9 ♂♂, 7 ♀♀, Wetter, September, October 1902. (Nos. 5467, 5468, 5574—5576, 5669, 5670, 5736, 5737, seven without numbers.)

♂♀. "Iris dark coffee-brown (blackish brown), bill black, feet blackish."

This is a very pretty discovery, upon which Mr. Kühn may be congratulated. To the majority of ornithologists it will still be a "good species," but from a modern point of view it is a "subspecies." Dr. Finsch noticed the cinnamon-rufous forehead and lores, but he could not separate this form, as he had only two young birds from Wetter. The true *hyacinthina* is only found on Timor and Semaou.

90. *Muscicapula melanoleuca westermanni* Sharpe.

[*Muscicapula melanoleuca* Blyth, *Journ. As. Soc. Beng.* xii. p. 409 (1843: "Nepaul, Darjeeling").]

Muscicapula westermanni Sharpe, *P. Z. S.* 1888, p. 270 (Perak).

(Cf. Hartert, *Nov. Zool.* 1902. p. 551.)

4 ♂♂, 1 ♀, Wetter, October 1902. (Nos. 5646, 5832—5834, 5876.)

91. *Gerygone everetti wetterensis* Finsch.

Gerygone wetterensis Finsch, *Notes Leyden Mus.* xx. p. 132 (1898: Wetter); id., *op. cit.* xxii. p. 252. pl. IV. fig. 2.

Differs from *G. e. everetti* only in the lesser extent of the black subapical portion in the tail, and even that runs very close in some specimens. The extent of the white is **not** always less in extent, extending on the outer pair over both webs in both forms.

4 ♂♂, 3 ♀♀, Wetter, September, October, 1902. (Nos. 5635, 5671, 5672—5675, 5843). "Iris brownish white (pale ochreous, whitish ochreous), feet blackish, bill black."

All our specimens are alike. They agree with Dr. Finsch's description and have a yellow wash on the sides of the abdomen, though they are fully adult.

92. *Gerygone kisserensis kisserensis* Finsch.

Gerygone kisserensis Finsch, *Notes Leyden Mus.* xx. p. 133 (1898: Kisser); id., *op. cit.* xxii. p. 253, Taf. iv. fig. 1, figura mala.

4 ♂♂, 4 ♀♀, Kisser, April—June 1901. (Nos. 3840, 3856, 3940, 4069, 4070, 4072, 4112, 4113.)

11 ♂♂, 8 ♀♀, Moa, November, December 1902. (Nos. 6108—6110, 6168—6176, 6264; the rest without numbers.)

4 ♂♂, 4 ♀♀, Letti, November, December 1902. (Nos. 6016—6020, 6034, 6035.)

"Iris bright crimson (reddish white, scarlet, burnt-sienna red with whitish outer ring), feet black (greyish black), bill black, base of lower mandible greyish."

Adult birds are white underneath, the sides widely rust-brown, young birds are lemon-yellow underneath. I cannot separate those from Kisser, Moa and Letti.

93. *Gerygone kisserensis sequens* subsp. nov.

Very close to *G. k. kisserensis*, but above more richly coloured, the back and wing-coverts more tinged with cinnamon-rufous, the crown of a deeper tint. The young are also yellow underneath.

Mr. Kühn sent a large series from Roma.

♂, Roma, 15. viii. 1902. (No. 5299A.) (Type of *G. k. sequens*.)

9 ♂ ad., 13 ♀ ad., 8 ad. with sex not stated, 6 juv., Roma, July, August 1902. (Nos. 5039—5042, 5152—5154, 5226—5228, 5296—5300, 5337, 5395—5397; seventeen without numbers.)

"Iris burnt-sienna red (reddish grey, pale crimson), bill and feet blackish."

The nomenclature adopted here is not final, but only chosen to make evident the close relationship of these forms. As we have no collection from Babber we cannot say much about the form occurring there. Dr. A. B. Meyer (*Isis* 1884, pp. 7, 27) described from a single skin from Babber a *Gerygone fulvescens*, which he compared with *dorsalis*; while Dr. Finsch (*Notes Leyden Mus.* xxii. p. 254) identified three spirit specimens from Babber with *Gerygone kühni* (Hartert, *Nov. Zool.* 1900, p. 15, Dammer), saying that Meyer's description of *fulvescens* cannot refer to his examples. It can hardly be said that these close and difficult forms can with absolute certainty be named from a few spirit specimens, and even a single skin will hardly settle the question finally, but I think it is quite possible that the same form occurs on Dammer and Babber, and that Meyer's *fulvescens* is the same as my *kühni*. The diagnosis of Meyer is certainly very short and insufficient, but it does not exactly contradict that of *kühni*. All these forms are apparently subspecies, and should probably all be termed as *G. dorsalis* with an added third name.

94. *Rhipidura rufiventris pallidiceps* subsp. nov.

Differs at a glance from *Rh. rufiventris rufiventris* of Timor by the slaty-brown, not black, pileum, and generally more brownish, less ashy upper surface. The pileum and sides of the head are almost pure black in the Timor form, in marked

contrast to the slaty-grey back, while in *pallidiceps* it is brownish grey, not much different from the back. In *pallidiceps* the abdomen also is paler, but other differences are not apparent. The type of *Rh. ruficentris pallidiceps* is No. 5511, Wetter, 16. ix. 1902. *Rh. r. pallidiceps* seems to be restricted to Wetter, whence Kühn sent:

2 ♂♂, 4 ♀♀, 1 ?, Wetter, September, October 1902. (Nos. 5510—5513, 5647, 5648, 5726, 5728.)

“Iris blackish brown, bill and feet black.”

I have been able to compare ten specimens with thirteen from Timor, and I am much obliged to Dr. Finsch for lending me some specimens from the Leyden Museum.

95. *Rhipidura setosa büttikoferi* Sharpe.

Rhipidura büttikoferi Sharpe, *Bull. B. O. C.* i. p. xviii. (1892: Dammer Island).

Rhipidura hoedti Büttikofer, *Notes Leyden Mus.* xiv. p. 93 (1893: Letti).

Rhipidura büttikoferi Finsch, *Notes Leyden Mus.* xxii. p. 256 (Letti).

6 ♂♂, 3 ♀♀, Letti, November—December 1902. (Nos. 5987—5992, 6444, 6445.)

4 ♂♂, 1 ♀, Moa, November—December 1902. (Nos. 6112, 6113, 6162, 6382, 6383.)

6 ♂♂, 3 ♀♀, 1 ?, Roma, July—August 1902. (Nos. 5049—5053, 5233—5235; two without numbers.)

“Iris blackish brown, bill and feet black.”

Specimens from Dammer, Letti, Moa and Roma are not distinguishable.

96. *Rhipidura semicollaris* S. Müll.

Rhipidura semicollaris S. Müller, *Nat. Gesch. Ned. Ind., Land- en Volkenk.*, p. 184 (Timor); Finsch, *Notes Leyden Mus.* xxii. p. 257 (Wetter).

4 ♂♂, 1 ♀, Wetter, September, October 1902. (Nos. 5556, 5557, 5723, 5724, 5842.)

“Iris blackish brown, feet black, bill blackish, base of lower bill whitish.”

97. *Rhipidura elegantula* Sharpe.

