

A CATALOGUE OF THE BIRDS IN THE COLLECTION OF THE BOMBAY NATURAL HISTORY SOCIETY—23

CAMPEPHAGIDAE: (Cuckoo-Shrikes, Minivets);
IRENIDAE: (Fairy Bluebirds, Ioras, Leaf Birds).

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[Continued from Vol. 77 (1): 99]

This part covers 1007 specimens of 59 species and subspecies. After the main work was completed 32 specimens of 16 species and subspecies mostly collected by Sálím Ali in different parts of India, and a few erroneously unregistered have been formally added to the collections. These have been examined and entered under the appropriate headings, but all have not been included in the tables of measurements.

I am grateful to Mr. Noshervan Setna who helped me with the measurements and other work for several months.

1064 *Hemipus picatus capitalis* (Horsfield) (Assam) Brownbacked Pied Flycatcher-Shrike 2: 307

15: 10 ♂♂ (1 by pl.) 4 ♀♀ 1 o?

2 Bhagat State, 1 Simla Hills; 1 Tama, 1 Mangdechu, C. Bhutan; 1 Dehra Dun, U.P.; 1 Dibrugarh, 2 Sadiya, 1 Martam, Rongni Valley, 2 Silchar, Assam; 2 *N. Shan States*; 1 *Jade Mines, Upper Burma*.

Unsexed specimen No. 4818 collected by C. M. Inglis (probably at Cachar where he obtained No. 4819) has the upperparts blackish brown, i.e. a mixture between *capitalis* and *picatus* which replaces it in Southern Burma.

Measurements on p. 279.

1065 *Hemipus picatus picatus* (Sykes) (Dukhun) Blackbacked Pied Flycatcher-Shrike 2: 306

41: 27 ♂♂ 13 ♀♀ 1 o?

3 Kolkaz, 1 Rangobeli, Melghat, Berar; 1 Malegaon, Surat Dangs; 1 Canacona, Goa; 1 Karwar, 1 Balemani, 2 North Kanara; 1 Sethipalli 2500', Shimoga; 1 Begur, Manantoddy, 1 Padagiri, Nelliampathis, Cochin, 1 Thekaddy, Periyar Lake, Kerala; 1 Coonoor, Nilgiri; 1 Shambaganur, Palnis; 1 Billigirirangans, 2 Chitteri Range, Salem district; 2 Anantgiri, 1 Lamasinghi, 3 Sankrametta 3500', 1 Upper Sileru, Vizagapatam district; 1 Gurguria, Simlipal Hills, 3 Badrama (Bamra), Orissa; 1 Mandikheri, Piparia; 1 Geedam, 1 Makri, 3 Antagarh, 1 Bailadila, Bastar, M.P.; 1 *Khayauk Chaung, Sedan Chang, Thayetmyo*, 2 *Tonya, Prome, Burma*.

Laid on their backs, both sexes show considerable variation in the extent of the white on the chin and the vinaceous brown on the underparts. Four from North Kanara (2 ♂♂ 2 ♀♀) collected at the turn of the century by T. R. Bell and E. H. Aitken can be picked out by their pale yellowish almost unmarked underparts. A recent specimen from Goa does not show this difference.

No 4831 from Khayauk Chaung, Thayetmyo, Burma, originally marked ♀ is in ♂ plumage.

Stuart Baker (FAUNA, 2, p. 307) refers to a

perfectly typical specimen of *picatus* from Darjeeling and Mt. Victoria in Chin Hills and an equally typical specimen of *capitalis* from Malabar and wonders if they are wanderers or aberrants.

Among those in female plumage, only 4 (1 ♂ 2 ♀ ♀ 1 o?) have the head concolorous with the back, all the others, including two young males, from Chitteri Range, Salem district, having distinctly darker caps.

The tails of birds along the western side of the country (Kolkaz to Billigirirangans in the above list) average shorter than those from Vizagapatam hills, Orissa and eastern Madhya Pradesh.

Measurements on p. 279.

1066 **Hemipus picatus leggei** Whistler (Ohiya, Ceylon) Ceylon Pied Flycatcher-Shrike

nil.

This subspecies is separated from nominate *picatus* by the single fact that the sexes are alike, i.e. the female acquires the male plumage.

It was originally confined to Ceylon, but in INDIAN HANDBOOK (6: pp. 3-5) it is said to occur in southern Kerala, where "the sexes are however dimorphic"!?

The southernmost female available is from Padagiri, Nelliampathis, Cochin, which does not differ from other females of *picatus*.

1067 **Tephrodornis gularis pelvica** (Hodgson) (Nepal) Nepal Wood Shrike 2: 309

30: 20 ♂ ♂ (2 by pl., 4 imm.) 9 ♀ ♀ (2 imm.) 1 o?

1 Sukna, 2 Sevoka, Darjeeling, 4 Ranibagh, 2100' U.P.; 4 Kameli (Bailadilla) Bastar, M.P.; 1 Sankrametta, Vizagapatam, A.P.; 3 Gurguria, 2 Mahendragiri, Simlipal Hills, Orissa; 1 Gaumara, Jalpaiguri; 1 Dibrugarh, Assam; 1 Roopachena, Cachar; 1 *Jungle, N. Shan States*; 1 no data.

*See remarks by S. Dillon Ripley, *IBNHS* 78: 168-9.

Immature males have horny bills (*contra black*) and little or no grey on the upperparts. Their wings and bills average slightly less than in the adults, and they are excluded from the measurements.

8 (5 ♂ ♂ 3 ♀ ♀) obtained in Bhutan in 1966 have only recently been registered. In series the grey heads and brown backs of the males appear duller than those of other *pelvica*.

The measurements (p. 279) separately placed, are also a little smaller.

1068 **Tephrodornis gularis sylvicola** Jerdon (Malabar Coast) Malabar Wood Shrike 2: 311

22: 12 ♂ ♂ 8 ♀ ♀ 2 o? (juv.)

1 Waghai, Surat Dangs; 2 Canacona, Goa; 1 Kodra, 1 Karwar, 1 Balammani, N. Kanara; 1 Kuriarkutti, Cochin; 1 Padagiri, Nelliampathis; 2 Thattakad, 1 Tenmalai, 2 Ponmudi, 2 Thekaddy, Periyar Lake, 1 Kalekare, 1 Begur, Manantoddy, 2 Manalur, Kerala; 1 Kannampalli, Nilgiri, 1 Palni Ghats; 1 Ulavi, Sorat Taluka, Mysore.

Measurements on p. 279.

EL **Tephrodornis gularis jugans** Deignan [Doi-Langka = Khao Pha Cho (19°N, 99°25' E) Thailand].

5: 4 ♂ ♂ (2 imm.) 1 ♀.

2 *Mindan Yoma Reserve, Thayetmyo*, 1 near *Jebawgyi, 2300' Sandoway*; 1 *Nyaunggyo, 2500'*, 1 *3000', Prome dist., Burma*.

Except that the males appear to show less grey on the head, these birds are barely separable from *pelvica*.

Measurements on p. 279.

1069 **Tephrodornis pondicerianus pallidus** Ticehurst (Larkhana, Sind) Sind Wood Shrike 2: 314

25: 14 ♂ ♂ (1* fledgling) 9 ♀ ♀ (1 juv.) 2 o? 1 Sind*; 3 Ambala, Punjab; 5 Meerut, U.P.; 2 Delhi; 1 Bharatpur; Rajasthan; 1 Narwar Fort, Gwalior; 7 Bhuj, Kutch; 1 Jawar, Jaswantpura, Jodhpur; 1 Mathar, Narbudda Valley, Bhopal; 2 Deesa, Palanpur, 1 Nadiad, Kaira, Gujarat.

As accepted by earlier workers, the two races *pallidus* and *pondicerianus* recognised in Indian limits are not easily separable, particularly without any topotypical material to hand. The single specimen from Sind is a fledgling which is very much paler than 3 others in the same stage of plumage from southern India, but it is dated 4 May 1877 and much of the paleness may be due to fading.

Measurements on p. 279.

1070 *Tephrodornis pondicerianus pondicerianus* (Gmelin) (Coromandel) Indian Wood Shrike 2: 312

61: 29 ♂♂ (1 fledgling) 25 ♀♀ (2 fledglings) 7 o?

1 Songadh, Navsari, Gujarat; 1 Raipur, 1 Dhangarh, Melghat; 1 Santa Cruz, 1 Bandra, Bombay City; 2 Khandalla, 1 Talegaon, 2 Poona; 1 Ratnagiri; 3 Karwar, 1 N. Kanara; 3 Murgimatta, Mysore; 1 Anaikatty, Gudalur, Nilgiris; 1 Palnis, 1 Rajanipure, Panthaiam Hills; 1 Akkakulam, 1 Nettayam, Kerala; 1 Nillapur, foothills near Jamestown, Kanyakumari; 1 Gingee, S. Arcot, 1 Kurumbapatti, Salem; 5 Seshachalam Hills, 1 Koduru, 2 Palkonda Hills, S. Cudappah; 1 Nallamalai Range; 1 Anantgiri, Vizagapatam; 2 Jabalpur, 2 Bhanupratapur, Kanker, 1 Golapalli, Bastar, M.P.; 3 Barkot (Bamra), 2 Band, 1 Kutri, Daspalli, 1 Samastipur, 1 Chahala, Simlipal Hills, Orissa; 1 Rajputee, Saran, 3 Baghownie, Darbhanga, Bihar; 1 Cawnpore, 1 Pilibhit Terai, 1 Kalkuna, foot of Kumaon Hills, U.P.; 1 Tribani, Nepal; 1 *Maymyo*, Upper Burma; 2 *Kandi*, *Prome* dist.; 1 *Kyibin*, *Henzada*, Burma.

Reference has already been made to the differences which cannot be localized. The 5 from Seshachalam Hills in south India appear paler than the others from the surrounding areas, but these skins are excellently prepared, by Lapersonne, which in itself separates them from the others.

Two fledglings taken on the same day at Khandalla by T. Yamamoto are probably of the same brood and age, but show a difference in the extent of spotting on the head.

In some birds the head appears darker than

the back, while in others it appears to be streaked. A male, No. 4880, from Baghownie, Bihar, has the eye-brows creamy white, a character shared with another ♂ (No. 17088) of *pallidus* from Ambala, Punjab, and seen in others near Bombay.

Birds from Burma cannot be separated. The measurements show wide variation which it is not possible to associate with place or plumage. Larger series from the same place obtained over the whole year may perhaps provide some explanation.

Measurements on p. 279.

1071 *Tephrodornis pondicerianus affinis* Blyth (Ceylon) Ceylon Wood Shrike 2: 313
nil.

1072 *Coracina novaehollandiae macei* (Lesson) (Calcutta, Bengal) Large Cuckoo Shrike 2: 343

26: 16 ♂♂ (1 by pl., 9 adults) 10 ♀♀

1 Patan, Mehsana, 1 Dalkhan, Amreli, 1 Juna, Rajpipla, 1 Ajwa, Baroda; 1 Meskhatri, Surat Dangs; 1 Jaithari, Bhopal, C.I.; 1 Andheri, Bombay; 3 Ratnagiri; 1 Kumta, 2 North Kanara; 1 Mercara, Coorg, 1 Trivandrum; 1 Mudumalai; 1 Shevaroy Hills, 2 Nallamalai Range, South Kurnool; 1 Antagarh, 1 Kanta, Bastar, 1 Kanker, M.P.; 1 Balasore, 1 Dapur, 1 Chilka, 1 Maidapur, Angul, Orissa.

