On a Collection of Birds from Celebes and Halmahera, preserved in Yamashina Museum of Birds. (Non-Passerres, II)

Nagahisa KURODA

PODICIPIDAE

52. *Podiceps ruficollis tricolor* G.R. Gray

Podiceps (Sylbeocyclus) tricolor G.R. Gray, Pr. Z.S. London, 1860 (1861), p. 266
(Ternate).

Halmahera ♂ 9, xii, 1934

A race for Celebes, the Moluccas, New Guinea to Bismark Archipelago and the Solomon Is.

SULIDAE

53. *Sula leucogaster plotus* (Forster)

Pelecanus Plotus Forster, Descr. Anim., ed. Licht., p. 278 (Near New Caledonia).

Celebes ♂ 1928

ANATIDAE

54. *Dendrocygna guttata* Schlegel

Dendrocygna guttata Schlegel, Mus. Pays-Bas, 6, 1866, Anseres, p. 85. (Celebes).

Halmahera ♂ 19, xii, 1934

3 ♂ ♂, 2 ♀ ♀ ix, xi (1 ♀), 1936

4 ♀ ♀ 29, iii, 11, 19, iv, 1937

3 ♂ ♂, 3 ♀ ♀ undated

3 ♂ ♂ juvs. undated

Celebes (Mongondo) 2 downy chicks 8, v, 1937

No locality 4 unsexed undated

A species distributed from Mindanao, Celebes and the Moluccas to New Guinea, also Bismark Archipelago.

55. *Tadorna radjah radjah* (Lesson)

Anas radjah "Lesson and Garnot", Lesson, Man. d'Orn., 2, 1828, p. 417
(Buru).

Halmahera	♂	26, iii, 1932
	♀	28, ii—5, iii, 1935
	♀	26, iii, 1937
	unsexed	undated
Wing	{ ²⁷⁵ ₂₈₁	(unsexed), 264 (♂)
	♂	10, vi, 1937
Wing	268	

A race for the Moluccas and New Guinea with the other race in Australia. The last specimen (labelled as "Celebes"=error, Halmahera!) has the greater wing-coverts not pure white but is greyish towards the narrow subterminal black band, the dark breast band being almost lacking (by loss of feathers?). This may not be a young bird for it has white head.

ARDEIDAE

Genus *Ardea* Linné, 1758

Type, *Ardea cinerea* Linné

56. *Ardea sumatrana sumatrana* Raffles

Ardea Sumatrana Raffles, Trans. Linn. Soc. London, 13, pt. 2, 1822, p. 325 (Sumatra).

Halmahera ♀ 28, ii—5, iii, 1935

The species ranges in two races from Burma to the Philippines, Borneo, the Moluccas, New Guinea and Australia, but lacking in Celebes.

Genus *Egretta* Forster, 1817

Type, *Ardea garzetta* Linné

(57). *Egretta alba modesta* (Gray)

Halmahera 2 unsexed vi, 1936

♂ ix, 1936

Stresemann ('41, p. 7) makes it a breeding bird in Celebes, though is only known from the northern peninsula.

58. *Egretta intermedia intermedia* (Wagler)

Ardea intermedia Wagler, Ibis, 1829, p. 659 (Java).

Celebes (Mongondo) ♀ 26, iv, 1937

It is reported as breeding in Celebes (Stresemann, '41, p. 7).

59. *Egretta garzetta nigripes* (Temminck)

Ardea nigripes Temminck, Man. d'Orn., ed. 2, 4, 1840, p. 376 (Sunda Is.)

Halmahera ♀ undated

A black-toed race of *garzetta* ranging in the Philippines, Celebes, the Moluccas, Sunda Is. and New Guinea.

Genus *Bubulcus* Bonaparte, 1855

Type, *Ardea ibis* Linné

60. *Bubulcus ibis coromandus* (Boddaert)

Cancroma Coromanda Boddaert, Tabl. Pl. Enlum., p. 54, 1783 (Coromandel).

Halmahera ♂, 3 ♀, 3 unsexed iv, vi, ix, 1936

♀ undated

Celebes (Minahasa) ♂, ♀ 9, 16, v, 1938

A widely distributed race, but may be new to Halmahera.

Genus *Demigretta* Blyth, 1846

Type, *Ardea sacra* Gmelin

61. *Demigretta sacra sacra* (Gmelin)

Ardea sacra Gmelin, Syst. Nat., 1, pt. 2, 1789, p. 640 (Tahiti).

Celebes (Minahasa) ♀ 15, viii, 1937

Genus *Dupetor* Heine and Reichenow, 1890

Type, *Ardea flavicollis* Latham

62. *Dupetor flavicollis gouldi* (Bonaparte)

Ardetta gouldi Bonaparte, Consp. Av., 2, 1855, p. 132 (New South Wales).