Rhipidura elegantula Sharpe, *Notes Leyden Mus.* i. p. 23 (1878: Letti); Finsch, *op. cit.* xxii. p. 257 (Letti).

4 ♂♂, 2 ♀♀, Letti, November—December 1902. (Nos. 5993—5995, 6440—6442.)

3 ♂♂, 3 ♀♀, Moa, November—December 1902. (Nos. 6111, 6155, 6161, 6379—6381.)

“Iris blackish brown, bill and feet black.”

7 ♂ ad., 5 ♂♀ ad., 6 ♂♀ juv., Roma, July, August 1902. (Nos. 5044—5047, 5155—5159, 5230—5232; six without numbers.)

I have used binomials for these *Rhipidurae*, not because I am sure that they are more than subspecies, but it requires more time than I can bestow on these birds at present to work out their minute relationship. No doubt several of these forms must be subspecies of one species.

Dr. Finsch has separated the Babber form under the name of *Rhipidura reichenowi* (*Notes Leyden Mus.* xxii. p. 257. pl. IV. fig. 3), because the forehead of the type was cinnamon, not white. He kindly sent me the type specimen, the others, having been sent in spirits, being of not much value. I find, however, that the forehead varies in the Roma specimens from cinnamon to creamy white—the white is, in fact, never pure in *elegantula*, but always of a distinct cream-colour.

I therefore cannot admit the difference of *reichenowi*; nor would the distribution be comprehensible; for, if *reichenowi* was distinct, we should have *elegantula* on Moa, Letti, Roma and Dammer, *reichenowi* on Babber.

The young birds have the forehead always cinnamon, the hind-neck and upper back earthy brown, chest greyish brown, the black jugular collar not developed.

98. *Myiagra rufigula* Wall.

Myiagra rufigula Wallace, *P. Z. S.* 1863. pp. 485, 491 (Sema, near Timor).

5 ♂♂, 5 ♀♀, Wetter, September, October 1902. (Nos. 5502—5504, 5551, 5552, 5740—5743, 5836.)

4 ♂♂, 5 ♀♀, Roma, July, August 1902. (Nos. 5033, 5166—5168, 5302, 5351, 5353.)

"Iris brownish black, feet bluish black (steel-brown), bill black, dark greyish blue (bluish grey) below."

99. *Monarcha inornata cinerascens* (Temm.).

[*Monarcha inornata* Garnot, *Voy. Coqu. Zool. Atl.* Pl. xvi. fig. 2 (1826); i. 2. p. 591 (1828: New Guinea).]

Drymophila cinerascens Temminck, *Pl. Col.* 430 fig. 2 (1826: Timor).

Monarcha inornatus Finsch, *Notes Leyden Mus.* xxii. p. 258 (Kisser, Wetter).

Monarcha inornata kisserensis Hartert, *Nov. Zool.* x. p. 26 (1903).

3 ♂♂, 2 ♀♀, Kisser, May—June 1901. (Nos. 3959, 3999, 4014, 4098, 4098A.)

7 ♂♂, 1 ♀♀, Moa, December 1902. (Nos. 6294—6300, 6313.)

1 ♂, Letti, 28. xii. 1902. (No. 6422.)

1 ♂ (?), 1 ♀, Roma, 3. viii. 1902. (Nos. 5314, 5315.)

"Iris blackish brown, feet dark bluish grey, bill slaty grey with paler tip."

Dr. Finsch came to the conclusion that "*kisserensis*" cannot be separated, but I have (*l.c.*) shown how it differs from typical *inornata*. Although I have not seen Timor specimens, there can hardly be any doubt that they are like those from Wetter, Letti, Kisser, Roma, Moa, etc., if, in fact, the locality was correctly stated by Temminck. I think, therefore, that the name *cinerascens* must be used instead of *kisserensis*.

100. *Monarcha trivirgata* (Temm.).

Drymophila trivirgata Temminck, *Pl. Col.* 418 (1826: Timor).

Monarcha trivirgatus Finsch, *Notes Leyden Mus.* xxii. p. 260 (Kisser, Wetter).

1 ♀, 2 ♂♂, 3 ♀ (juv.) Wetter, September—October 1902. (Nos. 5553—5555, 5727, 5835, 5837.)

27 ♂♀ ad., 2 juv., Roma, July—August 1902. (Nos. 5034—5037, 5169, 5170, 5229, 5301, and twenty-one without numbers.)

"Iris blackish brown, feet dark bluish grey, bill dark bluish grey."

CAMPEPHAGIDAE.

101. *Graucalus personata* (S. Müll.)

Cebblepyris personata S. Müller, *Verh. Natuurl. Gesch. Land- en Volkenk.* p. 190 (1839-44: Timor).

Graucalus personatus Finsch, *Notes Leyden Mus.* xxii. p. 249 (Letti, Wetter).

Graucalus lettiensis Meyer, *Abh. Isis* 1884. pp. 7, 28 (Letti).

11 ♂ ad., 7 ♀ and juv. Roma, July—August 1902. (Nos. 5116—5118, 5192—5194, 5262, 5263, 5326, and nine without numbers.)

3 ♂, 3 ♀ ad., Wetter, October 1902. (Nos. 5695, 5753, 5761—5764.)

2 ♂ ad., 1 ♂ juv., 1 ♀, Letti, November 1902. (Nos. 5961, 6044, 6090, 6091.)

2 ♂ ad., 1 ♀ ad., Moa, November 1902. (Nos. 6124, 6125, 6338.)

"Iris blackish brown (bill and feet black). The ♀ from Moa has an unusually blackish throat."

102. *Graucalus melanops* (Lath.).

Corvus melanops Latham, *Gen. Synops.*, *Suppl.* ii. p. 116 (Australia).

4 ♀ and juv., Roma, July, August 1902. (Nos. 5264, 5342—5345.)

1 ♂ juv., 1 ♀ ad., Letti, November 1902. (Nos. 5917, 5918.)

2 ♂ ad., 1 ♀ ad., 3 juv., Kisser, April—June 1901. (Nos. 4090, 4123, and four without numbers.)

6 juv., Moa, November 1902. (Nos. 6208, 6227—6231.)

"Iris deep brown (black), feet and bill black."

103. *Edoliisoma dispar* Salvad.

Edoliisoma dispar Salvadori, *Ann. Mus. Civ. Genova* xii. p. 329 (Type from Ké Bandam).

1 ♂ ad., 1 ♂ juv., 3 ♀ juv., 1 ♀ ad., Roma, July, August 1902. (Nos. 5098, 5174, 5176, 5331, 5325, 5391.)

"Iris ♂ ad., black, bill and feet black. Iris ♀ ad., blackish brown, bill and feet black."

These specimens are rather large, the bills somewhat long. Specimens from Dammer have partly large bills, partly not larger than those from the Key and S.E. Islands.

104. *Lalage timoriensis* (S. Müll.).

Ceblepyris timoriensis S. Müller, *Verh. Nat. Gesch. Ned. Ind., Land- en Volkenkunde* p. 190 (1839-44 : Timor).

Lalage riedelii A. B. Meyer, *Isis* 1884, pp. 7, 29 (Kisser).