The single adult male from Trivandrum has the underparts more closely barred than in any of the others in this plumage, and a 159 mm wing.

There is considerable variation in the amount of barring on the underparts but, except that the females and immature males from Orissa and Bastar, M.P., appear to be more closely barred on the underparts, and also show wider bills, it is not possible to isolate any of the differences.

Measurements on p. 280.

1073 *Coracina novaehollandiae nipalensis*
(Hodgson) (Nepal) Nepal Large Cuckoo Shrike 2: 344

5: 1 ♂ 3 ♀♀ 1 o?

1 Ambala*, 1 Kalka, Punjab; 1 Madhubani, Darbhanga, Bihar; 1 Goalpara, 1 Doyang, Sibsagar, Assam.

1 ♂ (wing 181) grey throat and upper breast, no barring on underparts.

3 ♀ (wings 168, 169, 178), 1 with chin barred, 2 grey; all three with grey upper breast, and varying amount of barring below.

* Whistler (JBNHS 36: 346) stated that in this form the throat/chin is never barred, either in the female or first year plumage. In Sp. No. 17215 from Ambala, Punjab, the chin is barred, followed by a grey upper breast and further barring on the underparts. In the absence of any such specimen among *macei* in this intermediate plumage, and the large 169 mm wing, it is left with *nipalensis*.

Measurements on p. 280.

1074 *Coracina novaehollandiae layardi*
(Blyth) (Ceylon) Ceylon Large Cuckoo Shrike 2: 345
nil.

1075 *Coracina novaehollandiae andamana*
(Neumann) (Andaman Islands) Andaman Large Cuckoo Shrike

7: 3 ♂♂ 3 ♀♀ 1 o?

1 Long I., 1 Maya Bunder, North Andaman; 2 Middle Andaman; 3 South Andaman.

These birds are similar to *nipalensis* and *siamensis* (as below) but the upper and lower parts are a clearer grey, and the belly a purer white than in any of the others. The two adult males (one with enlarged testes) show no barring on the underparts, while traces show in the other three, being least noticeable in a female with developed ovaries. Their bills are larger than in both *nipalensis* and *lushaiensis*.

Measurements on p. 280.

1075a *Coracina novaehollandiae lushaiensis* (Koelz) (Sungau, Lushai Hills = Mizo).

6: 5 ♂♂ 1 o?

1 Sadiya, U. Assam; 1 N. Cachar, 1 Upper Burma, 1 Kamaing, Myitkyina; 1 Loi Kan, N. Shan States, 1 Pankkaing, Prome, Burma.

The males are very different from both *nipalensis* and *siamensis* from the north and south, being much darker on the underparts, the grey deepening to black at the tip of the chin.

Koelz (1954, *Contrib. Inst. Reg. Expl.* 1 p. 15) described *lushaiensis* (Sungau, Lushai Hills, Assam) which he said was darker than *siamensis* and extended through the Naga Hills to Kohima, presumably north to Sadiya (east of Sibsagar in the plains) and west to the Jaintia Hills. This has been synonymised with *nipalensis* (SYNOPSIS, p. 322 and IND. HANDBOOK) but unless found to be identical with some other race from outside India, it appears to be separable not only from *nipalensis* but also from *siamensis* further south.

Measurements on p. 280.

EL *Coracina novaehollandiae siamensis* (Baker) (Krabina River).

3: 2 ♂♂ 1 ♀

2 Thayetmyo dist., 1 Henzada dist., Burma.

They are very close to *andamana* but less grey above and with smaller bills.

Measurements on p. 280.

1076 *Coracina striata dobsoni* (Ball) (Andamans) Barred Cuckoo Shrike 2: 346

2: 1 ♂ 1 ♀ Wrightmyo, South Andaman.

IND. HANDBOOK (6: 18) refers to the underparts of the females, "below the breast" being barred, implying that the chin and upper breast are not barred. In the single specimen available, the entire underparts from chin to vent are barred.

Measurements on p. 280.

1077 **Coracina melaschistos melaschistos**
(Hodgson) (Nepal) Dark Grey Cuckoo Shrike
2: 337

36: 21 ♂♂ (2 by pl.) 15 ♀♀ (3 by pl.)

1 Dungagali 7500'; 1 Murree, 1 Dakuri, 1 Almora, Punjab; 1 Koti State 6500', 1 Jabli 3500', 2 Simla, 1 Patiala State 4500'; 1 Chamoli, Garhwal, 1 Kumaon, Naini Tal, 1 Bankulwa Morung, Nepal; 1 Bhopalapatnam, 1 Amraoti, Bastar, M.P.; 2 Badrama (Bamra), 1 Korai (Bonai), 2 Chahala, Simlipal Hills, Orissa; 1 Baghownie, Tirhut, Bihar; 1 Sukna, Darjeeling; 1 Peshoke 2600', Sikkim; 1 Tama, 1 Gedu, West, 1 Shamgong, Central Bhutan; 1 Bara Pani, Shilong, 2 Dibrugarh, 2 Margherita, 1 Martan, Rongni Valley, 1 Lohit Valley, 1 Assam; 1 Bagho-Bihar, Cachar; 2 *N'Kraung*, Upper Burma.

The grey of the upper and underparts varies appreciably and the latter carry different markings in white which are referred to hereunder but their significance is not understood.

The females are generally paler than the males and differ in the more extensive barring on the underparts, particularly on the under tail-coverts. The statement in IND. HANDBOOK (6: 19) separating the females by the roundish white patch on the wings is not quite correct, for several young males with brown primaries or barred underparts have similar patches.

Several females have fine white streaks below and behind the eyes, which character is entirely lacking in the males.

No. 5137 (unsexed) from Dungagali N.W.F.P. is barred over most of the underparts but marked "Nesting" indicating that birds breed without acquiring the adult plumage.

Two females No. 5128, Margherita, Assam, and 5143, Kumaon, Naini Tal, lack the white spots on the wings and are exactly like some of the males. This is presumably the final plumage in both sexes and one is inclined to accept Blanford's statement (FAUNA 1: 492) to this effect, and to which he adds "Fully adult females are however seldom met with".

Some of the males show unmarked white

under tail-coverts and it has not been possible to determinate the position of this phase in the sequence of plumages.

INDIAN HANDBOOK (1971, 6: 20) refers to the southernmost records as from Londa c. 15° 30'N on the west coast. The BNHS Bird Migration Camp at Pt. Calimere, 10°15'N., on the east coast claims to have ringed 70 birds passing through in autumn and 7 in spring. This would indicate its visiting Ceylon, where it has not yet been recorded!?

Measurements on p. 280.

EL **Coracina melaschistos avensis** (Blyth)
(Arakan)

1 ♀ *Tonbe*, *Prome*, *Burma*.

The undersurface of the tail is not black as in all phases of nominate *melaschistos*, and the bird is paler all over.

Measurements on p. 280.

1078 **Coracina melanoptera melanoptera**
(Ruppell) (Bhadwar, Punjab) Himalayan
Blackheaded Cuckoo Shrike
2: 340
nil.

1079 **Coracina melanoptera sykesi** (Strickland)
(Dukhun) Peninsular Blackheaded Cuckoo Shrike

36: 21 ♂♂ (6 juv.) 15 ♀♀ (4 juv.)

1 Gujri, Dhar, C.I.; 2 Dabka, Baroda; 1 Wada, Bhiwandi, 1 Vikhroli, 1 Trombay, 2 Andheri, Bombay; 1 Santgol, 1 Alanki, 1 Karwar, 2 Kumta Div., 2 N. Kanara; 1 Molem, Goa; 3 Bangalore, 1 Kolar, Mysore; 1 Gudalur 3000', 1 Segoor, 3500', 1 Coonoor, Nilgiris; 1 Mercara, Coorg; 1* Cape Comorin, 1* Sheshachalam Hills; 1 Kurumbapatti, Salem; 1 Dantewara, 1 Antagarh, 2* Dantewara, Bastar, M.P.; 1* Bengasai, Mahendragiri, 1 Berbera, Puri, Orissa; 2. Kumaon, Naini Tal, 1 Kesarwala, Dehra Dun, U.P.

The key to subspecies in INDIAN HANDBOOK (6: 20) separates males of nominate *melanoptera* from *sykesi* by their darker colour and larger wing, 107 mm or over, but later in the

text the males are said to measure 98-110. Four males from Orissa, Central Provinces, Karnataka and as far south as Cape Comorin, have wings 109-111 mm and the underparts strikingly darker than in the others. In the absence of any topotypical material from the Himalayas or the Punjab, it is not possible to determine the identity of these four, which are marked* in the list above. Their measurements are also separately placed.

In adult males both the upper and lower mandibles are black, except in 5165 (20 November). In the juveniles they are both yellow, with the upper mandible horny in 5151 and 5149 (29 April and 10 April).

In the females, the 4 juveniles are browner above, *contra* grey in the adults, and also have a slight fulvous wash on the underparts. No. 5166 marked as with soft skull (7 September) has traces of barring on the upper plumage.

Measurements on p. 280.

1079a **Coracina nigra davisoni** (Kloss)
(Nicobar Islands) Nicobar Pied Cuckoo-Shrike.

6: 2 ♂♂ 2 ♀♀ 2 o?

2 Nancowry, 1 Trinkut, 3 Camorta, Central Nicobars.

Both the unsexed birds are barred below as in females; one of them, No. 22623, has black patches on the back suggesting a change of colour into the male plumage.

Measurements on p. 281.

1080 **Pericrocotus flammeus speciosus**
(Latham) (Darjeeling) North Indian Scarlet Minivet

2: 319

21: 13 ♂♂ 7 ♀♀ 1 o?

1 Mussoorie, 3 Dehra Dun; 2 Nawacot, 2 Loharpowa, Nepal; 1 Rangpo, 1 Kalijhora, 1 Singtam, 1 Tista, Sikkim; 1 Tama, C., 1 Deothang, E. Bhutan; 1 Sevoke, 1 Longview, Darjeeling; 1 Buxa Duars, 1 Hazarpatha, Bengal; 1 Mishmi, 1 Rotang, Abor Hills; 1 no locality.

The twelve males in red plumage all have the outer web of the first two primaries unmarked, while of the six females, two are similar to the males but the other four have three. The latter include a juvenile with traces of barring on the neck, and an orange wash on the underparts, suggesting that adults of both sexes have two unmarked primaries.

Four males have all black central tail-feathers, while the others have a varying amount of red on the outer webs.

The bird from Mussoorie has an exceptionally curved bill, 19.5 mm. from feathers, and this figure is excluded from the table of measurements.

The key in INDIAN HANDBOOK (6:25) says this is larger than *fraterculus* (1082) with the wing 96 mm and over, *contra fraterculus* 90-98, but later p. 29 Deignan is quoted indicating 96-103 for the latter.

♂ No. 4952 from Mishmi, Abor Hills, is pinkish on the right wing and body and on the whole tail (except 2 central feathers which are black).

See remarks under 1082 below.

Measurements on p. 281.

1080a **Pericrocotus flammeus andamanensis** Beavan (Andaman Islands) Andaman Scarlet Minivet

2: 322

7: 5 ♂♂ 2 ♀♀ (1 juv.)