Halmahera ♀ 16, iv, 1937

♂ 7, vi, 1937

2 ♂ ♂ juvs. (one black phase)

19, 25, v, 1937

The race *flavicollis* has chestnut spots of the throat, with cheeks black in adults and chestnut in young, while in *gouldi* both spots and cheeks are black in the adults and young. The nominal race ranges from India to Celebes and *gouldi* from the Moluccas to Australia. A specimen (No. 28326) is a very young bird having buffish margin of the feathers with buffish scales on the cheeks and spots of the throat, while the other is a young of all-dark plumage (= '*melaena*').

Stresemann states that in Celebes this '*melaena*' doesn't occur though is known from Halmahera.

Genus *Nycticorax* T. Forester, 1817

Type, *Ardea nycticorax* Linné

63. *Nycticorax caledonicus minahasae* Meyer and Wigglesworth

Nycticorax minahasae Meyer and Wigglesworth, Journ. f. Orn., 42, 1894, p.

115 (Kema, N. Celebes). Cf. Riley, Pr. U.S. Nat. Mus., 64, art. 16, 1924, pp. 30-31.

Celebes (Minahasa) ♀ 3, vii, 1938

Genus *Butorides* Blyth, 1852
Type, *Ardea javanica* Horsfield

64. *Butorides striatus moluccarum* Hartert

Butorides striatus moluccarum Hartert, Vög. pal. Faun., 2, 1920, p. 1251 (Buru).

Halmahera	2♂♂, ♂ juv.	15, 18, xii, 1934
	2 unsexed	ix, 1936
	♂	30, iii, 1937
	♀	undated

Wing 172-184 Tarsus 45-50.2 Culmen depth at
base 63.5-67.5/12-14

Peters gives Buru, Ceram and Amboina (also Obi?) for its range, and Halmahera should be added by the above records.

65. *Butorides striatus* (?) *javanicus* (Horsfield)

Ardea Javanica Horsfield, Trans. Linn. Soc. London, 13, 1821, p. 190 (Java).

Celebes (Minahasa)	♂	5, viii, 1937
	4♂♂, 5♀♀	7, 15, 18, 19, v, 18, 22, vii,
		3, 5, 18, viii, 1938
	2♀♀ juvs.	2, 29, vii, 1938

Wing 158, 165 (♀♀ juvs), 168-177 Tarsus 42.5-46

Culmen/depth at base 54-63 11-12

This race ranges widely from India to the Philippines, Sunda Is., and Celebes. The measurements of Celebesian specimens given by Stresemann are; 4♂♂, wing 172, 176, 178, 178; and Meyer & Wigglesworth give: wing 160-168 (juvs), 167-174 (vid ads), 180-182 (ads), tarsus 44-48, culmen 52 (juv)-62, in 13 specimens.

Nine Formosan specimens (2♂♂ ads, 2 subads, 5juvs) measure; wing 156 (juvs), 170-185 (exceptional 193), tarsus 45 (juvs)-50, culmen depth at base 52 (juvs)-64 11.5 (juvs)-13. Thus, although the Formosan birds are similar in color to Celebesian *javanicus*, they are apparently larger in size and are thicker billed, though the Celebes specimens may sometimes be almost as large as the Formosan birds according to the measurements given by Meyer & Wigglesworth (wing length and tarsus). The bill length, however, rarely exceeds 60mm. in Celebesian specimens, while it is usually over 60mm. in Formosan birds, and the bill is apparently slender in the former.

As to the measurements of Sunda Is. birds, Dr. Kuroda, Sr. (Bds. Java) re-

ports as follows: Java ♀, wing 181, tarsus 50, culmen 64; wing 157-180 (Stresemann), 162-169 (Van Oort) Bali ♀, wing 155 (von Plessen).

The Formosan population may be separable as larger and thicker-billed northern race, but whether the smaller and thinner-billed Celebesian birds are similar to the typical Javan form is still unclear.

Genus *Ixobrychus* Billberg, 1828

Type, *Ardea minuta* Linné

66. *Ixobrychus sinensis sinensis* (Gmelin)

Ardea Sinensis Gmelin, Syst. Nat., 1, pt. 2, 1789, p. 642 (China).

Halmahera ♀ ix, 1936

Celebes (Kema) unsexed 4, vi, 1889 (Rosenberg)

A race of China, India to Malay Archipelago. Mayr ('41) does not recognize the races.

FALCONIDAE

Subfamily Buteoninae

Genus *Haliaeetus* Savigny, 1809

Type, *Falco albicilla* Linné

Subgenus *Cuncuma* Hodgson, 1837

Type, *Falco leucoryphus* Pallas

67. *Haliaeetus leucogaster* (Gmelin)

Falco leucogaster Gmelin, Syst. Nat., 1, pt. 1, 1788, p. 257

(New South Wales, fide Mathews, Nov. Zool., 1912, p. 248).

Halmahera ♀ 28, ii—5, iii, 1935

2♀♀ 29, iii, 7, iv, 1937

Celebes ♂ 29, iv, 1937

A species widely distributed from India, Malay Archipelago to Australia, and also western Polynesia.