Lalage timoriensis Finsch, *Notes Leyden Mus.* xxii. p. 251 (Letti, Kisser, Wetter).

3 ♂ ad., 1 ♂ juv., 1 ♀ ad., 1 ♀ juv., Kisser, April, May 1901. (Nos. 3906, 3977, 3981, and three without numbers.)

6 ♂ ad., 1 ♀, Moa, November, December 1902. (Nos. 6205, 6206, 6257, 6339, 6352, 6407, 6408.)

7 ♂ ad., 3 ♀, Wetter, September, October 1902. (Nos. 5616—5618, 5668, 5805—5809, and one without number.)

8 ♂ ♀ juv., Roma, July, August 1902. (Nos. 5030—5032, 5303, 5304, 5371, 5390, 5400.)

"Iris ♂ ad., coffee-brown, bill and feet black."

4 ♂ ad., 1 ♂ juv., 4 ♀ ad., 1 ♀ juv., Letti, November 1902. (Nos. 5908—5916, 5930.)

TURDIDAE.

105. *Geocichla peronii audacis* (Hart.).

Geocichla audacis Hartert, *Bull. B. O. Club* viii. p. 43 (1899 : Dammer).

Geocichla Peronii (non Vieillot) Finsch, *Notes Leyden Museum* xxii. p. 263 (Wetter and Babber).

After comparing our magnificent series of 34 *audacis* with 10 Timor birds (5 in Tring and 5 in London) I am at a loss to understand Dr. Finsch's statement, that Timor examples are of the same colour as *audacis*. *G. peronii peronii* is

above yellowish cinnamon, *audacis* chestnut- or rufous-cinnamon, and also the chest and sides differ in the same way. Possibly the Timor examples in Leyden have darkened, as Corn-Buntings and Robins do, in collection, especially when inadequately kept and exposed to dust, light and damp. Dr. Finsch, however, is right in doubting the differences in size, though generally *peronii* are larger, wing near to or above 110 mm., *audacis* from Wetter, Babber, Roma on an average 104 to 109, from Dammer 100 to 108 mm.; but I admit that these differences in size are not constant enough to mention them, while the colour is an unmistakable character for the separation of these two excellent subspecies.

Mr. Kühn sent the following specimens, in addition to those formerly obtained on Dammer:

13 ♂ ♀ ad., Wetter, September, October 1902. (Nos. 5452, 5457, 5597, 5598, five without numbers.)

2 juv., 28 ♂ ♀ ad., Roma, July, August 1902. (Nos. 5079—5084, 5147—5151, and nineteen without numbers.)

“Iris dark coffee-brown (dark brown), feet pale flesh-colour, bill dull black, pale at base below.”

106. *Geocichla andromedae* (Temm.).

Myiothera Andromedae Temminck, *Pl. Col.* 392 (1826: Java).

Geocichla Andromedae Finsch, *Notes Leyden Mus.* xxii. p. 264 (Wetter).

4 ♂ ♂, 4 ♀ ♀, Wetter, October 1902. (Nos. 5592—5594, 5776, 5848, 5849, 5849A, 6325.)

1 ♂ juv., Roma, 26. viii. 1902. (No. 5410.)

♂ ♀ ad., “Iris dark brown (very dark brown, brownish-black), feet dark brownish grey, bill black.”

107. *Pratincola caprata caprata* (L.).

Motacilla Caprata Linnaeus, *Syst. Nat.* ed. xii. p. 335 (1766: ex Brisson, hab. Luzon).

Pratincola caprata Finsch, *Notes Leyden Mus.* xxii. p. 252 (Wetter, Kisser).

5 ♂ ad., 1 ♂ juv., 2 ♀ ad., Wetter, September, October 1902. (Nos. 5518, 5561, 5562, 5738, 5739, 5762, 5800, 5801.)

3 ♂ ad., 2 ♀, 1 ♂ juv., Kisser, April, May 1901. (Nos. 3859, 3926, 3962, and four without numbers.)

TIMELIIDAE.

108. *Cisticola cisticola fuscicapilla* Wall.

Cisticola fuscicapilla Wallace, *P. Z. S.* 1863, p. 489 (Timor, Flores, Type from Timor).

The magic spell cast around *Cisticola cisticola* in its (probably numerous) geographical forms by Dr. Sharpe, who in the *Cat. B.* vii. united all the forms from France and Spain to South Africa, China and Japan, south down to Timor, etc., has now been broken. Mr. Whitaker has separated the N. African form (*Bull. B. O. C.*, October 1903), and we may as well give up the view that the same form ranges from France to the Cape and Timor. The birds from Wetter, Moa, Letti, Kisser, are exactly like those from Timor. They are much duller than S. European *cisticola*.

2 ♂ ♂, 1 not sexed, Moa, November 1902. (Nos. 6157, 6323, 6324.)

1 ♀, Wetter, 1. x. 1902. (No. 5676.)

2 ♂♂, 3 ♀♀, 1 unsexed, Kisser, April, May 1901. (Nos. 3841, 4015—4017, 4073, 4075.)

“ Iris greyish brown, feet pale flesh-brown, bill brownish, whitish below.”

109. *Cisticola exilis* (Vig. & Horsf.) (? subsp.)

Malurus exilis Vigors & Horsf., *Trans. Linn. Soc.* xv. p. 223 (1827 : ex Latham, Australia).

All these birds have striped crowns and long tails. They appear to be all in winter (non-breeding) dress. The want of white tips to the rectrices and some other details seem to distinguish them readily from the various forms of *C. cisticola*. I hardly think they will ultimately be found identical with typical *exilis*, but cannot give reliable character.

5 ♂♂, 6 ♀♀, Letti, November, December 1902. (Nos. 6013, 6014, 6015, 6454—6461.)

1 ♂, Moa, 28. xi. 1902. (No. 6305.)

17 ♂♀, Roma, July—August 1902. (Nos. 5043, 5225, 5291—5295, and ten without numbers.)

110. *Megalurus galactotes* Temm.

Malurus galactotes Temm., *Pl. Col.* 65 fig. 1 (1823 : Australia).

♀ in moult, Roma, 30. vii. 1902. (No. 5224.)

“ Iris dull dark brown, bill blackish, whitish with yellowish base below, feet pale brownish.”

This specimen has the crown and upper tail-coverts sharply streaked with black; it does not, therefore, belong to *M. timoriensis*.

LANIIDAE.

111. *Lanius bentet* Horsf.

Lanius bentet Horsf., *Trans. Linn. Soc.* xiii. p. 144 (1821 : Java); Finsch, *Notes Leyden Mus.* xxii. p. 268 (Kisser).

The variation in the extent of the black on the crown is remarkable. It is greatest in specimens in worn plumage, less evident in freshly moulted ones; but sometimes the black does not seem to be there, so that it could not be produced by wear. The young bird just before and after leaving the nest is above more rusty brownish, with narrow, blackish anteapical bars, the secondaries widely edged with rusty-buff, the alar speculum buffy-whitish, sides of breast with blackish anteapical bars.

6 ♂♀ ad., Wetter, September, October 1902. (Nos. 5765, 5798, 5799, 5802—5804.)

2 ♂ ad., 2 ♀ ad., 2 pull., Kisser, April 1901.

“ Iris brown, bill and feet black, feet in the pulli blackish plumbeous, bill brownish black, below whitish.”