3 Wrightmyo, 1 Pochang, Shoal Bay, 2 Pyinmanala, 1 Chirria Tapoo, South Andaman.

The males have the first three primaries unmarked on the outer webs and the central tail-feathers all black. The two females have the same characters. Of 2 ♂♂ and 2 ♀♀ examined at the Zoological Survey in Calcutta, the males were similar but the females (1 Wrightmyo; 1 Bonnington, N. Andaman) had the first four primaries unmarked as required in IND. HANDBOOK.

Measurements on p. 281.

1081 *Pericrocotus flammeus flammeus*
(Forster) (Ceylon) Peninsular Indian Orange
Minivet 2: 322

43: 23 ♂♂ (3 imm. yellow) 20 ♀♀

1 Galkund, 2 Mheskatri, 3 Waghai, 1 Mahal, Surat Dangs; 1 Suriamal, Thana; 1 Bhimashankar, 2 Khandala, Poona; 1 Mahableshwar, Satara; 1 Savantwadi; 2 Kadra, 2 Karwar, 1 Kumta, 1 Castle Rock, 1 North Kanara; 1 Molem, Goa, 2 Murgimatta, 1 Keegore, Jog Road, Sagar, Shimoga; 1 Bandipur, 1 Bababudan Hills, Kadur district, Mysore; 1 Kodanad, 6400', 1 Anaikutty, 2 Gudalur, Nilgiris; 1 Shembaganur, 1 Vengaparai, 1 Kodikanal, Palnis; 1 Palam Ghat, 2 Ponmudi, S. Travancore, 1 Kumili; 3 Billigirirangan Hills, Coimbatore; 2 Shevaroy Hills; 1 Madura.

The majority of males have the central tail-feathers all black, a few having small orange tips. Except for one male and one female the first four primaries in both sexes (not three as in IND. HANDBOOK) have the outer webs unmarked.

Measurements on p. 281.

1082 *Pericrocotus flammeus fraterculus*
Swinhoe (Hainan) Hainan Scarlet Minivet
2: 320

11: 8 ♂♂ (1 yellow juv.) 3 ♀♀

1 Goalpara, 2 Dibrugarh, 3 Margherita, 2 Tezu, Lohit Valley; 1 Garo Hills, 1 Haflong, 1 N. Cachar.

As far back as 1877 (*Stray Feathers* 5: 194) Hume held that birds from Assam and Burma differed from *speciosus* in being slightly smaller and having the outer webs of the central tail-feathers red. Subsequent workers have agreed that birds from Assam are slightly smaller (wings of ♂ *speciosus* average 102.7 mm *contra* 98.8 in these, with some overlap—H.A.) but there is some uncertainty regarding the name that should apply.

Hume referred to them as McClelland's *elegans* described on pages 156-157 of *Proceedings of Zoological Society of London*, 1839. In INDIAN HANDBOOK the reference is changed to Horsfield *P.Z.S.*, 1840, and this needs clarification. Horsfield reported on a collection

made by McClelland and described *elegans* on pages 156-157 of *P.Z.S.* for 1839, which was actually published in 1840. The change of author is correct according to the rules of nomenclature but since the journals are referred to by year, it would, I think be more reasonable to quote the source as "*P.Z.S.*, 1839 (published 1840)".

Hume (*loc. cit.*) held that *speciosus* weighed "nearly double what *elegans* does."

Ticehurst in Stanford's 'Birds of Prome District, Burma' (*JBNHS* 34: 906), refers to "11 male *fraterculus* from the type locality, having the central tail-feathers black or occasionally red on distal half of the outer webs, while out of over twenty males from Burma, only two have them black." Among those listed above as *speciosus* are 11 adult (red) males, of which 4 single birds from Dehra Dun, Nawacote, Mishmi, and Hazaria, Patharghatta have all-black central tail-feathers, while of the 7 red males in this group (1082) one each from Margherita and Goalpara have similar tails.

No topotypes of *fraterculus* are available and I cannot separate the birds from eastern Assam from those from further south, i.e. Garo Hills, Cachar etc., which are said to be *fraterculus* in INDIAN HANDBOOK. All-black central tail-feathers are also a female character shared with juvenile males and with the material and literature available, I would be reluctant to separate them from *speciosus*. If the differences exist the name *elegans* is more appropriate with priority over *fraterculus*, should that be identical.

In the birds from Burma and Siam now available, 7 have the outer webs of the central tail-feathers completely red. As it is not possible to call them *fraterculus* (as was done by Stuart Baker), I am leaving them all under *flammiifer* q. v.

Again, if the birds from Assam are different

from those from Burma, the former can hardly have the popular name of "Burmese" Scarlet Minivet as in INDIAN HANDBOOK.

The extralimital distribution of this subspecies is omitted in IND. HANDBOOK (6: 29).

The males have the outer webs of the first two primaries unmarked and the females three. In IND. HANDBOOK (loc. cit.) the primaries of the male are compared with the rectrices of the female!

Of the 3 males from N'Kraung, Upper Burma, obtained in July/August, 2 have the central rectrices black but the third has the half-grown feathers red. They undoubtedly belong to *flammiifer*, the black central tailfeathers in the male being a subadult character in some races, e.g. *semiruber*.

As in *speciosus* some males show yellow patches on the breast, chin and secondaries, presumably in the course of changing from juvenile to adult plumage.

Several females have traces of orange in the yellow, but this count be due to the same reason.

Measurements on p. 281.

EL *Pericrocotus flammeus flammiifer*
Hume (region of the Pak Chan Estuary, Malay Peninsula, at latitude 10°N).

22: 12 ♂♂ (1 yellow juv.) 10 ♀♀

1 Taungdwin Chg., Upper Chindwin; 1 Tongaun-chy, 1 Yagyi, 1 Kani, Lower Chindwin, 1 Chindwin; 3 N. Kraung, 1 Upper Burma; 1 N. Shah States; 3 Maymyo, 1 Sadan Chang, Thayetmyo, 1 Theme, 1 Thanichaung Pass, 1 Nyaunggyi, Prome, Burma; 3 Lampang, Pangla, 1 Bau, Nong Tong, 1 Siam.

See remarks under 1082 and 1083

These birds do not agree with the description in Stuart Baker's FAUNA in so far as the males and females have two and three outer primaries unmarked and not three and four as stated therein. Juvenile ♂ 4955, N. Shan States has the wing and tail both 98 mm.

The Siam birds (3 ♂♂ 2 ♀♀) are brighter than those from Burma.

Measurements on p. 281.

1083 *Pericrocotus flammeus semiruber*
Whistler & Kinnear (Sankrametta, Vizagapatam) East Indian Scarlet Minivet

16: 11 ♂♂ (2 imm.) 5 ♀♀

1 Anantgiri, 3000', 1 Dharakonda, U. Sileru, Vizagpatam; 1 Lohattar, Kanker; 3 Daiba, 1 Makri, 1 Kameli (Bailadila), 2 Antagarh, 3 Chota Dongar, Bastar, M.P., 1 Tigiria, 1 Kutri, Daspalla, 1 Chahola, Simlipal Hills, Orissa.

Of the 9 red males, eight have the outer webs of the two outermost primaries unmarked and the outer webs of the central tailfeathers red for most of their length. Two immature males (both yellow with an orange tinge) have 3 unmarked primaries and the central tail feathers black, as in the ninth red male No. 17118 which has three unmarked primaries; this is as in four of the five females, one having only two unmarked.

The birds from Thailand under *flammiifer* above are marked *semiruber* by Deignan and the distribution in Peters' CHECKLIST is extended to "Southern Burma, southward to Central Tenasserim (where intergrading with *flammiifer*); Thailand (except to southwestern and peninsular provinces); Indo-China (except the area occupied by *elegans*)".

Semiruber is however distinctly larger and the Thailand birds referred to above agree more closely with what I have placed under *flammiifer*, than with *semiruber*.

Measurements on p. 282.

1084 *Pericrocotus brevirostris brevirostris*
(Vigors) (Himalayas=Sikkim foothills) Short-billed Minivet

2: 324

11: 8 ♂♂ 3 ♀♀

1 Rangpo, 1 Pashok, 1 Penionche, 1 Rinchingpong, Sikkim; 2 Tama, 1 Shamgong, Central Bhutan, 2 Deothang, E. Bhutan; 1 Huchugaon, Goalpara, 1 Margherita, Assam.

Both sexes average slightly smaller than *ethologus*. The males can be identified by the absence of red running backwards along the edges of the inner secondaries. In the females

the yellow on the forehead extends on to the crown. The yellow on the outer web of the second innermost rectrice extends to the tip, while the inner web either has a small yellow spot or a wedge of yellow at the tip (Mayr 1940, p. 713).

Measurements on p. 282.

1085 *Pericrocotus ethologus favillaceus* Bangs & Phillips (Koolloo Valley, northern India) West Himalayan Longtailed Minivet.

74: 38 ♂♂ (6 imm. yellow, including 2 barred above, 1 partly red) 31 ♀♀ (1 chick 1 juv. barred above) 5 o? (1 juv. barred above).

1 Wana, S. Waziristan; 2 Ajun, 3 Chitral; 1 Attock, 1 Ambala, 1 Rawalpindi, 1 Lahore, 1 Pipli, Karnal; 1 Nankhri, 8000' (?), 2 Chini, 22 Simla Hills; 1 Padar, Kishtwar, 1 Srinagar, 1 Yusmarg, 1 Kashmir; 3 Jajjah, 2 Bahawalnagar, Bahawalpur; 1 Surwaya, Gwalior; 1 Pili, 1 Kolkaz, 2 Rangobeli, Melghat; 1 Jubbulpore; 9 Meerut, 1 Salukapur, U.P.; 1 Darmar, Ranikhet, 1 Konain-Jamsar, 1 Gup-takashi, 2 Lambathach, Kumaon; 1 Partapur, 1 Sipuri, Nepal, 2 Dhanaulti, 2 Mussoorie, 2 Shikar-pur (F.J.R. Field 1891?).

The birds collected in the plains and obtained between 9th November and 21st March are no doubt winter migrants. Four females with the lightest grey upperparts are from Simla, Bahawalpur, Jubbulpore and Melghat, while two males from Rawalpindi and Lahore appear to be the deepest red. Two females from Simla (No. 17132 incubating) and Partapur, Nepal (4973) have their underparts tinged with orange. In the latter, the orange wash extends on to the forehead.

The present identifications are mainly on geographical grounds, though in series, males of *laetus* (*infra*) are a slightly deeper red, particularly on the rump, and the females a deeper yellow.

In *Stray Feathers* 5, p. 414/5, V. Ball has referred to the chin and throat of young males of *P. speciosus* (now *P.f. semiruber*) from Sambalpur being mottled with, if not wholly, scarlet before showing any sign of the ultimate

black. Stuart Baker in *FAUNA* (2, p. 320) says "the change of plumage in all Minivets is very interesting, as specimens are numerous which show signs of attaining an increase of red in the old feathers prior to the moult. Birds in this stage show no signs of the barring on the upper surface and are obviously undergoing, or about to undergo, the second moult."

Juvenile ♂ No. 17137 from Simla (5th July) is barred on the head and upper back.

No. 17135 dt/11th July from Simla a yellow juvenile ♂ has patches of black on the back and head, and red on the breast and rump. The 7th to 9th primaries are barred red and the others yet yellow.

In JBNHS 41, p. 93 is a note regarding a yellow bird marked ♂, moulting to yellow.

Measurements on p. 282.