Genus *Spizaetus* Vieillot, 1816

Type, *Falco ornatus* Daudin

68. *Spizaetus lanceolatus* Temminck & Schlegel

Spizaetus lanceolatus Temminck & Schlegel, in Siebold, Fauna Jap., Aves, 1844, p. 7 in text (Celebes).

Celebes (Minahasa) ♂ 22, viii, 1938

A species restricted to Celebes, and Sula-Besi and Peling. Peters makes it a race of *nipalensis*, but Stresemann ('40, pp. 469-470) considers it a valid species.

Subfamily Circaetinae

Genus *Spilornis* G.R. Gray, 1840Type, *Falco bassus* J.R. Forster69. *Spilornis rufipectus rufipectus* Gould*Spilornis rufipectus* Gould, Pr. Z.S. London, 1857, p. 222 (Macassar).

Celebes (Minahasa) ♂ juv. 20, viii, 1938

A species restricted to a part of Borneo, Celebes and Sula Is., and the present race is endemic to Celebes.

Subfamily Perninae

Genus *Aviceda* Swainson, 1836Type, *Aviceda cuculoides* Swainson70. *Aviceda subcristata rufa* (Schlegel)*Baza rufa* Schlegel, Vog. Ned. Ind. Valkvog., 1866, p. 41, 78, pl. 27, f. 4;

pl. 28, f. 1-3 (Halmahera, Morotai, Batjan, Ternate, Tidore).

Halmahera unsexed ix, 1936

♂ 3, v, 1937

unsexed undated

Against the species *jerdoni* which is distributed from India to the Philippines, Celebes and Borneo, the present species occupies Sunda Is., Moluccas south to New Guinea and Australia. The Moluccan race, *A. s. rufa*, has doubtfully been reported from Celebes. Meyer & Wigglesworth (1898, I, pp. 77-8) give few old specimens as probably from Celebes, though they regard them to be "almost certainly erroneous".

Subfamily Milvinae

Genus *Haliastur* Selby, 1840Type, *Falco indus* Boddaert71. *Haliastur indus girrenera* (Vieillot)

Haliastur girrenera Vieillot, Gal. Ois., 1, 1822, p. 31, pl. 10 (New South Wales, fide Peters, I, p. 205).

Halmahera 3 ♂ ♂, ♀ 19, 29, iv, 18, xii, 1 undated, 1934

♂, 2 ♀ ♀ 6, 8, i, 28, ii-5, iii, 1935

unsexed ix, 1936

♂ 27, iii, 1937

unsexed undated

These specimens have no black shaft of the feathers except in two specimens

only (males), in which slight black shafts are present on the back.

72. *Haliastur indus ambiguus* Brüggemann

Haliastur indus var. *ambiguus* Brüggemann, Abb. Nat. ver. Bremen, Bd. v, 1875, p. 45, 1876 (Celebes).

Celebes (Menado, Minahasa, Inubont)

2 ♀ ♀ 4, 12, viii, 1937

♂ 27, vi, 1938 (Inubont)

In these specimens dark shafts are present on the head and are lacking on the breast.

Note: The above two races are dark backed and, as Stresemann states ('40, p. 479), the race *ambiguus* can be recognized. A specimen from Mindanao can be identified as *intermedia* being characterized by weak streaks on the white head and breast, and the chestnut color of the back is paler with also slight streaks. Two Indian and one Siamese specimens are heavily streaked on the white parts, and the back is pale as in Mindanao specimen, also having slight streaks. They belong to the race *indus* (also cf. Cat. Bds. Brit. Mus., I, p. 314). The measurements are as follows:

Locality	Wing	Tail	Race
Halmahera	342-361	154-187	<i>girrenera</i> (10 spec.)
Celebes	342-400	191, 201	<i>ambiguus</i> (3 spec.)
Mindanao	378	200+x	<i>intermedia</i> (1 spec.)
Siam	371	293	<i>indus</i> (1 spec.)
India	365, 373	183.5, 200	<i>indus</i> (2 spec.)

Subfamily Accipitrinae

Genus *Accipiter* Brisson, 1760

Type, *Falco nisus* Linné

(*Astur*-Group)

73. *Accipiter novaehollandiae griseogularis* (G.R. Gray)

Astur griseogularis G.R. Gray, Pr. Z.S. London, 1860, p. 343 (Batjan, Gilolo and Ternate)

Synonyms:

Accipiter aequatorialis Wallace, Pr. Z.S. London, 1865, p. 474; Ibis, 1868, p. 10 (=male!)

Astur henicogrammus Sharpe, Cat. Bds. Brit. Mus., 1874, p. 124 (part: description of the adult).