112. *Pachycephala calliope* Bp.

Pachycephala calliope Bonaparte, *Consp. Av.* i. p. 328 (1850 : Timor, ex Müller's MS.); Finsch *Not. L. M.* xxii. p. 265 (Wetter).

6 ♂ ad., 1 ♀ ad., Wetter, September 1902. (Nos. 5496—5500, 5517, 5634.)

“ ♂ Iris dark reddish brown (coffee-brown), feet dark plumbeous (dark grey), bill black.”

113. *Pachycephala orpheus* Jard.

Pachycephala orpheus Jardine, *Contr. Orn.* 1849 p. 129 pl. 30 (♀, typical locality Timor. Finsch, *Not. L. M.* xxii. p. 266 (Wetter).

4 ♂♂, 5 ♀♀, 1 without sex stated, 1 ♂ albinistic var., Wetter, September, October 1902. (Nos. 5514—5516, 5627—5632, 5725, 5866 (albino).

“Iris blackish brown (dark chocolate, dark brownish red), feet blackish, bluish or ashy grey, bill dull black, base below pale in younger birds.” The albino is a somewhat pretty bird. Upperside white, with a few brownish grey feathers, outer webs of remiges and scapulars tinged with yellow. Lower rump, upper tail-coverts and tail rich deep yellow. Breast and abdomen creamy buff, flanks tinged with yellow. “Iris chocolate-red, feet dark plumbeous, bill black,” therefore not a true albino.

A good series in fresh plumage might show that the Wetter form is not quite typical *orpheus*. The back is somewhat less greenish, more brownish, the crown lacks the greyish ashy tinge, the upper tail-coverts are more tinged with a sort of orange-yellow. As, however, most of our specimens are in worn plumage, and we have not a good series from Timor, these differences may not be of any systematic value.

114. *Pachycephala par* spec. nov.

Supra olivascente-brunnescens, supracaudalibus rufescentibus, viridi tinctis. Remigibus nigro-fuscis, viridi-olivaceo marginatis, secundariarum internarum pogoniis externis late olivaceo-brunneis. Rectricibus viridi-olivaceis, pogoniis externis flavo-viridi tinctis et marginatis. Guttur alba, rhachidibus plumarum brunneo terminatis, gastraeo reliquo luteo, plumis tibialibus plus minusve flavo tinctis, subcaudalibus luteo-flavis, subalaribus pallide luteis. Rostro nigro, pedibus plumbeis. Al. ♂, 93-94, ♀, 90-93, cand. 72-74, rostr. ca. 20, metatars. ca. 25 mm.

This interesting new “Thickhead” belongs to one of those groups in which the sexes are alike, the male being indistinguishable from the female except by a somewhat but very little smaller size. The upper surface is olive-brown with a faint ashy tinge on the crown, the upper tail-coverts are of a peculiar rufous, with a more or less greenish tinge. The wing is brownish black, the quills externally margined with greenish olive, the inner secondaries with most of the outer webs, the last one over both webs olive-brown. Rectrices greenish olive, the outer webs margined with, and in certain lights entirely yellowish olive-green. The shafts of the rectrices brown above, white below. Chin and throat white, the shaft on the lower throat tipped with brown streaks, the white merging into the buff breast and abdomen. Sides of body deeper buff, chest with dark shaft-stripes. Thighs mostly washed with yellow, under tail-coverts buffy-yellow, under wing-coverts pale buff. Bill black, feet plumbeous (reddish grey, dirty ashy grey), iris blackish brown or brownish black.

The young bird is much like the adult, but the wings are more margined with rufous; throat and breast tinged with yellow, and heavier, and more streaked with blackish brown.

Hab. Roma.

Type: ♀, No. 5339, Roma, 9. viii. 1902. H. Kühn coll.

Mr. Kühn, who discovered this new form on Roma, sent:

4 ♂♂, 4 ♀♀, Roma, July, August 1902. (Nos. 5176 [juv.], 5221, 5316, 5317, 5339, 5340, 5369, 5376.)

115. *Pachycephala par compar* subsp. nov.

Differs from *P. par* as follows : Lores and an indistinct superciliary line paler, more buffy, ear-coverts somewhat paler ; the abdomen is much paler, and sometimes tinged with yellow ; the throat therefore hardly at all in contrast to the abdomen ; under tail-coverts paler, more sulphur-yellow ; tail generally lighter ; under wing-coverts lighter, almost whitish. Some specimens have distinct brown shaft-streaks on the throat, others not.

Hab. Letti and Moa.

Type : No. 6033, ♂, Letti, 4. xi. 1902. H. Kühn coll.

There can be no doubt that the two new forms, *par* and *compar*, represent each other, and I have therefore treated them as subspecies ; but an ultimate revision of the genus will probably lead to the reception of more forms into the same species. I am, however, not able to review the whole group at present.

Mr. Kühn sent the following specimens :

2 ♂♂, 5 ♀♀, Letti, November, December 1902. (Nos. 6030—6033, 6437—6439.)

3 ♂♂, 1 ♀, Moa, November 1902. (Nos. 6204, 6250, 6251, 6344.)

“ Iris ♂ dark brown (dull blackish brown), ♀ chocolate-red (burnt-sienna red), dark coffee-brown (dark brown), bill black, feet ash-grey, greyish plumbeous.”

116. *Pachycephala arctitorquis kebirensis* Mey.

Pachycephala kebirensis A. B. Meyer, *Abh. Isis* 1883. p. 35 (Babber).

20 ♂ ad., 18 ♀♀ and juv., Roma, July—August 1902. (Nos. 5014—5028, 5222, 5223, 5311, and twenty without numbers.)

10 ♂ ad., 6 ♀♀, Moa, November 1902. (Nos. 6114—6121, 6197—6199, 6258, 6259, and three without numbers.)

1 ♀, Wedan, near Babber. W. Doherty coll.

It is with much hesitation that I enumerate the birds from Roma and Moa under Dr. Meyer's name *kebirensis*, which he has given to the Babber form ; but I am fully convinced that none of these are the true *arctitorquis*, which is the Tenimber (Timorlaut) one only.

In *P. arctitorquis arctitorquis* the *female* is above cinnamon, the crown really cinnamon, the back tinged with brown, and *P. a. arctitorquis* is considerably smaller. In the form inhabiting Dammer, which I presume to be exactly the same as that from Babber (judging from the one specimen obtained by Doherty and from descriptions), the crown is not cinnamon in the fully adult *female*, but rufous-grey. The Roma birds are most closely allied to those from Dammer (and Babber), but the *females* are mostly more greyish above. I am inclined to think that they are different, especially as there is an evidently young Roma example with a yellowish abdomen and less cinnamon above than any apparently equally young Dammer examples. The tails are also purer grey, not tinged with grey. On the other hand, two Dammer birds (apparently very adult *females*) are not distinguishable from the Roma series, and the former are mostly worn, the Roma ones in beautifully fresh plumage. Moreover, the worn Moa birds (collected at another time of the year) look more brownish on the tails. On the other hand, the Moa series is smaller, wings about 1 to 6 mm. shorter. I defer judgment at present, until fresh series from the same months of ♂ and ♀ ad. and juv. are to hand from the various islands ; but there are apparently only two possibilities : that of two or that of four forms—namely, either :

1. *P. arctitorquis arctitorquis* : Tenimber group.
2. *P. arctitorquis kebirensis* : all the South-West islands from Babber to Moa, Dammer and Roma.