1086 *Pericrocotus ethologus laetus* Mayr (Jeyluk, Sikkim) East Himalayan Longtailed Minivet

16: 10 ♂♂ (1 yellow) 6 ♀♀

1 Chungthang, N. Sikkim; 1 China Kothi, 1 Ha Road, West Bhutan, 1 Khosela, 6 Rongtong, E. Bhutan; 1 Goalpara, 3 Shillong, 1 Dibrugarh, 1 Margherita, Assam.

Juvenile ♂ 21719 from Chungthang, N. Sikkim, is marked *Pericrocotus solaris* by Sálím Ali, but this appears to be in error, because of a) the large 92 mm wing; b) presence of a slight yellow on forehead, and c) the absence of yellow tips to the second innermost rectrices.

The females have an olive tinge on the back.

Measurements on p. 282.

1087 *Pericrocotus ethologus mariae* Ripley (Phek, eastern Naga Hills) Nagaland Long-tailed Minivet

nil.

EL *Pericrocotus ethologus yvetteae* Bangs (Ma-li-pa, Kokang, Burmese Wa States) North Burmese Longtailed Minivet

2: 1 ♂ 1 ♀

2 *N. Shan States, Burma*

Measurements on p. 282.

1088 ***Pericrocotus solaris solaris*** Blyth
(Darjeeling) Yellowthroated Minivet 2: 326

10: 5 ♂ ♂ 5 ♀ ♀

1 Temi, 2 Tung, Sikkim; 1 Honka W., 3 Gomchu, 1 Deothang, E. Bhutan; 1 around Bewehaung, Sarag country, 1 Shillong, Assam.

The five males show bright orange-red ("red-orange", Deignan, BIRDS OF NORTH THAILAND, p. 277) and not scarlet or red as referred to in Indian literature. In BIRDS OF MALAYA (2: 150) the immature male of *P. solaris montanus* Salvadori is said to be "At first like the adult female, but gradually acquiring the scarlet plumage of the male, in part by moult, but in part it would appear by a direct change in the pigment of the feather, passing through orange to the pure scarlet."

The females are distinguished from *ethologus* by the total absence of yellow on the forehead and the yellow tip to the second innermost tail feathers (as in *brevirostris* q.v.). They are also a brighter yellow below.

Measurements on p. 282.

1089 ***Pericrocotus roseus roseus*** (Vieillot)
(Bengal) Rosy Minivet 2: 328

30: 23 ♂ ♂ (1 by pl.) 7 ♀ ♀

1 Dharampur, 2 Koti, 2 Bhajji State, Simla Hills; 1 Kumaon, Naini Tal Dist; 3 Khandala, W. Ghats; 1 Canacona, Goa; 1 Kadra, N. Kanara; 3 Darba, 1 Bhopalapatnam, 1 Barsur, Bastar, M.P.; 1 San-krametta, Vizagapatnam dist., A.P.; 2 Badrama (Bamra), 1 Kendrapara, 1 Anantpur, 5 Dibrugarh, 1 Shillong, Khasia Hills, Assam; 1 *Kani*, Lower Chindwin; 1 *Inbin*, Henzada, 1 *Prome*, Burma.

Only three males have red on the rump. No. 5056 from Kani, Lower Chindwin has a large patch extending from the rump on to the upper tail-coverts.

Four males (17 June, Simla; 10th and 12th September Dibrugarh; 16th October Kumaon) have yellow patches in the wing, including two

with red on the rump (Kumaon and Dibrugarh).

The winter distribution is more extensive than suggested in the map in IND. HANDBOOK (6: 38), the bird having been recorded from Karachi, Bombay area, Travancore etc.

Measurements on p. 282.

1089a ***Pericrocotus divaricatus divaricatus***
(Raffles) (Singapore) Ashy Minivet 2: 334

1 ♂ Karnala, Pen, Kolaba, Maharashtra.

Measurements on p. 283.

1090 ***Pericrocotus cinnamomeus pallidus***
Baker (Larkhana, Sind) Sind Little Minivet 2: 332

1 ♂ Bahawalpur, s.w. Punjab.

This specimen is marked *pallidus* by Whistler and has a grey chin, the least amount of orange-red on the upper breast among the adult males available, followed by almost pure white all over the lower belly, under tail-coverts and tail. The upperparts are the palest grey among specimens available and the bar on the wing is yellow, with almost no trace of red or orange. It is the only specimen with the outermost tail-feathers pure white.

One from Karnal, Punjab, and six from Meerut, U.P., appear very similar to this specimen but others from Jagadhri, Ambala and Delhi lying in-between, are no doubt *peregrinus*.

In the FAUNA (1924) Stuart Baker said *pallidus* was found in Sind, to the extreme northwest of India, and possibly Mt. Aboo. Later (1929, Bull. Brit. Orn. Cl. 49, p. 64) he changed the words to "Sind, the northwest province and Mt. Aboo".

This is confusing, for North-Western Provinces was the old name for Agra District and the distribution may be either north-west from Sind into Baluchistan or eastwards towards Agra!

The distributional map in IND. HANDBOOK (6: 400) shows this form as extending up to Rawalpindi, but specimens from this place appear nearer to *peregrinus*, the type locality of which, Ambala, as pointed out by Ticehurst (*Ibis* 1922, p. 613 & *JBNHS* 31, p. 496) is unfortunately too close to Sind. There is also the possibility of the bird from Bahawalpur being wrongly identified and not the same as topotypical *pallidus* from Sind, and this matter needs to be re-examined. It is evident that there is much variety in all the races and it is difficult to name every specimen by itself.

In this and subsequent races, the descriptions refer to the males and the differences among the females, if any, are specifically said to apply to them.

In all races, the females are pale-brown, rather than grey above.

Measurements on p. 283.

1091 ***Pericrocotus cinnamomeus peregrinus*** (Linnaeus) (Ambala) Northern Little Minivet
2: 324

62: 42 ♂♂ 18 ♀♀ 2 o?

Whistler and Kinnear after examination of the material collected in the Eastern Ghats accepted *peregrinus* (type locality Ambala) as extending over the whole of India, excluding the ranges of *malabaricus* (Malabar) *pallidus* (Sind) and *vividus* (Orissa and north-eastwards) and separated Ceylon birds (*ceylonensis*) as distinct. In IND. HANDBOOK, *peregrinus* is replaced south of about Gujarat by *cinnamomeus* named in Ceylon, with *ceylonensis* as a synonym of the latter.

The arrangement appeared unlikely for the birds from Ceylon had at some stage or the other been said to resemble *malabaricus* by Van Schauburg (1930), Whistler & Kinnear, Whistler, Koelz, Ripley & Sálím Ali. No specimens from Ceylon were available but the

*Three of them are marked *malabaricus*.

loan of 10 specimens (5* ♂♂ 5 ♀♀) from the British Museum (N.H.) appear to have provided an explanation confirming that the earlier isolation of the Sri Lanka birds was correct (see under 1093). The others from peninsular India, with the exclusions referred to above, are for the moment placed in 3 groups under this form.

(a) ***peregrinus***, including topotypes

25: 19 ♂♂ (1 yellow juv.) 5 ♀♀ 1 o? (yellow)

1 Choi, Campbellpore; 3 Rawalpindi, 1 Chandigarh, 1 Jagadhri, 2 Ambala; 1 Ladwa, Karnal; 4 Delhi; 6 Meerut, 1 Salukapur, 2 Bulandshar, U.P.; 1 Baghowni, Darbhanga, 1 Pilibhit Terai, 1 Rajputtee, Saran.

As indicated under 1090 some from the Punjab are very similar to that marked *pallidus*. Of the 3 males from Rawalpindi two have black chins and breasts and the third grey. Some of the skins are in poor condition.

(b) 20: 10 ♂♂ 9 ♀♀ 1 o?

1 Ajmere, 3 Bhuj, 1 Kutch; 1 Deesa, Palanpur, 1 Cambay, 1 Bodeli, 1 Ajwa, Baroda; 1 Narwar Fort, Gwalior, 1 Bijnor, Indore; 1 Jubbulpore, 2 Gondia; 2 Bhanupratapur, Kanker; 1 Darba, 1 Bhopalapatnam, 1 Konta, 1 Geedam, Bastar.

♂ 5099 from Bhuj, Kutch, is very close to *pallidus*, but another from the same place agrees more closely with some from Gujarat. There is some variation in plumage, but in series most of these would be closer to group (a) than to the male *pallidus* from Bahawalpur. ♀ No. 5116 collected at Ajmere was listed under *P. erythropygius*.

(c) 9: 8 ♂♂ (1 chick) 1 ♀

1 Bhiwandi, Thana; 1 Malad, 3 Andheri, 2 Trombay Island, 1 Bombay; 1 Khandala, Pune.

The males have definitely darker grey backs and blacker throats than (a), and also more orange and yellow on the underparts. Two males from Trombay are very close to birds from Valpoi and Colvalle, Goa with dark grey chins but the latter are placed with *malabaricus* as other birds from N. Kanara appear to be of this form.

(d) *sidhoutensis* Koelz

8: 5 ♂♂ 3 ♀♀

1 Satara, Maharashtra; 1 Gingee, S. Arcot; 1 Palkonda, 1 Koduru, 2 Seshachalam Hills, S. Cuddapah; 1 Kolar, E. Mysore; 1 Cumbum Valley, Kurnool dist.

Birds from Cuddapah district were listed with *peregrinus* by Whistler but separated as *sidhoutensis* by Koelz, 1939, *Proc. Biol. Soc. Washington* 52: 69 and later synonymised with *cinnamomeus* in IND. HANDBOOK. The specimens available have smaller wings, purer white on the underparts, and paler grey upperparts than those in (b) above. It is possible that this is another of Koelz's races which may merit recognition.

Measurements on p. 283.

1093 *Pericrocotus cinnamomeus cinnamomeus* (Linnaeus) (Ceylon) Ceylon Small Minivet
nil.

The following 10 (5 ♂♂ 5 ♀♀) were borrowed from British Museum (N.H.):

2 Uragama, 1 Gan Maduwa, 1 Nedimala, 2 Wilimada, 1 Kumbalgamha C.P., 1 Pusiwalla, 1 Coca-watte, 1 Ceylon.

Reference has been made under 1091 to the confused position regarding the identity of birds from Ceylon and South India. The males are almost as deeply coloured as in *malabaricus* but are dark grey *contra* blackish above, the orange-red on the underparts is less extensive, there being more white on the lower belly and vent.

The females are similar to those of *peregrinus* and the other races in peninsular India except *malabaricus* *q.v.*

The colour differences have been set out in detail by Whistler in THE AVIFAUNAL SURVEY OF CEYLON (1944) and the subsequent confusion is partly due to changing the specific name from *peregrinus* to *cinnamomeus* and partly to the fact that the Ceylon males approach *malabaricus* and the females *peregrinus*.

nus/sidhoutensis in colour.

In addition to this both males and females resemble those of *malabaricus* (and *vividus* from the Andamans) in the wings being equal to or slightly longer than the tails.

Measurements on p. 283.

1094 *Pericrocotus cinnamomeus malabaricus* (Gmelin) (Malabar Coast, restricted to Mahe) Malabar Little Minivet

9: 5 ♂♂ 3 ♀♀ 1o? (juv.)

1 Colvalle, 1 Valpoi, Goa; 1 Karwar, N. Kanara; 2 Murchiston, Ponmudi, 1 Maruthankuzi, 1 Urum-bikera, Mundakayam, 1 Pambanar, Peermade, 1 Wadakancheri, Kerala.