Astur muelleri Sharpe, Ibid., p. 103 (description of the young)

Halmahera ♂ 15, xii, 1932

3 ♀ ♀ 29, iii, 7, iv, 20, vi, 1937

♂ juv.	7, vi, 1937
“♀” (♂ subad. !)	undated
unsexed (♀ !)	undated
“♂” (♀ !), ♀ juv.	25, viii, 1938
Wing 223-225 (♂ ♂), 251-264 (♀ ♀)	Tail 168-183.5 (♂ ♂),
194-202 (♀ ♀)	Culmen 18.5-19.5 (♂ ♂), 23-24.5 (♀ ♀)
Tarsus 62 (♂ ♂), 71 (♀ ♀)	Middle toe without claw
33-37 (♂ ♂), 44-45 (♀ ♀).	

As shown in the synonyms, much confusion is found in the name of this species, for the size difference by sex is extremely great, the male being as small as *A. henicogramma*. This confusion has correctly been settled by Salvadori (Orn. d. Papuas et de Molucche, I, 1880, pp. 54-56, 57-60).

This species is characterized by a vinous collar round the nape and is a member of the “Formenkreis” of *A. novaehollandiae*—*A. fasciata*, each with many subspecies, and each group is characterized by the color of cere, wing formula and the presence or absence of the vinous collar (cf. Stresemann, Journ. f. Orn., 1924, pp. 444-446).

The young (No. 34200, ♀) is brown on the upperparts lacking ashy tinge, the second year young (No. 34257, ♂) has the head greyish with much white at the base of feathers, and has vinous chestnut collar on the nape. The cheek is pale grey and the throat almost white at the center, the underparts being buffish white, heavily barred with vinous chestnut (with dark margine) on the upper breast, and the lower parts are spotted. Thigh is more buffish with rusty bars.

The species *novaehollandiae* is of Austro-Moluccan (including Sunda Is.) distribution and the race *griseocularis* is a Moluccan form.

74. *Accipiter henicogramma* (G.R. Gray)

Astur henicogramma G.R. Gray, Pr. Z.S. London, 1860, p. 343 (East Gilolo)
(Type is a young specimen !)

Synonyms:

Accipiter muelleri Wallace, Pr. Z.S. London, 1865, p. 474; Ibis, 1868, p. 9
(Adult specimen !); Sharpe, Cat. Bds. Brit. Mus., 1874, p. 102 (part:
description of the adult bird).

Astur henicogramma Sharpe (not of Gray), Ibid., 1874, p. 124 (part;
description of the young bird, ex Gray's type).

Halmahera ♂ 5—12, ii, 1935

“♂” (♀ ?) undated

Celebes (Gorontaro, Mongondo)

♀ juv. (♂ ?) 16, vi, 1937

Wing 211-246 Tail 188, 197 Culmen 16.5

Tarsus 67.5-70.5 Middle toe without claw 30.5-33

This is a much smaller species of about the size of the male of *A. n. griseogularis*. It can be easily identified from that species (or the "Formenkreis" *novae-hollandiae-fasciata*) by: 1) the primaries are not abruptly emerginated on the inner web, 2) uniformly very dark slaty (not pale ashy) upperparts, without a vinous collar on the hind neck, 3) throat is mixed with some white and chestnut color (not uniformly pale buffish ashy color), 4) under surface is rich chestnut color with faint narrow whitish bars (not pale vinous buff), 5) very slender and long tarsus with smaller toes, and 6) proportionally very long tail. The young are brown and barred on the whole upperparts (not plainly brown) and the throat is streaked, the underparts being barred without spots.

The proportional difference in measurements are as follows:

	Wing/tail	Wing Tarsus	Tarsus/Mid. toe without claw
<i>A. n. griseogularis</i>	1.26-1.32	3.53-3.78	1.55-1.87
<i>A. n. fasciata</i>	1.34	3.31	1.77
<i>A. henicogramma</i>	1.16-1.24	3.27-3.48	2.13-2.21

A. hecniogramma is a Moluccan species.

75. *Accipiter trinotatus trinotatus* Bonaparte

Accipiter trinotatus Bonaparte, Consp. Av., 1, 1850, p. 33 (Celebes)

Celebes (Minahasa and Mongondo)

2♂♂, 2♀♀, ♂juv. 9, 10, v, 30, vi, 10, vii,

12, viii, 1938

An endemic species of Celebes, the present race occupying the most part except southern district where *haesitandus* occurs.

It is characterized by large white spots (two exposed) of the tail. The adult is slaty black above with salmon-colored underparts and the young are chestnut on the upperparts, head with dark stripes, tail black (with large white spots), edged with rusty color, the outermost rectrices being chestnut. Shaft of primaries black above, and white below, the throat is buffish with dark stripes, breast to flanks buffish and striped. The southern race is said to be distinguishable only in the richer buffish underparts in the young.

76. *Accipiter griseiceps* (Schlegel)

Astur griseiceps Schlegel, Mus, Pays-bas, 2, 1862, Astures, p. 23 (N. Celebes).