Or :

1. *P. arctitorquis arctitorquis* : Tenimber group (smaller, ♀ more cinnamon).
2. *P. arctitorquis kebirensis* : Babber and Dammer (larger, ♀ more brownish).
3. *P. arctitorquis* subsp. nov. : Roma, size of 2, ♀ more greyish).
4. *P. arctitorquis* subsp. nov. : Moa (colour as 3, but smaller).

I prefer to adopt the former course for the present time.

ZOSTEROPIDAE.

117. *Zosterops lettiensis* Finsch.

Zosterops lettiensis Finsch, *Notes Leyden Mus.* 1898. p. 136 (Letti)

I am obliged to use binomials for forms of the genus *Zosterops* in most cases, as I cannot venture just now to review the whole genus, in order to arrange it in species and subspecies. I cannot, however, agree with Dr. Finsch, who unites *Zosterops lettiensis* with *griseiventris* from Tenimber, which is smaller (if correctly measured, *males* being compared with *males* and *females* with *females*) and greyish on the sides. Though the birds from Moa and Letti, Kisser and Wetter, are extremely near to *griseiventris*, they are not more different from *citrinella* of Timor, Savu, and other Sunda Islands ; in fact, they only differ from *citrinella* in having considerably larger bills, being perhaps (on an average) paler yellow on the throat and generally slightly longer in the wing.

I cannot see my way to follow Dr. Finsch (*Zosteropidae*, *Tierreich Lief.* 15. p. 16) in recognising two species on Timor—namely, *citrinella* on Timor alone and *neglecta* on Timor and eastwards to Java. Our very large series leaves the possibility of separating the Timor form, being slightly darker, and allowing *neglecta* to inhabit Java to Flores ; but the differences are so slight, so inconstant, that I do not venture to do this. If, however, future material from all islands **collected at the same season** should induce any one to do such splitting, then the Alor birds, which are very yellowish above and have brighter yellow upper tail-coverts, must also be distinguished. I do not venture to do so at present, having only two specimens from Alor. The following forms are evident enough :

Z. citrinella, Timor to Java : bill smaller.

Z. lettiensis, Wetter, Kisser, Moa, and Letti : bill larger.

Z. bassetti, Dammer and Roma : browner on the underside.

Z. griseiventris, Tenimber : smaller and greyer on the sides underneath.

All these must be subspecies of one species, but I am not certain about the oldest name of the latter.

Mr. Kühn sent the following specimens of *lettiensis* :

6 ♂♂, Letti, November, December 1902. (Nos. 5984—5986, 6446—6448.)

4 ♂♂, 2 ♀♀, Moa, November 1902. (Nos. 6178—6180, 6303, 6304.)

6 ♂♂, 3 ♀♀, 2 ?, Kisser, April—June 1901. (Nos. 3842—3846, 3943, 4022—4025, 4105, and two without numbers.)

4 ♂♂, 2 ♀♀, 1 ?, Wetter, September, October 1902. (Nos. 5681—5686, 5686a).

“ Iris brown in various shades, bill black with greyish base below, feet ash-grey.”

118. *Zosterops bassetti* Sharpe.

Zosterops bassetti Sharpe, *Ann. & Mag. Nat. Hist.* ser. 6. vol. xiv. p. 57 (1894: Dammer).

25 ♂ ♀, Roma, July, August 1902. (Nos. 5054—5059, 5161—5165, and fourteen without numbers).

Generally Roma specimens seem to be a little larger, but nearly half of them are not larger than true *bassetti*; in fact, I believe, if we had a sufficiently large series from Dammer, there would be no difference at all.

DICAETIDAE.

119. *Dicaeum mackloti* subsp. nov. ?

Mr. Kühn sent a series from Roma and Moa. These birds seem to be somewhat intermediate between *D. mackloti mackloti* and *D. mackloti salvadorii*. The black surrounding of the lower throat is more or less wide, as in *D. m. mackloti*, but nearly always wider in the Roma birds; the undersurface is buffy, apparently paler than in *salvadorii*; the bill larger than in *mackloti* (in most specimens), more like that of *salvadorii*. The latter has been described from Babber, and occurs also on Dammer; but I have only a single *male* from the latter island before me. *D. m. salvadorii* is doubtless (like several others) a subspecies of the *mackloti* group. The underside is not quite pure white in *mackloti*, the black surrounding of the red throat not entirely absent, but somewhat indicated in *salvadorii*.

Future ornithologists will perhaps name both the Roma and Moa forms, but I do not venture to go so far just now.

Mr. Kühn sent the following specimens:

13 ♂ ad., 4 ♂ juv., 6 ♀ ad., 4 juv., Roma, July, August 1902. (Nos. 5305—5310, 5355—5358, 5379—5398, 5399, 6181, and twelve without numbers.)

10 ♂ ♂, 3 ♀ ♀, November, December 1902. (Nos. 6182—6188, 6266, 6334—6336, and two without numbers.)

NECTARINIIDAE.

120. *Cinnyris solaris exquisita* subsp. nov.

[*Nectarinia solaris* Temminck, *Pl. Col.* 347 (1825: "Amboyna," errore! Terra typica Timor, ex Sal. Müller)].

Cinnyris solaris Finsch, *Notes Leyden Mus.* xxii. p. 268 (Wetter).

Very closely allied to *N. solaris solaris*, but the bill rather long, colour of abdomen and breast very brilliant, axillary tufts deep orange, back much washed with golden brown. (*Type*: No. 5609, Wetter, 30. ix. 1902.)

Mr. Kühn sent of *C. s. exquisita*:

12 ♂ ad., 2 ♂ juv., 4 ♀ ♀, Wetter, September, October 1902. (Nos. 5492—5495, 5571, 5572, 5608—5611, 5729, and seven without numbers.)

"♂ ad. Iris blackish brown, bill black, feet black."

We must recognise three subspecies:

1. *Cinnyris solaris degener* subsp. nov.: bill shorter, back more greenish, axillary tufts pure yellow, flanks greenish. Flores, Lomblen, Alor. (*Type*: No. 6039, ♂, Endeh, S. Flores, 12. ix. 1896, A. Everett coll.)

2. *Cinnyris solaris solaris*: bill probably a little longer, back more washed with golden brown, axillary tufts more golden yellow. Exactly intermediate between *C. s. degener* and *C. s. exquisita*. Timor and Semao.

3. *Cinnyris solaris exquisita*: bill longest, back washed with golden brown, axillary tufts orange-yellow (very different from those of *degener*), flanks orange with an olive wash. The *females* underneath bright yellow, with an orange tinge on the breast and centre of the abdomen, under tail-coverts of the brightest yellow; the females of *C. s. degener* are underneath sulphur-yellow, with a faint greenish tinge. (Of *C. s. solaris* the Tring Museum has no *females*.) *Cinnyris solaris exquisita* inhabits Wetter.

MELIPHAGIDAE.

121. *Myzomela kuehni* Rothsch. (Pl. X. *Nov. Zool.* vol. x.)