This race is very distinctive, the males being distinguished by their almost black backs, the jet black chin and throat, the bright scarlet and orange-yellow on the underparts, including the under tail-coverts. The females are a much deeper yellow below than in any other race, the upper breast is washed with pale brown rather than yellow. Except in the single female from N. Kanara, the wing is longer than the tail, a character not consistent in those from Goa and further northwards.

Vidal (*S.F.* 9: 59) has referred to a "richly coloured bird" from Ratnagiri, but there is nothing to indicate what he was comparing it with. There is an appreciable amount of variation in the extent of the red on the underparts.

Measurements on p. 283.

1095 *Pericrocotus cinnamomeus vividus* Baker (Attaran River, Amherst Dist., Tenasserim, Burma, restricted to Pabyouk, 22m SE. of Moulmein) Eastern Little Minivet 2: 331

20: 12 ♂♂ 7 ♀♀ 1 o?

When describing this form Baker (1920) apparently accepted it for the Andamans also, but this place is not referred to in the FAUNA (1924) where he gave the range as "Eastern Bengal and Assam, Burma, Siam, Cochin

China, Yunnan and Annam". This has later been extended westwards to include the birds from Orissa and northeast Andhra Pradesh, and also those from the Andamans. In the absence of topotypical material it is not possible to settle this matter but the Andaman and Orissa populations show the following differences:

ANDAMANS

- 1) *Chin* dark grey
- 2) *Bill* longer and heavier
- 3) *Upperparts* darker grey
- 4) *Orange-red of underparts* extending to vent
- 5) *Outermost rectrices, from below* orange-red.
- 6) *Wing* equal to or longer than tail

Items 5 and 6 hold good for females also.*

The females are very similar to those from Ceylon except that the under wing-coverts at the edge of the wing appear a brighter and more prominent yellow.

Under these conditions I am leaving the two groups separately under the same name:

(a) Andamans 10: 4 ♂♂ 5 ♀♀ 1 o?

2 Long I., Middle Andamans; 3 Wimberleyganj, 2 Wrightmyo, 1 Landfall I., 2 South Andaman.

Schauburg (1930) thought that a single female collected at Port Blair, Andamans, by B. B. Osmaston differed from continental birds in its larger bill, wholly white underparts with a faint tinge of yellow on the flanks, and proposed that it should be named after the collector, should it be found to deserve separation.

(b) 10: 8 ♂♂ 2 ♀♀

1 Anantgiri, 1 Sankrametta, Vizagapatnam; 2

* On a recent (June 1980) visit to the Zoological Survey of India at Calcutta, I had the opportunity of examining and comparing 7 males and 3 females from the Andamans with 6 males and 6 females from Orissa and Balaghat, M.P., in their collections, and the above remarks are supported by this material.

Chota Dongar, Bastar, M.P., 1 Gurguria, Simlipal Hills, 1 Keonjgarh, 1 Badrama (Bamra) 1 Barkot, 1 Ranipathar, Phulbani Dist., Orissa; 1 Goalpara, Assam.

Birds from Bastar, eastern M.P., and Vizagapatnam grade into this form which is very distinctly brighter on the underparts than those from the south and others under *peregrinus*.

This single bird from Assam is in very poor

ORISSA

- 1) black or darker grey
- 2) shorter and lighter
- 3) paler grey
- 4) lower belly paler, whitish to vent
- 5) pale, pinkish
- 6) wing shorter than tail

condition. A pair from Maymyo, Burma, is so different that I am listing them separately below.

Measurements on p. 283.

EL *Pericrocotus cinnamomeus* subsp.

2: 1 ♂ 1 ♀ *Maymyo, Burma*.

Both were collected on 25th August 1913. The ♂ is largely orange coloured below, unlike any other specimen available, and with a grey throat much paler than in Andaman birds. The female is yellow below, not unlike one from the Andamans. Their tails are 8 and 5 mm longer than the wings, which is more than in any others of the species.

Measurements on p. 283.

1096 *Pericrocotus erythropygius erythropygius* (Jerdon) (S. India =Ajanta)
Whitebellied Minivet

21: 12 ♂♂ (3 juv.) 8 ♀♀ 1 o?

1 Dhirpur, 2 Ambala, 1 Bunni, Kadwa, Karnal, Punjab; 1 Ajmere; 3 Delhi; 1 Meerut; 3 Rapar, 2 Kutch; 1 Kuno, Gwalior; 1 Malwa plateau, Bhopal; 1 Saugor, 1 Mather, Narbada Valley (north); 1 Bodeli, Baroda district; 2 Raipur, Melghat, Berar.

Measurements on p. 283.

Aegithina tiphia

Hume as far back as 1877 (*Stray Feathers* 5: 420-441) examined some 240 specimens in his collection and after referring in great detail to the variations and similarities in the males and females from all parts of its range said "...is it logical or expedient to break this species up into several on the strength of such very variable and inconstant differences? In my opinion it is not."

In 1952, Daniel Marien (*Amer. Mus. Novit.* 1589) got together some 425 specimens and made another attempt at clarification. This was followed by a paper on the taxonomic importance of variation in non-breeding plumage in *Aegithina tiphia* and *A. nigrolutea* by Mrs. B. P. Hall (1957, *Ibis* 99, pp. 143-156) and also referred to racial differences in birds from further east—Burma, Thailand, Malaya and the Sumatran Islands. This work is based on the examination of almost 900 skins.

But I have been unable to sort out this small collection into the five races now accepted with the certainty or confidence with which such work is ordinarily accepted, and part of the present grouping is based on the geographical distribution in INDIAN HANDBOOK (6, pp. 47-53). Perhaps the 90 specimens are too few to carry out this work, but where the specimens do not agree with the literature available, I have made some small changes in the accepted distribution and referred to them under the subspecies.

We have blackheaded males from 30th January (Orissa) to 16th October (Kumaon) and males in non-breeding plumage or without black heads from 16th October to 22nd June (Cachar) though no specimens obtained in May or early June are available.

It is curious that in both species the male wings are slightly (1%) larger than in the

females, but the latter have their tails about 5% longer than in the males.

1097 **Aegithina tiphia septentrionalis** Koelz (Bhadwar, Kangra, Punjab) Northwestern Iora

4: 1 ♂ 3 ♀♀

1 Madhopur, 3 Chandigarh, Punjab.

These are slightly larger than any of the others, particularly the bills of the male and one female. The male obtained on 19th February has no trace of black above except in the tail, in which the outermost feathers are edged with white and the two central feathers tipped greenish; other males of *humei* (one marked juvenile) and *deignani* have similar green in the tail.

Measurements on p. 284.

1098 **Aegithina tiphia tiphia** (Linnaeus) (Benghala = neighbourhood of Calcutta) Common Iora 1: 340

6: 4 ♂♂ (1 by pl.) 2 ♀♀ (1 o?)

2 Naini Tal, Kumaon; 1 Dibrugarh Assam; 1 Rupachena, Cachar; 1 Rewa Tea Estate, S. Sylhet; 1 Sandoway, Arakan, Burma.

One male from Naini Tal (16th Oct.) has a totally black head while another male obtained on the same day has a green back and head. Marien has illustrated *septentrionalis* and nominate *tiphia* as races in which the male does not acquire a black head, and this appears to be endorsed by Mrs. Hall. Salim Ali & Ripley in INDIAN HANDBOOK are not very definite and as indicated earlier it is apparently possible to separate these races only on an average with several hundred specimens in hand (?).

Measurements on p. 284.

1099 **Aegithina tiphia humei** Baker (Rai-pur, M.P.) Central Indian Iora 1: 342

15: 8 ♂♂ (1 juv.) 7 ♀♀

1 Narwar Fort, 1 Surwaya, Gwalior; 1 Mandu,

Dhar; 1 Chikalda, Amraoti, Berar; 1 Patan, Meh-sana, 1 Nadiad, Kaira, 1 Cambay, 2 Gir, Amreli, 1 Dabaka, 1 Bodeli, Baroda, 1 Laochali, Surat Dangs, Gujarat; 2 Jubbulpore, 1 Dhaura, Bina, M.P.

The females are a little paler and yellower than in the other races. The immature male is slightly darker than the female. All are paler than those from further east in M.P., Orissa etc., and I can only see this form restricted to a relatively small area in Gujarat and adjacent places. There is no doubt that *nigrolutea* occurs in the same place, e.g. Deesa.

Measurements on p. 284.

1100 *Aegithina tiphia deignani* Hall (Yaw-dwin, Pakokku dist., Central Burma) Peninsular Indian Iora

35: 20 ♂♂ 15 ♀♀

1 Satara, 2 N. Kanara* 2 Palkonda Hills, 2 Seshachalam S. Cudappah, 1 Gingee, S. Arcot; 2 Nallamalai Range, S. Kurnool; 1* Jeypore Agency, 1 Sankrametta, Vizagapatam; 2 Gondia, 2 Bhanuprattapur, Kanker, 2 Geedam, 2 Konta, Bastar, M.P.; 1 Konai, Bonai, 2 Band, 1 Rampur, 3 Barkot, 1 Badrama (Bamra), Orissa; 2 *Shwebo*, 1 *Upper Burma*; 1 *Hsipaw*, N. *Shan States*, 2 *Tonye*, 1 *Kendin*, *Prome*, *Burma*. *missing.

*Other birds from N. Kanara have been listed under *multicolor*, but these two, possibly from the eastern side of the district agree more closely with this form. The females are a shade darker than *humei*, while some of the males have yellow bases to the black feathers and are paler than *multicolor* above. This is a very difficult race to separate.

Measurements on p. 284.

1101 *Aegithina tiphia multicolor* (Gmelin) (Ceylon) Ceylon Iora 1: 342

29: 15 ♂♂ 13 ♀♀ 1 o?

1 Pali Hill, 1 Trombay, 1 Malad, 1 Kurla, 1 Hog I., Bombay; 1 Rajapur, Ratnagiri; 1 Canacona, Goa; 1 Anshi, 1 Castle Rock, 1 Kudra, 1 Karwar, N. Kanara; 1 Ulavi, Sorab, 1 Murgimatta, Sagar, 2 Kolar, E. Mysore; 2 Bangalore; 1 Shembaganur, Palnis; 1 Tirumalai, 1 Thekadi, Periyar, 1 Aram-

boli, 1 Rampara, Panthalem Hills, Kerala; 1 Elavakulam, 1 Colombo, Ceylon; 4 Kurumbapatti, Salem; 1 Kalavachu, Shriharikota.

I have moved this form as far north as Bombay on the west for the deep green on the back is similar to that in birds from the south, and the amount of black on the head and back of the breeding male is admittedly very variable and not a satisfactory character. The Colombo male (1st June) is the deepest yellow below. In this specimen the black on the head goes down the nape but does not extend on to the back, which is the deepest green among the specimens available; the second wing-bar is restricted to a small white spot, a character shared with others from peninsular India, where a double wing-bar may occur in birds from the same place. The bird from Anshi, N. Kanara has the most extensive black on the back, extending almost on to the rump. Whistler 1935 (*JBNHS* 38, p. 83) in *Birds of Travancore and Cochin* came to the conclusion that the darker and duller green of the upperparts of the female and of the male in "winter plumage" was the only satisfactory feature on which this race could be maintained. Fairbank (1876, *S.F.* 4, p. 258) in 'Birds of Khandala etc.', says that mature birds in the *zeylonica* (*multicolor*) plumage are more common at Khandala than at Ahmednagar (further into the open Deccan—H.A.).

The ♀ from Elavankulam, N.W.P., Ceylon has the underparts the brightest yellow in the whole series.