Celebes (Amurang, Minahasa) ♀ 19, vii, 1938

An endemic species of Celebes. The head is grey, all upperparts brown, tail indistinctly barred, all underparts white, breast and flanks with broad stripes, and the thigh is narrowly barred. The tarsus and toes are short.

(77). *Accipiter soloënsis* (Horsfield)

Halmahera ♂ juv. 18, i, 1935

A winter migrant probably from China.

(*Accipiter*-Group)

78. *Accipiter rhodogaster rhodogaster* (Schlegel)

Nisus virgatus rhodogaster Schlegel, Mus. Pays-Bas, 2, 1862, Astures, p. 32
(Gorontaro, Celebes).

Celebes (Amurang, Minahasa) ♀ juv. 15, vii, 1938

An endemic race to Celebes and Banggai, with the other race in Sula Is. (*sulaensis*). Peters regards them as conspecific with *virgatus*. Has very long *Accipiter*-type tarsi and toes. The present young specimen is bright buffish chestnut above with subterminal black spots, the head is almost black with buffish chestnut margin of the feathers, tail and wings are distinctly barred with black. Underparts are creamy white with broad blackish and rusty stripes. The adult is said deep bluish grey above.

79. *Accipiter erythauchen erythauchen* G.R. Gray

Accipiter erythauchen G.R. Gray, Pr. Z.S. London, 1860, p. 344 (E. Gilolo).

Halmahera	1 juv.	ix, 1936
	♀ juv.	29, iii, 1937
	♂	15, v, 1937

This Moluccan species comprises two races, the northern (Halmahera, Batjan, Obi) and southern (Ceram, Buru-*ceramensis*). The tarsi are extremely long. A very small sized species.

Subfamily Pandioninae

Genus *Pandion* Savigny, 1809

Type, *Falco haliaetus* Linné

80. *Pandion haliaetus cristatus* (Vieillot)

Buteo cristatus Vieillot, Nouv. Dict. Hist. Nat., 4, 1816, p. 481 (Tasmania, fide Mathews).

Halmahera	unsexed	ix, 1936
Celebes	♂	13, v, 1938

An Austro-Malaysian race.

STRIGIDAE

Genus *Ninox* Hodgson, 1837

Type, *Ninox nipalensis* Hodgson

(Subgenus *Spiloglaux* Kaup, 1846)

Type, *Strix boobook* Latham

81. *Ninox squamipila hypogramma* (Gray)*Athene hypogramma* Gray, Pr. Z.S. London, 1860, p. 344 (Batjan).

Halmahera ♂, 3 ♀ 21, 28, v, 2, 10, vi, 1937

♀ 25, viii, 1938

♀ undated

Wing 216-230 Tail 123.5-139 Culmen 16.2-18

Tarsus 33.5-35

The *Spiloglaux* is an Austro-Malaysian group and the present species is only known from Batjan and Halmahera. Two of the specimens lack any bars on the central rectrices, while they are most distinct in a female which is small in measurements (a younger bird?).

(Subgenus *Ninox* Hodgson)82. *Ninox perversa* Stresemann*Ninox perversa* Stresemann, Orn. Mon., 46, p. 149, 1938(New name for *Noctua ochracea* Schlegel, 1866-N. Celebes).

Celebes (Minahasa, one from Mongondo)

♂ 2 ♀ 7, v, 8, 10, vii, 1938

An endemic Celebesian species. The male is almost uniform ochreous chestnut color on the undersurface and the white spots on the wings and tail (inner basal part only) are very small and indistinct, the female is paler below with distinct darker stripes and the white markings on the wings and tail are conspicuous, while the young (with silky feathers on the underparts) is still paler below and has distinct white markings as in the female.

(Subgenus *Cephaloptynx* Kaup, 1852)Type, *Noctua punctulata* Q. et Gaim.83. *Ninox punctulata* (Quoy et Gaimard)*Noctua punctulata* Quoy et Gaimard, Voy. Astrol., Zool., 1, p. 165, 1830, pl. 1, fig. 1 (Celebes).

Celebes (Minahasa) ♀ 17, vi, 1938

An endemic Celebesian species.

(Subgenus *Hieracoglaux* Kaup, 1848)Type, *Falco connivens* Latham84. *Ninox connivens rufistrigata* (Gray)*Athene rufistrigata* Gray, Pr. Z.S. London, 1860, p. 344 (E. Gilolo)

Halmahera ♀ 25, vii, 1938

An endemic Halmaheran species.

Genus *Otus* Pennant, 1769
Type, *Otus bakkamoena* Pennant

(Subgenus *Pisorhina* Kaup, 1848)

Type, *Scops manadensis* Q. et G.

85. *Otus manadensis leucospila* (Gray)

Ephialtes leucospila Gray, Pr. Z.S. London, 1860, p. 344 (Batjan and Gilolo).