Myzomela kuehni Rothschild, *Bull. B. O. C.* p. 42, February 1903 (Wetter); *Nov. Zool.* 1903, p. 219.

13 ♂ ♀, Wetter, September, October 1902. (Nos. 5479—5481, 5568—5570, 5692—5694, and four without numbers.)

122. *Stigmatops notabilis* Finsch.

Stigmatops notabilis Finsch, *Notes Leyden Mus.* xx. p. 130 (1898: Wetter); id. *Notes Leyden Mus.* xxii. p. 271, pl. iv. 4.

6 ♂ ♂, 1 ♀, Wetter, September 1902. (Nos. 5792—5797, 5831.) "Iris blackish brown, feet dark grey (or dark brown in one), bill black."

All the specimens are marked "♂," but evidently one is a *female*, being much smaller. Wings in the *males* 72—75,* in the *females* 63 mm., bill in the *males* 15—17, in the *female* 13 mm.

The only specimen heretofore known is the type in Leyden, which has been preserved in spirits. The yellow is a little, but not much faded, otherwise it is in perfect coloration.

123. *Stigmatops squamata* Salvad.

Stigmatops squamata Salvadori, *Ann. Mus. Civ. Gen.* xii. p. 337 (1878: Koer, Mus. Leyden); Finsch, *Notes Leyden Mus.* xxii. p. 270 (Wetter and Babber).

A series from Wetter and Roma seems to be perfectly similar to *S. squamata squamata*, and that is also shown by Dr. Finsch's measurements of Wetter birds. This distribution is most peculiar, since the birds from Moa and Letti seem to be distinctly smaller and mostly indistinguishable from the small Tenimber race, *S. squamata salvadorii*?

2 ♀ ad., 2 ♂ ♂ 1 ♀ immat. Wetter, October 1902. (Nos. 5683, 5732—5735.)

16 ♂ ♀ ad., 9 ♂ ♀ immat. Roma, July, August 1902. (Nos. 5060—5070, 5160, and thirteen without numbers.)

124. *Stigmatops squamata* subsp. ?

? *Stigmatops salvadorii* Meyer, *Zeitschr. Ges. Orn.* 1884, p. 217 (Timorlaut).

Stigmatops kebirensis Meyer, t.c. p. 218 (Babber).

While most of the specimens from Moa and Letti are as small and partly even smaller than *salvadorii*, some, and especially those from Wetan, near Babber, are partly as large as *squamata*, partly intermediate between *squamata* and *salvadorii*. It is therefore difficult to come to a firm conclusion. Geographically we might expect—since it is certain that the Timorlaut race (*salvadorii*) is

* Dr. Finsch gives the wing as 168 mm. This must be a misprint or pen-slip. If 68 was meant the wing is not fully grown or exceptionally small.

markedly smaller—to find *salvadorii* on all the S.W. Islands, or a third race on the more western one, but hardly the large one on the S.E. Islands, Key and Webber and Roma, with a small one between on Tenimber and the more eastern S.W. Islands. Mr. Kühn sent the following specimens:

3 ♂♂, 3 ♀♀, Letti, November, December 1902. (Nos. 6026—6029, 6429, 6430.)

6 “♂,” 1 ♀ juv. Moa, November, December 1902. (Nos. 6200, 6201, 6265, 6321, 6322, 6386, 6387.)

1 ♂, 2 ♀♀, Wetan, near Babber, February 1897. W. Doherty coll.

125. *Philemon cineraceus* (Bp.)

Tropidorhynchus cineraceus Bonaparte, *Consp. Av.* i. p. 390 (1850: ex Müller MS. in Mus. Lugdun. “ex Timor.” The locality Timor is probably an error, because on that island we find the totally different *Philemon inornatus* Gray 1849 (*Gen. B.* pl.,—without locality, but according to specimens in Brit. Mus. from Timor), which is apparently the same as *Tropidorhynchus vulturinus* Jacq. & Puch. 1853, if the latter came from Timor. Bonaparte's description is very short and useless, but I suppose we must accept his name, as Dr. Finsch found the type to agree with the birds from Letti and Kisser.)

Mr. Kühn sent the following specimens:

9 ♂♀, Letti, November, December 1902. (Nos. 5970, 5971, 6051, 6498—6503.)

6 ♂♀, Moa, December 1902. (Nos. 6285—6287, 6388—6390.)

24 ♂♀, Kisser, April, May 1901. (Nos. 3796, 3812, 3819, 3957, and twenty without numbers.)

“Iris dull brown (dark or dull coffee-brown), feet plumbeous (dark plumbeous, blackish), bill black, bare parts whitish grey.”

The *females* are smaller than the *males*. ♂ wing 133—137, ♀ about 120—123 mm. The sides of the head are bare of feathers (while in *Ph. inornatus* there is only a bare line under and behind the eye). The feathers of the jugulum are rounded, in fresh plumage with a pure white drop-shaped hard tip and ashy-white almost to the base (while in *Ph. inornatus* they are elongated and pointed, the basal half dark-brown). The upperside is pale brownish-grey (not dark ashy-brown), the wings are longer. There is much variation, probably according to age. Sometimes there is a bright yellow on the sides on the foreneck, and nearly the whole throat is yellow, while the wings are margined with greenish or yellowish—these birds are probably younger; in others there is no sign of yellow, the outer edges of the wings are clear ashy grey—these are apparently the oldest birds.

126. *Philemon timoriensis* (Müll.).

Tropidorhynchus timoriensis S. Müller, *Verh. Land- en Volkenk.* p. 153 (1839-44: Timor and Semaio).

Philemon timoriensis Finsch, *Notes Leyden Mus.* xxii. p. 273 (Wetter).

13 ♂♀, Wetter, September, October 1902. (Nos. 5432—5436, 5451, and seven without numbers.)

“Iris smoky-grey, feet plumbeous (blackish grey), bill black.”

It may be desirable to separate the Wetter form, because the bill is generally longer, the distance from the end of the knob to the tip of the bill is about 2 to 4 mm. less; but in two specimens this is not evident, and, our series of typical *timoriensis* from Timor and Savu consisting only of seven specimens, it would be hazardous to give a name to the Wetter form. The crown is also lighter in most, but not all, Wetter specimens.

MOTACILLIDAE.

127. *Anthus rufulus medius* Wall.

Anthus medius Wallace, *P. Z. S.* 1863, p. 488 (Timor); Finsch, *Not. Leyd. Mus.* xxii. p. 275 (Kisser).

11 ♂ ♀, Letti, November, December 1902. (Nos. 5929, 5973—5976, 6466—6471.)

7 ♂ ♀, Moa, November, December 1902. (Nos. 6164—6167, 6256, 6331, 6332.)

5 ♂ 1 ? Kisser, April 1901. (Nos. 3824, 3825, 3851, 3852, 3903, 3904.)

128. *Motacilla boarula melanope* Pall.

4 ♂ ♀, Wetter, October 1902. (Nos. 5573, 5721, 5857, 5858.)

1 ♀, Moa, 6. xii. 1902. (No. 6284.)

PLOCEIDAE.

129. *Erythrura tricolor* (Vieill.).

Fringilla tricolor Vieillot, *Nouv. Dict. d'Hist. Nat.* xii. p. 233 (1817: Timor).