Measurements on p. 284.

EL *Aegithina tiphia horizoptera* Oberholser (Telok Bluku, Nais I., western Sumatra)
1 ♂ Singapore

Wing 63 mm Tail 44 mm W/T ratio 69.8

1102 *Aegithina nigrolutea* (Marshall) (Meerut) Marshall's Iora 1: 344

18: 9 ♂♂ 7 ♀♀ 2 o?

In 1954, Koelz, *Contrib. Inst. Regional Exploration*, No. 1:9 separated birds from Sihor near Bhavnagar, in Kathiawar as *sulfurea*, "slightly paler, more sulfury above and less yellow below, edgings of large wing feathers more white with less yellow wash". This was not accepted by Mrs. Hall, (*Ibis* 1957, p. 146) and later in IND. HANDBOOK, but the birds from Kutch appear to be outstandingly different from the others both in their paler more yellow *contra* green colour above, and smaller size.

The single bird from Victoria Park, Bhavnagar, in Kathiawar has the small wing and bill of those from Kutch and it is possible that a re-examination of the measurements of the type and specimens available abroad will indicate that the birds from Kutch and Kathiawar are distinct and Koelz's *sulfurea* can be maintained for that area. I am for the moment listing both groups separately under the nominate form:

a) 7: 4 ♂♂ 3 ♀♀ (possibly *sulfurea*)

1 Bela. Ropar, 1 Godsar, 1 Mandvi, 1 Nakharatna, 2 Bhujia, Kutch; 1 Victoria Park, Bhavnagar, Kathiawar.

b) 11: 5 ♂♂ 4 ♀♀ 2 o?

1 Jagadhri, Punjab; 2 Bharatpur; 4 Delhi; 1 Bhind, Gwalior, 2* Deesa, Palanpur, Gujarat, 1 Sarasnoor, Saharanpur, U.P.

Sp. No. 2736*, an unsexed bird from Deesa, Palanpur with an all-green tail was obtained by Sálím Ali and the label is marked "Shot at same time as GS 876 (now bearing BNHS registration No. 2535 and listed above—H.A.) an undoubted *nigrolutea*. Is post-juvenal plumage indistinguishable from *A. tiphia*—S.A." In the Gujarat Survey Report (*JBNHS* 52, p. 743) he says it was collected on the same day and in the same locality removing the first impression that they were together. In any case, the distribution of *nigrolutea* and *tiphia* overlaps in some places, e.g. West Khandesh (Barnes) and Jhansi, Etawah, Saharan-

pur (Hume) and I am not inclined to agree with S.A.'s acceptance of this bird as a juvenal form of *nigrolutea*. In addition to the colour differences the wing-tail ratio of 77.7% is much greater than in others of this species and approaches that of *tiphia*. With these reservations I am leaving it with *nigrolutea*, but recording its measurements separately.

It may be worth noting that the Koelz collection is said to have a ♂ and a ♀ obtained as far south as Salem, Madras.

Measurements on p. 284.

1103 ***Chloropsis aurifrons aurifrons*** (Temminck) (Sumatra, India = Cachar) Northern Goldfronted Chloropsis **1: 346**

24: 16 ♂♂ 4 ♀♀ 4 o?

2 Badrama (Bamra), 1 Ranipathar, Phulbhani, 1 Tikerpara, Angul, Orissa, 1 Upper Barakhamba, Simlipal Hills, Orissa; 1 Lalkua, foot of Kumaon Hills, 1 Kumaon, Naini Tal, 1 Ranibag 2050', 1 Pilibhit, Terai, U.P.; 1 Langharjan, 2* Rupchena, Assam; 1 Rewa Tea Estate, Cachar; 1 *Kanaing*, 2 *Upper Burma*; 1 *N. Shan States*; 1 *Mt. Victoria*, *Pokokku*, *Chin Hills*; 1 *S.E. of Maymyo*; 1 *Yin Chang*, 2 *Sadon Chang*, *Thayetmyo*; 1 *Panklaing*, *Henzada*; 1 *Ataran*, *Burma*.

Two males from Cachar have a bluish tinge in the green of the underparts.

Measurements on p. 285.

1104 ***Chloropsis aurifrons frontalis*** (Pellzeln) (Khelgate near Goa) **1: 348**

See remarks under 1105.

1105 ***Chloropsis aurifrons insularis*** Whistler & Kinnear (Cotta, N.P. Ceylon) Ceylon Goldfronted Chloropsis.

26: 14 ♂♂ 12 ♀♀

Whistler and Kinnear when working out the specimens from the Eastern Ghats noticed that they were larger than those from Ceylon and Travancore, and named the latter *insularis* (Type locality in Ceylon), arbitrarily fixing the northern boundary on the west as the Palghat Ghat. The birds in the Eastern Ghats and north of the Palghat Gap on the west were

left as *C. aurifrons davidsoni* Stuart Baker (Type locality, Malabar) which name was later found to be occupied and changed to *frontalis* of Pelzeln (Type locality, Khelgate near Goa).

In the material available, the birds from Goa, Western India, southwards into Kerala show no differences of size which would warrant the acceptance of two separate races from this area. No specimens from Ceylon are available and unless these are found to be smaller (which is not suggested by the figures published by Whistler) or different in some other respect, *insularis* becomes a synonym of *frontalis*, leaving the larger birds from north of Goa and the Eastern Ghats without a name. I am listing the specimens in accordance with these remarks.

Small Goldfronted Chloropsis = *frontalis*

14: 7 ♂♂ 7 ♀♀

1 Molem, Goa; 2 Castle Rock, 1 Karwar, 2 N. Kanara, 1 Jog, Shimoga, Mysore; 1 Wynaad; 2 Edanad, Chengamnur, 1 Tenmalai, 1 Santhanpara, Cardamon Hills, 1 Thekady, Periyar Lake, 1 Maraiyur 3500 ft, Kerala.

Large Goldfronted Chloropsis 12: 7 ♂♂ 5 ♀♀

(a) from northern portion of Western India 6: 4 ♂♂ 2 ♀♀

1 *Songadh, Navsari, 1 Waghahi, Surat Dangs, Gujarat; 1 Tulsi-Vehar, 2 *Mulund, Salsette; 1 Khandalla, Pune dist. Maharashtra.

*Two males show a yellowish ring after the black throat, as in *aurifrons*, but paler. This character is not visible in any of the smaller birds from the south.

(b) from Eastern Ghats 6: 3 ♂♂ 3 ♀♀

2 Nallamalai, S. Kurnool; 1 Bhanuprattapur, Kanher, C.P.; 3 Anantgiri, Vizagapatnam dist.

The species has been recorded from Delhi and it remains to be determined if it is of this form or nominate *aurifrons*.

Measurements on p. 285.

1106 **Chloropsis hardwickii hardwickii**
Jardine & Selby (Nepal) Orangebellied Chloropsis 1: 349

46: 27 ♂♂ 16 ♀♀ 3 o?

1 Dehra Dun, 2 Gangolinath, Almora, 4 Rani-bagh, Kumaon; 1 Kurseong, 1 Singtam, Sikkim; 4 Long View, Darjeeling, 1 Honka, west, 2 Deo-thang, 1 Narphang, East, 1 Tama, 2 Maie River, Bhutan; 2 Martam Rongni Valley, 1 Mais, 1 Kalak-tang, A.P.; 2 Tezu, Lohit Valley; 1 Rotung, 1 Abor Country; 2 Margherita, Lakhimpur dist., 1 Kohi-ma, 2 Naga Hills, 1 Baster, Cachar, 1 Lai-key, Assam; 1 Mogok, 2 Kamaing, 1 Upper Burma; 1 Tago HKA Chindwin River; 2 Katha; 1 Loikaw, 1 N. Shan States; 1 Sandoway, Arakan; 1 Bombay market.

The immature males with the purplish blue on the wing edges replaced by green, are separately measured. In ♂ No. 1737 from the Naga Hills the chin and upper breast are not yet completely black, and it lacks the dark blue-black shoulder of the subadult male. ♀ No. 4577 from Tezu, Lohit Valley has a deep navy-blue line along the shoulder (edge of wing) lacking in all the other females. The blue chin stripe is also slightly darker than in the females and very similar to the male referred to above. ♂ sp. No. 1730 from Sandoway dist., Arakan, the southernmost specimen from Burma in subadult plumage with a very yellowish head is marked *C.h. malayana* by C. B. Ticehurst, but Deignan (BIRDS OF N. THAILAND, p. 327) states that this cannot be maintained as a valid form.

Measurements on p. 285.

1107 **Chloropsis cochinchinensis jerdoni**
(Blyth) (Central India) Jerdon's Chloropsis

1: 352

39: 23 ♂♂ (3 juv.) 15 ♀♀ 1 o?

1 Bodeli, Baroda, Gujarat; 1 Chanderi, Gwalior; 3 Raipur, Melghat; 1 Borivli, 1 Andheri, Bombay, 1 S. Konkan, 2 Canacona, Goa; 3 Karwar, N. Kanara; 1 Bhadrappur, Shimoga, Mysore; 1 Tope, Palnis; 1 Thattakad, N. Travancore; 1 Anurudipur, Ceylon; 1 Kurumbapatti, 1 Chitteri Range, Salem; 1 Koduru, S. Cudappah, 1 Nallamalai, Range; 4 Jabalpur, 2 Sonawani, Balaghat, 2 Bhanuprattapur, Kanker; 1 Bhopalapatnam, 1 Golpalli, 1 Kameli, 1 Konta, Bastar, M.P.; 1 Jeypore, Vizagapatnam;

1 Baramba State; 1 Bansura, 1 Barkot, 1 Badrama, Bamra, 1 Berbera, Puri, Orissa.

From the specimens available it would appear that the juvenile male (No. 1701 Karwar, N. Kanara, July 1898) first has a blue chin as in the female, which turns green before becoming black as in the adult male (No. 24096 of 8 Dec. 1972 from Canacona, Goa). This bird with the blue chin has a pale coloured bill and slight specks of black on the chin.

Measurements on p. 285.

1108 *Chloropsis cochinchinensis cochinchinensis* (Gmelin) (Cochin China) Bluewinged Chloropsis

1: 350

7: 4 ♂♂ 2 ♀♀ 1 o?

1 Rupchena, 1 Cachar; 1 *Singhaling*, *Kanti*, *Chindwin*, 1 *Mondon Yoma Res.*, *Thayetmyo*; 1 *Mai Village*, *Sadoway*; 1 *Kywizin*, *Henzada*; *Burma*.

The four males have little yellow on the breast but the term 'Goldmantled' used in INDIAN HANDBOOK hardly appears appropriate, and I have changed it as above.

Measurements on p. 285.

1109 *Irena puella puella* (Latham) (Travancore) Fairy Bluebird

3: 1

20: 10 ♂♂ (1 imm.) 10 ♀♀ (4 imm.)

2 Molem, Goa, 1 Katyal, 2 Anshi, 1 Karwar, 1 Potoli, 3 N. Kanara; 1 Talewadi, Belgam; 1 Bhadrapur, Shimoga; 2 Coonor Ghat, Nilgiris; 1 Tope, Palni Foothills, 1 Manalur, Palnis; 1 Maraiyur, 1 Tenmalai, 1 Merchiston, Ponnudi, Travancore, 1 Chitteri Range, Salem dist.

Measurements on p. 286.