Halmahera ♀ downy with wing and tail quills 28, iii, 1937

Otus manadensis-group, which Stresemann ('40) regards as the races of *scops*, is distributed in Celebes (typical form) and the Moluccas. The present race is known from Batjan, Halmahera and Morotai.

PSITTACIDAE

Subfamily Loriinae

Eos-Trichoglossus-Oenopsittacus relation.

These groups share a few morphologically similar characters, though are distinct in color system:

- 1) Bill character is almost exactly the same.
- 2) Tail feathers are soft and broad in *Eos* and *Oenopsittacus*, a little stiffer and narrower, and the tail is sharply cuneated in *Trichoglossus*.
- 3) Primaries are stiff and narrow in *Eos*, similar or more or less broad in *Trichoglossus*, and are soft and broad in *Oenopsittacus*. The wing formula is similar.
- 4) Dark bars of the breast characteristic in *Trichoglossus* can be found in *Oenopsittacus* but is lost in *Eos*.

The tail feathers, at least in *Trichoglossus*, are round tipped in the male and pointed in the female.

In distribution, *Trichoglossus* occupies from Australia, Timor-Group, Celebes, Amboina-Group, Papuan Is., New Hebrides and New Caledonia; *Eos* from the Moluccas, Sanghir Is., Papuan Is., Tenimber and Solomon Is., while *Oenopsittacus* is a Micronesian (Caroline Is.) aberrant.

Genus *Eos* Wagler, 1832

Type, *Psittacus histrio* P.L.S. Müller

86. *Eos squamata guenbyensis* (Scopoli)

Psittacus Guenbyensis Scopoli, Del. Flor. et Faun. Insubr., fasc. 2, 1786, p.

87 (Halmahera. cf. Peters, iii, p. 146).

Halmahera ♀ 18, xii, 1934

♂, 2 ♀, 1 unsexed 5-12, ii, 28, ii-5, iii, 1935

♂, ♀ x, xi, 1936
2♀♀, ♀ juv. 4, 6, 26, v, 4, vi, 1937

The species is distributed in the Western Papuan Islands to the Moluccas.

In two specimens (Nos. 18408, 18409) the purple collar and the same color of the abdomen are almost continuous, and therefore, the red band is incomplete, while in the others there is a broad red breast band (about 2cm.). The purple occipital patch is continuous to the purple collar and the under tail-coverts are purple or more or less reddish.

Eos squamata (?) *insularis* Guillemard

Eos insularis Guillemard, Pr. Z.S. London, 1885, p. 565, pl. 34 (Weeda Is.).

Halmahera 2♂♂ 18, xii, 1934

Wing 136+x, 139.5 Tail —, 81.5

These two specimens differ from the preceding race in having broader (3cm.) red breast band, only a small occipital patch not continuous to the purple collar which are paler and duller than in *guenbyensis*, and red rather than purple under tail-coverts. These characters are to be attributed to the race *insularis* which has not been recorded from Halmahera. It is to be added that a specimen of typical *guenbyensis* was collected with the above two *insularis* examples on the same date, 18, xii, 1934.

Genus *Trichoglossus* Vigors and Horsfield, 1827 (1926)

Type, *Psittacus haematod* Linné

87. *Trichoglossus ornatus* (Linné)

Psittacus ornatus Linné, Syst. Nat., ed, 10, 1, 1758, p. 98 (Celebes. cf. Peters, iii, p. 148).

Celebes (Minahasa) ♂ 17, iv, 1937
♂, 5♀♀ 4, 5, 6, 14, 15, 18, v, 1938
2♂♂, ♀ 7, 15, 17, vii, 1938
4♂♂, 2♀♀ 6, 7, 8, 9, 28, viii, 1938
1 unsexed undated
Wing 123-131 Tail 76.5-87 Culmen 18.8-20.6
Tarsus 17-18.5

"Moluccas Is." unsexed undated
Wing 120.5 Tail 73 Culmen 17 Tarsus 15

The species is known from Celebes and Togian Is., Peling, Banggai and Buton. The above "Moluccas Is." specimen is a very small example and with olivaceous upperparts, not as greenish as in Celebes series. This may be an unknown race?

Genus *Psittentiles* Bonaparte, 1854

Type, *Trichoglossus versicolor* Lear

88. *Psittenteles flavoviridis meyeri* (Walden)

Trichoglossus Meyeri Walden, Ann. and Mag. Nat. Hist., (4), 8, 1871, p. 281 (Menado, Celebes).

Celebes unsexed undated

A species restricted to Celebes and Sula Is. (typical race).

Genus *Domicella* Wagler, 1832

Type, *Psittacus domicella* Linné

(*Lorius* Vigors, 1825 (*L. domicella*) is preoccupied by *Lorius*

Boddaert, 1783 (*L. roratus*), an apparent error for *Lorius*)

89. *Domicella garrula garrula* (Linné)

Psittacus garrulus Linné, Syst. Nat., ed. 10, 1, 1758, p. 100 (Halmahera. cf. Peters, iii, p. 155).