15 ♂ ♀, Wetter, September, October 1902. (Nos. 5505—5509, 5612—5615, 5689—5691, three without numbers.) Nine of these are very fine adult *males*.

1 ♂ ad., 9 ♀ and jun., Roma, July, August 1902. (Nos. 5048, 5206—5209, 5312, 5313, 5392—5394.)

♂ ad. "Iris blackish brown, bill black, feet pale brownish flesh-colour (pale brownish)."

Dr. Sharpe, apparently having compared nothing else than one specimen from Timor, separated a single *male* from Timorlaut as *Erythrura forbesi* (*Cat. B.* xiii.), because it had the hinder head, hind-neck and mantle entirely green without any wash of blue. When discussing the birds of Timorlaut and Dammer I called the *Erythrura* from these islands *E. tricolor forbesi*, as they agreed perfectly with the type of *forbesi*. The birds we have now received from Wetter and Roma are also exactly like all those from Timorlaut and Dammer, while the single one from Timor has the blue of the forehead spread over the hind-neck and mantle. But what is *E. tricolor* Vieillot? This name is based on the "Azuvert" of Vieillot's *Ois. Chant.* Pl. 20, 1805, and there we find figured and described a bird with the hinder crown, hind-neck, and mantle pure green, without a bluish wash or tinge ("un joli vert-olive sur l'occiput, le dessus du cou, le dos . . .") How, therefore, can he bestow a new name on a bird because it has no blue on the hind-neck? It seems to me that the single Timor *male* in London is an aberrant example, because Dr. Finsch says (*Not. Leyd. Mus.* xxii. p. 277) that Wetter birds are quite like Timor ones, and because we have a *male* from Tenimber (No. 2951) in which the blue spreads over the hind-neck on to the beginning of the interscapulum. A fresh series from Timor, however, is much desired! There is a discrepancy in the description of the tail in Vieillot's original description, but it appears to be due to some fault in the specimen or to a fault in the drawing and text, such as we not uncommonly find in older (and modern) writings. Otherwise the plate represents most clearly the bird under consideration.

130. *Munia pallida* Wall.

Munia pallida Wallace, P. Z. S. 1863, pp. 486, 495 (Lombok and Flores, type Lombok).

24 ♂ ♀, Roma, July, August 1902. (Nos. 5078, 5210—5212, 5278—5288, nine without numbers.)

25 ♂ ♀, Kisser, April, May 1901. (Nos. 3837, 3914, 3916, 3917, 3918, 3920—3925, 4003—4008, seven without numbers.)

Most of these specimens are rather greyish brown on the back, but I do not think they can be separated from the true *pallida*, though a larger series from Lombok and Flores should be examined.

131. *Munia punctulata nisoria* (Temm.).

Fringilla nisoria Temminck, Pl. Col. 500 (1830 : Java).

16 ♂ ♀ and juv., Kisser, April, May 1901. (Nos. 3836, 3915, 3919, 3939, 3987—3989, 3991—3996, three without numbers.)

3 juv., Wetter, August 1902. (Nos. 3844—3846.)

1 ♀ ad., 15 juv., Roma, July, August 1902 (Nos. 5267—5277, five without numbers.)

3 ♂ ♀ ad., Moa, November, December 1902. (Nos. 6156, 6263, 6393.)

11 ♂ ♀ ad., 1 juv., Letti, November, December 1902. (Nos. 6005—6012, 6449—6452.)

132. *Taeniopygia castanotis insularis* Wall.

Amadina insularis Wallace, P. Z. S. 1863, p. 495 (Timor, Flores, Terra typica : E. Timor).

19 ♂ ♀, Kisser, April, May 1901. (Nos. 3830, 3833—3835, 3863, 3864, 3929—3938, three without numbers.)

7 ♂ ♀, Wetter, October 1902. (Nos. 5688, 5810—5815.)

20 ♂ ♀, Moa, November 1902. (Nos. 6101—6106, 6189—6196, 6267, five without numbers.)

12 ♂ ♀, Letti, November 1902. (Nos. 5996—6006.)

ORIOLIDAE.

133. *Oriolus flavocinctus migrator* subsp. nov.

Differs from *O. flavocinctus mülleri* Bp. of S. New Guinea and Aru in being more heavily marked with black. The black shaft-stripes on the underside and crown are wider, the wide sagittate black spots on the feathers of the back are broader, the birds therefore appearing darker. The yellow tips to the lateral rectrices are generally still more reduced than in *mülleri*. Some of the Roma specimens can hardly be distinguished, but the series shows the differences very strikingly.

Type of *O. fl. migrator* : ♂ No. 5907, Letti 4. xi. 1902.

There are thus three subspecies of *Oriolus flavocinctus* :

Oriolus flavocinctus migrator : Stripes below and spots above larger and more conspicuous, yellow tips to outer rectrices as small as in *O. fl. mülleri* or smaller, Letti, Moa, Roma.

Oriolus flavocinctus mülleri : Stripes below narrower, spots above smaller, yellow tips to outer rectrices a little larger, but sometimes not so, than in *O. fl. migrator* : Aru Is., S. New Guinea.

Oriolus flavocinctus flavocinctus: Stripes below and spots above as in *O. fl. mülleri*, yellow tips to outer rectrices larger: Australia.

Of *Oriolus flavocinctus migrator* Mr. Kühn sent the following specimens:—

3 ♂ ad., 1 ♀ ad., Letti, November, December 1902. (Nos. 5907, 5968, 6428, 6427.)

5 ♂ ad., 2 ♀ ad., 2 ♀ juv., Moa, November 1902. (Nos. 6141—6144, 6219, 6220, 6253, 6254, 6280.)

17 ♂ ♀ ad., 1 ♂ juv., 2 ♀ juv., Roma, July, August 1902. (Nos. 5101—5111, 5102A, 5105A, seven without numbers.)

♂ ♀ ad.: "Iris scarlet, bill brownish red (pale brownish red, pale sienna-red), feet plumbeous (bright plumbeous, ash-grey)."

The *female* is like the *male*, young birds are underneath paler and with much wider black median stripes to the feathers. The iris is blackish grey, the bill dull blackish or brown, and there is a narrow yellow ring around the eyes.

134. *Oriolus finschi* spec. nov.

♂. Supra brunneo-cinereus, indistincte nigrescente striatus, uropygio supra-caudalibusque unicoloribus brunneo-cinereis, alis pullioribus, tectricibus pallide marginatis. Loris, mento, capitis collique lateribus schistaceis. Subtus luteo-brunnescens, pectore et abdominis plumarum mediis brunneo-cinereis, cauda brunnea, rectricum pogoniis internis luteo terminatis.

♀. Supra brunnescens, pileo nigrostriato, collo nigro-brunneo maculato, alis paullo pullioribus. Loris, capitis collique lateribus nigris, regione supra-auriculari et post-auriculari lutescente-albidis, gutture medio juguloque albido-luteis, pectore abdomineque lutescentibus, plumarum mediis brunnescentibus.