1110 *Irena puella sikkimensis* Whistler & Kinnear (Sukna, Darjeeling) Northern Fairy Bluebird

20: 14 ♂♂ (5 imm.) 6 ♀♀ (1 imm.)

1 Sevoke, Long View, 5 Darjeeling; 2 Gaylegphug, C. Bhutan; 1 Tezu, Lohit Valley, 1 Changchang Pani, 1 Mayhenta, Upper Assam; 1 Gunjang, North Cachar, 1 Chutti Bhil, Cachar; 1 *Arakan Yomas*, *Bassein*; 1 *Ngapoli*, 1 *Sadoway dist.*; 2 *Nyaunggyo*, *Prome dist.*; 1 *Attaran*, 1 *Hank-Yadoma Chq.*, *Burma*.

See note on validity of this form, p. 381 infra.

Measurements on p. 286.

1110a *Irena puella andamanica* Abdulali (Long I., Middle Andamans) Andaman Fairy Bluebird

10: 5 ♂♂ (2 imm.) 5 ♀♀ (1 imm.)

2 Bakultala, 1 *Long Island, Middle Andamans; 3 Wrightmyo, 2 Chouldhari, 1 Landfall I., 1 Chivia Tapoo, South Andamans. *Type.

See note on validity of this form, p. 381 infra.

The map in IND. HANDBOOK shows the species as occurring in the Andamans and Nicobar Islands. There is no authentic record of its occurrence in the Nicobars.

Measurements on p. 286.

EL *Irena puella malayensis* Moore (Malacca)

2: 1 ♂ 1 ♀

The long undertail-coverts are distinctive.

Measurements on p. 286.

1064-1065 *Hemipus picatus* subsp.

	WING	BILL	TAIL
♂ ♂ 1064 <i>capitalis</i> (9)	62-66 av. 63.3	12.7-14.7 av. 13.6	57-61 av. 59.5
	(IH) ♂ ♀ 62-67	from skull 16-18	58-65)
1065 <i>picatus</i> (20)	59-65 av. 62	12.4-14.2 av. 13.5	52-59 av. 55.6
	(IH) 60-66	from skull 14-16	57-62)
♀ ♀ 1064 <i>capitalis</i> (4)	62.63.65.67	13.2, 13.3 (2)	55.60 (2), 64
1065 <i>picatus</i> (12)	61-64 av. 62	12.5-14.1 av. 13.2	50-62 av. 55
	(IH) 58-64	from skull 15-17	56-65)

1067/8 *Tephrodornis gularis* subsp.

	WING	BILL	TAIL
♂ ♂ 1067 <i>pelvica</i> (5) northern	121-125 av. 122.8	21.4-25 av. 22.5	80-90 av. 85.8
(9) southern	118-123 av. 120	22.5-25 av. 23.7	81-87 av. 85
(4) Bhutan	115-117	21-22.2	80-86
	(IH) 115-124	from skull 23-29	82-91)
1068 <i>sylvicola</i> (7) black bills	111-120 av. 117	20-25.2 av. 23.5	75-83 av. 80.5
(4) grey bills	111-117 av. 114	22.5-23.7 av. 22.9	80-85 av. 82
	(IH) 112-120	from skull 25-30	79-84)
<i>jugans</i> (2)	118, 120	23.2, 23.4	83, 84
♀ ♀ 1067 <i>pelvica</i> (6, 2 imm.)	116-123 av. 120	21.5-25.5 av. 23.5	83-91 av. 84.5
Bhutan (3)	115-117	20, 22, 22.5	85, 86, 90
	(IH) 115-124	from skull 25-29	84-92)
1068 <i>sylvicola</i> (8)	113-119 av. 116	21-24.7 av. 22.1	78-85 av. 82
	(IH) 111-121	from skull 23-27	80-88)
<i>jugans</i> (1)	116	24	81

1069/70 *Tephrodornis pondicerianus* subsp.

♂ ♂ 1069 <i>pallidus</i> (13)	84-94 av. 89.2	16.5 (2), 18-20 av. 18-7
	(IH) 82-94	from skull 19-23
1070 <i>pondicerianus</i> (24)	82-95 av. 88.3	17-20.5 av. 19.5
	(IH as in <i>pallidus</i> for both sexes)	
	87-92 av. 87.6	17.8-18.6
Burmese (3)		59-70
♀ ♀ 1069 <i>pallidus</i> (8)	86-89 av. 88	63-69 av. 65.5
	(IH) 80-89	56-71)
1070 <i>pondicerianus</i> (22)	83-92 av. 86.6	60-66 av. 62.6
Burmese (1)	79	61

1072/76 *Coracina novaehollandiae* subsp.

	WING	BILL	TAIL
1072 <i>macei</i> (9) adults (7) juveniles	159-170 av. 164 151-170 av. 162 (IH) 153-173 181	23.4-27.5 av. 25.4 23-26 av. 24.9 from skull 27-31 27.5	112-124 av. 116.9 117-127 av. 121.4 111-134) 120
1073 <i>nipalensis</i> (1)	(IH) 175-193	from skull 30-34	126-148)
1075 <i>andamana</i> (3)	175, 176, 181 (IH) 173-176	28.2, 28.7 (2) —	126, 132(2) —)
1075a <i>lushaiensis</i> (5) — <i>siamensis</i> (2) ♀ ♀	172-183 av. 177 169, 182	26-29.1 av. 27.2 26.5 (2)	114-138 av. 124 122, 137
1072 <i>macei</i> (10)	158-166 av. 161.3 (IH) 156-167	23-26.6 av. 24.5 from skull 26-30	112-132 av. 120 108-135)
1073 <i>nipalensis</i> (3)	168, 169, 178 (IH) 173-188	25.3, 25.5, 26.2 from skull 30-32	120, 121, 132 126-143)
1075 <i>andamana</i> (3)	165, 170, 173 (IH) 167-174	24, 26.6, 27 —	120, 128, 132 —)
1075a <i>lushaiensis</i> 1 o? — <i>siamensis</i>	174 180	27.5 28.6	120 135

1076 *Coracina striata dobsoni*1 ♂
1 ♀168 (153-170)
158 (151-172)29.7
26.2131
1291077 *et al. Coracina melaschistos melaschistos* and *C. m. avensis*

	WING	BILL	TAIL
1077 ♂ ♂ (19) ♀ ♀ (12) EL <i>avensis</i> ♀ (1)	113-128 av. 120 (IH) 118-128 115-124 av. 120 (IH) 114-124 111	16.5-19 av. 17.8 from skull 19-23 16.6-19.3 av. 17.9 from skull 19-22 17.7	93-117 av. 104.5 111-123, once 95, once 96) 94-117 av. 105.8 109-120) 101

1079 *et al. Coracina melanoptera* subsp.

	WING	BILL	TAIL
1079 <i>sykesi</i> (7) (4) 1079 <i>sykesi</i> (8 adult) 1079 <i>sykesi</i> (16 juv.)	109-111 (IH) ex Koelz 107-112 100-107 av. 104.6 97-107 av. 101 (IH) 98-110	17.3-18 av. 17.6 — 17-18.6 av. 17.5 16-17.3 av. 16.8 from skull 18-20	72-90 av. 82 85-92) 71-85 av. 76.2 73-82 av. 76.6 72-84, once 94)

1079 *et al.* **Coracina melanoptera** subsp. (contd.)

	WING	BILL	TAIL
1079 <i>sykesi</i> (9 adult) <i>sykesi</i> (4 juv.)	100-104 av. 101.5 98-103 av. 100 98-104	14.6-17 av. 16.5 15.5-17 av. 16.6 from skull 17-20	74-82 av. 77 70-77 av. 73.5 71-80)
	(IH)		
1079a Coracina nigra davisoni			
	91 (2)	16, 16.4	65, 72
(IH)	88-92	from skull 18-19	65-72)
	86, 89	16.4 (2)	68, 69
(IH)	88, 89	from skull 18, 19	69, 73)

1080/83 **Pericrocotus flammeus** subsp.

	WING	BILL	TAIL
1080 <i>speciosus</i> (12)	97-107 av. 103	14.5-17.9 av. 16.6	85-100 av. 94.3
1080a <i>andamanensis</i> (5)	95-110	from skull 19-21	96-113)
	90-97 av. 94.8	15.4-16.2 av. 15.7	86-91 av. 89
(IH)	92-96	from skull 19-20	87-98)
1081 <i>flammeus</i> (20)	88-99 av. 92.5	14.6-16 av. 15.2	81-95 av. 88
	87-97	from skull 17-20	82-101)
	85, 92, 94	15.4, 15.5, 15.7	86, 93, 95
1082 <i>fraterculus</i> (7)	95-102 av. 98.9	16-17 av. 16.3	91-102 av. 97.5
	90-97	13-14	78-81)
	95.0	—	88.0
flammeifer (8)	93-102 av. 97.9	14.5-16.5 av. 15.7	87-95 av. 90.8
" (1 juv.)	98.0	15.9	98
Siam (3)	98	16-17.7 av. 16.7	92-98 av. 95
1083 <i>semiruber</i> (9)	102-111 av. 104.2	14.6-16.5 av. 15.9	88-102 av. 95.7
	100-106	from skull 20-21	94-102)
	99-101	16.4-16.9	95-100
" (2 juv.)			
♀			
1080 <i>speciosus</i> (7)	99-104 av. 101.5	15.5-16.9 av. 16.4	95-103 av. 99.7
	96-108	from skull 19-22	94-110)
	97	16.5	95
	92, 93	15, 15.5	90, 98
1080a <i>andamanensis</i> (2)			
(1 juv.)			
1081 <i>flammeus</i> (20)	86-94 av. 90.4	13.8-16.9 av. 15.3	81-95 av. 87
	87-96	from skull 16-19	86-96)
1082 <i>fraterculus</i> (3)	93-99 av. 96.7	14.5-16.6 av. 15.5	90-95 av. 93.3
	90-97	13-14	78-81
EL	87-98 av. 94.3	14.2-16.5 av. 15.1	80-90 av. 86
Siam (2)	91, 96	15.5 (2)	86, 91

1080/83 *Pericrocotus flammeus* subsp. (contd.)

♀ ♀
1083 *semiruber* (5)

WING
101-102 av. 101.5
(IH 96-102)

BILL
15.5-16.7 av. 16.1
from skull 19-20

TAIL
94-96 av. 95.0
92-101)

1084 *Pericrocotus brevirostris brevirostris*

♂ ♂ (8)

85-89 av. 87.3
85-91

(IH 87, 88, 89
85-90)

84-97 av. 90.8
88-103)

94, 95, 96
90-100)

1085/87 *Pericrocotus ethologus* subsp.