Halmahera 3 ♂♂ 2, 9, i, 5, vi, 1933

4 ♂♂, 3 ♀♀ 1934, 18, iii, 15, 25, xii, 1934

♂, 2 ♀♀ 8, 18, i, 1935

3 ♂♂, 7 ♀♀ 1, 8, 11, 12, iii, 30, iv, 14, v, 11, vi, 1937

♂, ♀ undated

Wing 163-179 Tail 103.5-112.5 Culmen 22-25.5

No locality (Halmahera!) 8 unsexed undated

The species inhabits Halmahera and Weda Is. (*garrula*, with small dorsal yellow patch), and Morotai, Raou, Batjan and Obi (*flavopalliata*, with larger yellow patch).

Genus *Charmosyna* Wagler, 1832

Type, *Psittacus papou* Scopoli

90. *Charmosyna placentis intensior* (Kinnear)

Hypocharmosyna placentis intensior Kinnear, Bull. B.O.C., 48, 1928, p. 84 (Batjan).

Halmahera ♂, ♀ ix, 1936

♀ 25, viii, 1938

A Moluccan race of the species which is found also in New Guinea and Papuan Is.

Subfamily Cacatuinae

Genus *Cacatua* Brisson, 1760

Type, *Cacatua alba*, fide Vieillot, 1817

(ex Brisson)

91. *Cacatua alba* (P.L.S. Müller)

Psittacus albus P.L.S. Müller, Natursyst., Suppl., 1776, p. 76 (Moluccan Is.).

Halmahera	2 ♂ ♂	24, xii, 1934
	♀	9, i, 1935
	♀, 2 unsexed	3, mid., ix, 1936
	4 ♀ ♀	8, 9, 12, iii, 1937
	2 ♂ ♂, 2 unsexed	undated
	Wing 259-285 (11 spec.)	
	No locality (Halmahera !)	12 unsexed undated
	Wing 264-298 (11 spec.)	

The species is only known from the Moluccas.

Subfamily Psittacinae

Genus *Lorius* Boddaert, 1783

Type, *Psittacus roratus* P.L.S. Müller

92. *Lorius roratus vosmaeri* Rosthchild

Lorius roratus vosmaeri Rosthchild, Ann. and Mag. Nat. Hist. (9), 9, 1922, p. 412 (N. Moluccas).

Halmahera	♀	12, xii, 1932
	♂	9, vi, 1933
	3 ♂ ♂, 5 ♀ ♀	20, v, 19, 24, xii, 1934
	♂	8, i, 1935
	♂	ix, 1936
	5 ♂ ♂, 4 ♀ ♀, ♂ juv.	12, iii, 26, 28, iv, 9, 14, v, 15, 16, 17, 21, vi, 1937
	4 ♂ ♂, 3 ♀ ♀	undated
	Wing 247-267 (♀ ♀), 259-276 (♂ ♂)	Tail 121-139 (♀ ♀)
	133-153.5 (♂ ♂)	Culmen 35-40 (♀ ♀), 37.8-42 (♂ ♂)
	No locality (Halmahera !)	2 ♀ ♀ undated
Batjan	♂	viii, 1902

This is a north Moluccan race of the Austro-Moluccan species, *L. roratus*. A specimen (No. 34080) is of female color, being red above and purple below, but few green feathers (or green-tipped feathers on the back) are mixed particularly on the head and upper tail-coverts. The bill is black with small red basal part. This may be a young male.

There are two *L. r. roratus* (Ceram), and two *L. r. pectoralis* (New Guinea) in the Meseum collection. The males are similar, but the female *pectoralis* differs from *roratus* in the slightly yellowish tip of the tail, more purplish underparts and larger purple eye-ring. They form a group characterized by the purple eye-ring, red under tail-coverts and bluish underparts in the females, while *L. r.*

vosmaeri is characterized by yellow color of the male, redder back in the female, as well as yellow under tail-coverts and tail-tip and reddish purple underparts and neck-ring, lacking also purple eye-ring. The size is larger than the other two races.

Genus *Geoffroyus* Bonaparte, 1910

Type, *Psittacus geoffroyi* Bechstein

93. *Geoffroyus geoffroyi cyanicollis* (S. Müller)

Psittacus cyanicollis S. Müller, Verh. nat. gesch. Ned., Land-en Volkenk., pt. 4, 1841, p. 108 (Menado, error=Moluccas).

Halmahera	♂	vii, 1931
	♀	xi, 1932—vii, 1933
	♂, 3 ♀ ♀	20, 29, i, 15, ii, 9, vi, 1933
	♂, ♀	1934, 18, iii, 1934
	3 ♂ ♂, 2 ♀ ♀	6, 15, i, 5-12, ii, 1935
	“♀” (♂!)	ix, 1936
	6 ♂ ♂, 3 ♀ ♀	8, 9, 11, 12, iii, 10, v, 1937
	♂	26, vii, 1938
	6 ♂ ♂, 6 ♀ ♀	undated

Wing 167-174 (♀ ♀), 168-178 (♂ ♂) Tail 90.5-97, 107 (♀ ♀),

88-102.5 (♂ ♂) Culmen 21-24.5 (♀ ♀), 22-24.2 (♂ ♂)

No locality (Halmahera!) 2 ♂ ♂, ♀ undated

The species is distributed in the Moluccas, Sunda Is., New Guinea to West Papuan Is., and has never been recorded from Celebes.