Dr. Finsch identified a single young *male* from Wetter with *Oriolus viridifuscus* of Timor (*Notes Leyden Mus.* xxii. 246), an error which could not have been made if he had had adult *males* and *females*. The *female* is very similar to that of *O. viridifuscus*, but the hind-neck is spotted with black, the whitish stripe above the auricular region is wider, the whitish patch behind the ear-coverts appears to be larger, the tail is longer, the more or less distinct blackish lines on the jugulum are absent. The *male*, however, differs very strikingly. The upper surface is brownish ash-grey, not in the least greenish, the lores, chin, ear-coverts and sides of neck are slate-colour, the throat and jugulum buffy-brown like the abdomen, not grey in contrast with the abdomen. The bill is not brownish-red, but dark brown.

♂: wing about 43—46, tail about 120—123, bill 28.5—31, metatarsus 28 mm.

♀: wing about 38—43, tail about 120—124 mm.

Type: ♂ No. 5604A, Wetter, 16. iv. 1901 (Mus. Rothschild).

This interesting new form is named in honour of Dr. Otto Finsch, who wrote the first list of the birds of the South-West Islands, which has been of the greatest use to me during the present work, although our conclusions differ frequently.

No doubt several of these orioles of the so-called *Mimeta* group will in future rank as subspecies of one species, but I cannot at present review them. Probably *striatus*, *bouruensis*, *forsteni*, *viridifuscus* and *finschi* will be subspecies of one species.

We have received the following specimens:

5 ♂ ♂, 5 ♀ ♀, Wetter, 16. iv. 1901, September, October 1902. (Nos. 5599—5603, 5604A, four without numbers.)

♂ ♀: "Iris scarlet (vermilion, dark scarlet), bill dull black (blackish, black) feet plumbeous (blackish grey)."

135. *Sphecotheres hypoleucus* Finsch.

Sphecotheres hypoleucus Finsch, *Notes Leyden Mus.* xx. p. 129 (1898: Wetter); *op. cit.* xxii. p. 247 (Wetter), Taf. 3. fig. 1 ♂, 2 ♀ ♀).

Hitherto only known from three specimens in the Leyden Museum.

I have nothing to add to Dr. Finsch's descriptions. Mr. Kühn sent:

5 ♂♂, 6 ♀♀, Wetter, September, October 1902. (Nos. 5636—5641, 5755, four without numbers.)

♂: "Iris burnt-sienna red, bill black, feet plumbeous." ♀: "Iris blackish brown (chocolate, burnt-sienna, scarlet), feet (dark) plumbeous, bill black."

DICRURIDAE.

136. *Dicrurus densus* Bp.

Dicrurus densus Bonaparte, *Consp. Av.* i. p. 352 (1850: Timor. The whole diagnosis is "Mus. Lugd. ex Timor. Major.")

Chibia densa Finsch, *Not. Leyden Mus.* xxii. p. 248 (Wetter).

5 ♂♂, 4 ♀♀, Wetter, 15. iv. 1901; September, October 1902. (Nos. 3770, 3771, 5522—5525, 5558, 5667, 5667A.)

"Iris scarlet, vermilion, pale reddish brown, in a young bird dark coffee-brown, bill and feet black."

STURNIDAE.

137. *Calornis kuehni* spec. nov.

♂ ad. Upper surface and ear-coverts purple, back and rump a little more greenish, sometimes distinctly so, hind-neck and sides of neck also generally more greenish, sometimes with a distinct green collar, wings, tail and wing-coverts dark greenish with very little, if any, purplish tinge. Under-surface purple, middle of throat green, abdomen less purplish, sometimes distinctly greenish. Iris vermilion, bill and feet black. Wing $100\frac{1}{2}$ — $104\frac{1}{2}$ mm., tail of the same shape as in *minor*, i.e. a little rounded, the outer rectrices being only about $\frac{1}{2}$ cm. shorter, measuring about 60—65 mm., bill about 15—17 mm.

♀. Like the ♂, but often back, rump and abdomen greener.

Type: No. 5824, Roma, 25. viii. 1902.

Hab. Wetter, Roma and Moa.

Named in honour of Heinrich Kühn, the successful traveller and collector on the South-West Islands.

This new form is nearest to *C. minor*, from which it differs in having the head, back and abdomen purplish, while *minor* has a purplish collar and the head and back greenish. The middle of the throat is greenish, being quite or nearly uniform purple in *minor*. While our large series of *minor* from Lombok, Sumbawa, Sumba, Timor and S. Celebes is thus easily distinguished, some of the specimens from Djampea approach *kühni*, while one *female* is a most typical *minor*. The Moa specimens are mostly green on back and abdomen, and in some the green gular patch is indistinct.

No doubt *minor* and *kühni* will have to be called by trinomial names and be subspecies of one species, but other forms as well must be embraced; and it is here not the place to pass the whole genus *Calornis* in review, without which, however,

it would be rash to attempt to group the various forms, and therefore I use at present binomials for *kühni* and *minor*.*

Mr. Kühn sent the following specimens of *C. kühni*:

6 ♂♂, 2 ♀♀, 3 not sexed, Wetter, September, October 1902. (Nos. 5489—5491, 5564—5566, 5652, 5653, three without numbers.)

2 ♂♂, 5 ♀♀, Roma, August 1902. (Nos. 5538, 5563, 5823—5825, two without numbers.)

6 ♂♂, 3 ♀♀, Moa, November 1902. (Nos. 6238—6246.)

ARTAMIDAE.

138. *Artamus leucorhynchus* (L.).

6 ♂♂, 3 ♀♀, Wetter, September 1902. (Nos. 5458—5466.)

Finsch got it from Babber and Wetter.

139. *Artamus perspicillatus* Bp.

Artamus perspicillatus Bonaparte, *Consp. Av.* i. p. 344 (ex Temminck's MS., Timor).

These specimens are somewhat darker on the abdomen than two from Timor, but I believe the reason is merely that they are in worn plumage, while those from Timor are perfectly fresh and beautiful.

3 ♂ ad., 1 ♂ juv., 5 ♀ ad., Letti, November, December 1902. (Nos. 5922—5925, 6025, 6053, 6054, 6464, 6465.)

"Iris dark brown, bill milky grey or milky blue with black tip, feet blackish or ash-grey."

CORVIDAE.

140. *Corvus macrorhynchos* Wagl.

Corvus macrorhynchos Wagler, *Syst. Avium*, gen. *Corvus*, sp. 3 (1827: typ. loc. Java, cf. Hartert, *Vog. pal. Fauna* i. p. 12).

3 ♂♂, 6 ♀♀, Wetter, 10. iv. 1901, September, October 1902. (Nos. 3755, 5411—5415, 5488, 5651, one without number.)

"Iris dark coffee-brown, bill and feet black."

* Probably there will be four species, *i.e.* *Cal. metallica* (long-tailed and more brilliant) with a number of subspecies, including *circumscripta*, *Cal. chalybea* (short-tailed and less brilliant) with a number of subspecies, including *minor* and *kühni*, *Cal. obscura* and *Cal. grandis*, besides those called *Aplonis* in the *Cat. B.* xiii.



Hartert, Ernst. 1904. "The birds of the South-West Islands Wetter, Roma, Kisser, Letti and Moa." *Novitates zoologicae : a journal of zoology in connection with the Tring Museum* 11, 174–221. <https://doi.org/10.5962/bhl.part.26832>.

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