♂ ♂

1085 *favillaceus* (31)

WING
90-96 av. 93.4
89-96

BILL
11.5-13.7 av. 12.8
from skull 14

TAIL
98-110 av. 103
104-114)

Yellow juveniles (7)

1086 *laetus* (9)

87-92 av. 90
89-95 av. 91.6
89-95

12.2-14.6 av. 13.3
12.0-13.2 av. 12.7
from skull 15-16

95-108 av. 101
92-107 av. 100.5
101-107)

Yellow juveniles (1)

EL nominate *ethologus*

♀ ♀

1085 *favillaceus* (29)

86-97 av. 91.8
86-94

11.8-13.9 av. 12.91
from skull 14-15

96-112 av. 103.8
101-114)

1086 *laetus* (5)

87-93 av. 89.6
86-92

127-134 av. 13.2
from skull 15-16

93-103 av. 97.4
98-108)

EL *yvettae*

91

12.6

97

1088 *Pericrocotus solaris solaris*

♂ ♂ (5)

82-88 av. 85.2

11.8-13 av. 12.5

93-99 av. 95.4

♀ ♀ (5)

80-86 av. 83.8

12-12.7 av. 12.5

91-99 av. 94.8

(IH ♂ ♀ 78-90)

from skull 14-16

83-102)

1089 *Pericrocotus roseus roseus*

♂ ♂ (23)

82-92 av. 87.7

13-15 av. 14

80-91 av. 85.2

♀ ♀ (7)

87-94
82-93 av. 86.3
90-94

from skull 15-17
13.4-14.2 av. 13.7
from skull 15-17

87-94)
72, 80-89 av. 82.5
89-91)

1089a *Pericrocotus divaricatus divaricatus*

WING
95
(♂ ♀ 95-101)

BILL
15.3
c. 16

TAIL
93
86-94)

1090/5 *Pericrocotus cinnamomeus* subsp.

	WING	BILL	TAIL	W/T RATIO
1090 <i>pallidus</i> (1)	68	10.3	75	.906
	(IH 64-70	from skull 11-12	64-76)	
1091 <i>peregrinus</i> (a) (16)	68-74 av. 69.7	10.1-11.8 av. 10.7	69-75 av. 74.1	.940
(b) Gujarat (5) MP (6)	66-73 av. 68.9	10.2-12 av. 11	65-75 av. 70.6	.975
(c) Bombay area (9)	66-71 av. 68	10.8-12 av. 11.5	68-70 av. 69.2	.982
(d) South eastern India (5)	65-69 av. 67.2	10.8-11.5 av. 11.2	65, 69(2)	.994
	(IH 63-72	from skull 12-14	65-77)	
1093 Ceylon (5)	70-73 av. 71.2	11.6-13.2 av. 12.1	69-73 av. 70.2	1.01
1094 <i>malabaricus</i> (3)	71, 72, 75	11.5 (3)	67, 73	1.038
	(IH 69-75	from skull 12-14	66-74)	
1095 (a) <i>Andamans</i> (4)	70-72 av. 71.5	11.5-13 av. 12.2	71-73 av. 71.7	.997
(b) <i>vividus</i> (6)	65-72 av. 69.5	10.4-11.7 av. 11	69-73 av. 72	.965
	(IH 66-72	from skull 12-14	66-76)	
Maymyo, Burma (1)	75	11.4	83	.903
	(IH 68-69 av. 68.4	10.3-11.4 av. 10.8	71-76 av. 72.8	.94
1091 <i>peregrinus</i> (a) (5)	63-70 av. 66.5	10-11 av. 10.3	66-76 av. 70.4	.944
(b) Gujarat and MP (5)	68	10.9	—	—
(c) Bombay (1)	65, 66 (2)	10, 11.2, 11.6	65, 67, 71	.970
(d) S.E. India (3)	64-72	from skull 12-13	67-78)	
1093 Ceylon (4)	68-70 av. 69	11-12.1 av. 11.3	67-70 av. 68.5	1.07
1094 <i>malabaricus</i>	68, 71	11, 11.5	68, 69	1.014
	(IH 68-76	from skull 13-14	67-7)	
1095 (a) <i>Andamans</i> (4)	70-74 av. 71.2	11.5-11.9 av. 11.7	71-74 av. 71.7	.993
(b) <i>vividus</i>	71	11.4	75	0.946
	(IH 65-75	from skull 13-14	68-75)	
Maymyo, Burma (1)	74	10.7	79	.936

1096 *Pericrocotus erythropygus erythropygus*

♂ ♂ (9 adults)	68-73 av. 69.3	10-12.4 av. 10.8	74-85 av. 78
♀ ♀ (8)	67-72 av. 68.9	10-10.8 av. 10.4	72-78 av. 75
(IH ♂ ♀ 68-70	from skull 12-13		(L8 av. 84-85)

1097 *et al. Aegithina tiphia* subsp.

	WING	BILL	TAIL	W/T RATIO
♂ ♂	70	17	51	72.8
1097 <i>A.t. septentrionalis</i> (1)	(IH 63-65	—	—)	
	65-68 av. 66	13.8, 15.5	45-50 av. 47	67.5-76.9 av. 71.5
1098 <i>A.t. tiphia</i> (4)	(IH 62-66	from skull 18-19	49-52)	
	64-67 av. 65.2	15-16 av. 15.5	45-53* av. 47.6	69.2-81.5* av. 74
1099 <i>A.t. humei</i> (8)	(IH 61-69	from skull 16-20	44-55)	
	63-68 av. 65.9	14.6-16.2 av. 15.6	42-50 av. 46.6	63.6-74.6 av. 70.1
1100 <i>A.t. deignani</i> (18)	(IH measurements as in <i>humei</i>)			
	62-68 av. 65.2	14.5-17 av. 16	44-52 av. 46.5	67-80 av. 70.5
1101 <i>A.t. multicolor</i> (15)	(IH measurements as in <i>humei</i>)			

* marked juvenile ♂ and with greenish tail.

	WING	BILL	TAIL	W/T RATIO
♀ ♀	68, 69 (2)	16(2), 17.5	50, 51, 52	72.4, 73.9, 76.4
1097 <i>A.t. septentrionalis</i> (3)	(IH 63-65	—	—)	
	60, 63	14.9, 15	51, 52	82.5, 85
1098 <i>A.t. tiphia</i> (2)	(IH 60-65	from skull 18-19	50-59)	
	63-68 av. 64.8	14.2-15.7 av. 15	47-53 av. 49.7	73.4-82.5 av. 76.6
1099 <i>A.t. humei</i> (7)	(IH 62-67	from skull 16-19	46-56)	
	61-68 av. 64.2	14.4-16.4 av. 15.5	47-53 av. 50.2	71.2-84 av. 79.5
1100 <i>A.t. deignani</i> (15)	(IH measurements as in <i>humei</i>)			
	63-68 av. 65.1	14-16.3 av. 15	45-53 av. 48.5	66.1-84 av. 74.2
1101 <i>A.t. multicolor</i> (13)	(IH measurements as in <i>humei</i>)			

1102 *Aegithina nigrolutea*

	WING	BILL	TAIL
♂ ♂	62-64 av. 63	13.2-14.2 av. 13.8	44-46 av. 45
(a) (4)	65.5-69.5 av. 66.8	14.8-16.3 av. 15.5	46-50 av. 47
(b) (5)	62-65	from skull 14-18	43-47)
♀ ♀	61, 62	13, 13.2	44, 46
(a) (2)	62-67 av. 64.5	13.3-16 av. 14.8	46-49 av. 47.5
(b) (6)	61-64	from skull 14-17	45-51)

1103/5 *Chloropsis aurifrons* subsp.

	WING	BILL	TAIL
♂ ♂ 1103 <i>aurifrons</i> (14)	88-100 av. 93.5 (IH 90-103)	16.5, 18.3-21.7 av. 20 from skull 24-26	56-72 av. 63.4 65-77)
1104 <i>frontalis</i> (sic) (7)	91-100 av. 96 (IH 87-101)	19.5-22.5 av. 21 from skull 23-26	67-72 av. 70 69-77)
1105 <i>frontalis/insularis</i> (7)	91-95 av. 90.1 (IH 86-94)	19.3-21.3 av. 20.1 from skull 22-25	63-69 av. 64.8 65-70)
♀ ♀ 1103 <i>aurifrons</i> (4)	89-91 av. 89.7 (IH 89-94)	20-20.2 av. 20.1 from skull 24-25	61-64 av. 62 66-70)
1104 <i>frontalis</i> (sic) (5)	91-95 av. 93.6 (IH 83-95)	20-21.5 av. 20.7 23-25	66-70 av. 68 64-71)
1105 <i>frontalis/insularis</i>	84-93 av. 90.1 (IH 87-88)	19.5-21.5 av. 20.3 from skull 22-24	61-68 av. 63.7 59-64)

1106 *Chloropsis hardwickii hardwickii*

	WING	BILL	TAIL
Ault ♂ ♂ (16)	91-100 av. 96 (IH 93-100)	18.5-22.5 av. 20.8 from skull 21-26	64-74 av. 69.6 73-79)
Imm. ♂ ♂ (11) ♀ ♀ (15)	89-97 av. 92.7 85-95 av. 89.5 (IH 88-94)	19-21.3 av. 20.4 19-20.9 av. 19.8 from skull 22-25	63-73 av. 68.7 58-71 av. 65.5 65-72)

1107/8 *Chloropsis cochinchinensis jerdoni* and *C.c. cochinchinensis*

	WING	BILL	TAIL
♂ ♂ <i>jerdoni</i> (22)	87-97 av. 91.5 (IH 86-96)	18.8-21 av. 20.1 from skull 21-26	68-78 av. 72.2 66-81)
♂ ♂ <i>cochinchinensis</i> (4)	82-88 av. 85 (IH 84-90)	16.6, 19, 19.4 from skull 21-22	61-69 av. 65.5 65-72)
♀ ♀ <i>jerdoni</i> (15)	84-90 av. 86.4 (IH 82-88)	19.2-21 av. 19.9 from skull 21-25	63-74 av. 68 62-72)
♀ ♀ <i>cochinchinensis</i> (2)	79, 82 (IH 76-84)	18, 18.5 from skull 20-22	62 (2) 61-68)

1109/10a *Irena puella* subspp.

	WING	BILL	WIDTH AT NOSTRIL	TAIL	AV. T/W
♂ adults					
<i>puella</i> (9)	124-132 av. 129	22-24 av. 23.1	7.9-9.3 (8.5)	95-106 av. 100.3	(77.7)
<i>sikkimensis</i> (9)	126-136 av. 132.8	22-24 av. 24.4	8-9.5 (8.7)	90-101 av. 97.6	(76)
<i>andamanica</i> (3)	129, 133, 133 av. 131.6	24.5, 25.5, 26 av. 25.3	8.8-10	104, 105, 107 av. 105.3	(80)
♂ juv.					
<i>puella</i> (1)	124	23.3	8.2	97	(78)
<i>sikkimensis</i> (5)	128-134 av. 131.4	21.3-23.7 av. 22.5	8.1-9 (8.3)	91-98 av. 96.2	(73.2)
<i>andaminica</i> (2)	125, 126	24.2, 25	8.6, 9.3	100, 107	(80, 84.9)
♀ adults					
<i>puella</i> (6)	124-128 av. 126.3	22.3-24.2 av. 23.2		93-102 av. 97.5	(77.3)
<i>sikkimensis</i> (5)	125-136 av. 130.8	23, 23.7, 24.3 av. 23.6		92-103 av. 97.2	(74.3)
<i>andamanica</i> (4)	122, 126, 126, 127	24.2 (2), 24.3, 27.4		98, 101, 102, 105	(80.9, 83.3)
♀ juv.					
<i>puella</i> (4)	121-130 av. 125.5	23-24.2 av. 23.4	8.2-9.2 (8.8)	95-102 av. 97.5	(77.7)
<i>sikkimensis</i> (1)	128	23.2	8	93	(74)
<i>andamanica</i> (1)	129	25.5	9.7	99	(76.7)

EL *Irena puella malayensis* Moore (Malacca)

♂	121	22.7	80
♀	120	22.8	83

(to be continued)



Abdulali, Humayun. 1981. "A Catalog of the Birds in the Collection of the Bombay India Natural History Society 23." *The journal of the Bombay Natural History Society* 78, 261–286.

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