Genus *Prioniturus* Wagler, 1832

Type, *Psittacus platurus* Vieillot

94. *Prioniturus flavicans* Cassin

Prioniturus flavicans Cassin, Pr. Acad. Nat. Sci. Phil., 6, 1853, p. 373 (Celebes).

Celebes (Mongondo) 2 ♀ ♀ 6, v, 13, vi, 1938

The species ranges from the Philippines to N. Celebes. Peters and Hachisuka (Bds. Phil.) recognize the races, *montanus* and *verticalis*, but according to Stresemann ('40) they are not separable.

95. *Prioniturus platurus platurus* (Vieillot)

Psittacus platurus “Temm.” Vieillot, Nouv. Dict. Hist. Nat. 25, 1817 (1818), p. 314 (New Caledonia, error=Celebes, fide Peters).

Celebes (Menado, Minahasa)

♀	9, viii, 1937
2 ♂ ♂, 2 ♀ ♀	13, 14, v, 1938

This is a Celebesian species also found in adjoining islands, with another race in Talaut Is.

Note: *P. flavicans* has black tip of the tail and a blue patch on the head, *P. platurus* has dark-blue tip of the tail and the head is grey with a red spot, having also a orange neck-ring, while another species *discurus* of the Philippines is related with *flavicans* having black tip of the tail but the whole head is blue, and is smaller in size.

Genus *Tanygnathus* Wagler, 1832

Type, *Psittacus megalorhynchus* Boddaert

96. *Tanygnathus sumatranus sumatranus* (Raffles)

Psittacus sumatranus Raffles, Trans. Linn. Soc. London, 18, 1822, p. 231

(Sumatra: description of female). cf. Stresemann, O.M.B., 1938, p. 149.

Celebes (Celebes, Mongondo)

5♂♂, 9♀♀ 4, 10, 11, 15, 19, v, 19, 20, 23, 26, vi,
8, 31, vii, 1, 20, viii, 1938

A species of from the Philippines to Celebes and the adjoining islands, the present race being principally Celebesian.

97. *Tanygnathus megalorhynchus* subsp.?

Cf. Peters, iii, p. 240-1; Hachisuka, Bds. Philip., iii, pl. ii; L'Ois. et la Rev. fr. d'Orn., 1935, pp. 214-8.

Halmahera ♂? ix, 1936

Wing 236 Tail 138.5 Culmen 53 (height of up. mand. 29,
lower mand. 28.5) Tarsus 26.5

Celebes (Gorontaro, Mongondo) ♂ 7, v, 1937

Wing 234 Tail 184 Culmen 46.5 (height of up. mand. 24
lower mand. 24.5) Tarsus 25

The two specimens are similar generally in color except that the one from Halmahera (in fresh plumage) is purer in blue color of the rump, which is extended to the lower back. In Celebesian specimen (in used plumage) the blue is faded and the lower back is greenish as the upper back. In size the latter is smaller particularly in the bill.

Peters includes Halmahera and small islands off the northern peninsula of Celebes as well as Batjan, Obi, etc. in the range of *T. m. megalorhynchus*, but Hachisuka ('35) describes races: *T. m. batchianensis* (Batjan, Mysol. wing ♂ 240-254, ♀ 240, tail ♂ 150-165, ♀ 145) and *T. m. obiensis* (Obi. wing ♂ 235-245, tail 145-147). For Salawatti, Batanta, Halmahera and Waigiou? he refers the much smaller original race (wing ♂ 220, 232).

The above two specimens agree generally with his *batchianensis* or *megalorhyn-*

chos in the prevailing blue color, but the under tail-coverts are not washed with blue as he remarks. According to Mayr ('41) the N. Moluccan race is *megalarhynchos* (cf. Pr. Acad. Nat. Sci. Phil., 1939, pp. 148-9— not referred).

Genus *Loriculus* Blyth, 1850

Type, *Psittacus galgulus* Linné

98. *Loriculus stigmatus stigmatus* (S. Müller)

Psittacus (Psittacula) stigmatus S. Müller, Verh. nat. gesch. Nederl., Land-en Valkenk., pt. 6, 1843, p. 182 (Celebes).

Celebes (Minahasa) 8 ♂♂, 7 ♀♀

8, v, 16, vi, 17, 18, 19, 23,
24, 29, vii, 15, 19, 23, 25,
viii, 1938

An endemic Celebesian species with only another race in Togian Is.

(to be continued)