

CONTRIBUTIONS TO THE FAUNA OF MANIPUR STATE, ASSAM.

PART II. BIRDS.¹

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[With Plate V.]

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I. INTRODUCTION.

The first systematic account of the birds of Manipur State was given in a series of papers by Godwin Austen (1874-82) who dealt with the birds of the "North-east Frontier of India", that is, mainly of the Khasia and Naga Hills in Assam. Hume's (1888), however, was the first really comprehensive systematic account of the Manipur birds, and it remains so to this day. He listed about 500 species from Manipur. Oates (1883-90), in his volumes on the birds of British Burma, gave valuable distributional notes on Manipur species. Allen (1905) referred briefly to the commoner game birds, while Annandale (1921, p. 538) mentioned a few of them. In recent years, Higgins (1913, 1914, 1933-34a) gave a useful account, accompanied by field notes, of the game birds of Manipur. The minor papers dealing with Manipur birds will be found in the list of References at the end.

The present report deals with two collections :—

(i) One made by a Party of the Zoological Survey of India in February 1936 during the "Naga Hills and Manipur Survey", covering the following regions as far as Manipur is concerned : The Imphal Valley ; and the northern (Imphal-Dimapur Road) and western (Imphal-Silchar Road) portions of Manipur. This collection, which consisted of some 60 skins, was unaccompanied by any field notes.

(ii) A second collection consisting of about 130 skins made by one of us (M.L.R.) during July-December 1945, from the Imphal Valley and the hills in the vicinity (*vide* Part I, Roonwal, 1949, for map, etc.). The field notes, etc. given in the following account refer to this collection.

¹For Part I, General Introduction, see Roonwal, *Rec. Indian Mus.* XLVI, pp.123-126, 1949.

Both the collections together comprise 91 species and subspecies. In the following list, critical systematic notes have been given wherever necessary; and the following are the principal new facts brought to light:—

A new subspecies, *Otus bakkamoena manipurensis* subsp. nov., the Manipur Collared Scops Owl (Fam. Asionidae), has been described and figured (pp. 162-166; and Pl. V).

The following are the other points discussed:

Monticola solitaria affinis (Bly.) and *M. s. longirostris* (Bly.) (Fam. Turdidae).—The systematic status of the various subspecies of *M. solitaria* is discussed, together with the question of type-specimens and type-localities (pp. 139-143). The two type-specimens of *M. s. affinis* Bly. (from "Tenasserim provinces") are lost. The holotype of *M. s. longirostris* (Bly.) is in the Indian Museum (Zool. Surv. India); the type-locality is "between Sind and Ferozepur" (in the Punjab). A key to the various subspecies of *M. solitaria* is given.

Dicrurus macrocercus macrocercus Viell. (Fam. Dicruridae).—It is shown (p. 146) that the separation of these drongoes into a western and an eastern race in India is unjustified, and all Indian specimens are *D. m. macrocercus*.

Strix indraneae newarensis (Hodgs.) (Fam. Asionidae).—A peculiar clicking sound made with the tongue is recorded in this Wood-Owl (p. 161).

Otus bakkamoena lettia (Hodgs.) (Fam. Asionidae).—The question of the type-specimens of *lettia* is clarified. A key for the differentiation of the various Indian subspecies of *O. bakkamoena* is given (pp. 163-166).

Gyps himalayensis Hume (Fam. Aegyptiidae).—The first record is now provided from eastern Assam (Manipur), thus extending the range of this griffon (p. 167).

Streptopelia decaocto decaocto (Frivald.) (Fam. Columbidae).—The Manipur ring-doves are clearly *S. d. decaocto* and not of the Burmese race, *S. d. xanthocyclus* New., as hitherto believed (p. 172).

The following abbreviations have been used:—

Measurements: W., wing-length; Tl., tail-length; Tr., tarsus-length; B., bill-length (from base).

Ad., adult; av., average; juv., juvenile.

II. SYSTEMATIC ACCOUNT.

Ord. 1. PASSERIFORMES.

Fam. 1. CORVIDAE.

1. *Corvus macrorhynchos intermedius* Adams.

(The Himalayan Jungle Crow.)

1859. *Corvus intermedius*, Adams, *Proc. zool. Soc. London*, p. 171. (Kashmir, Dagshai and Simia. Restricted to Kashmir, *vide* Stresemann, *Orn. Gessel. Boyern* XII (1916), p. 282.)
 1874. *Corvus culminatus*, Godwin Austen, *J. Asiat. Soc. Bengal* XLIII, p. 170.
 1888. *Corvus macrorhynchus*, Hume, *Str. Feath.* XI, p. 256.

1922. *Corvus coronoides intermedius*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 28.
 1932. *Corvus macrorhynchos intermedius*, Whistler and Kinnear, *J. Bombay nat. Hist. Soc.* XXXV (2), p. 512.

Specimens collected.—2 (1♂, 1♀) from Imphal Valley, along Dimapur Road, 2,500 ft., 20th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	329	219	61	65
1♀	325	231	58	62

Colour of soft parts.—Bill, legs and claws jet black. Iris dark brown. Foot-pads (♂) dirty smoky.

Field notes.—This crow was common all over the Imphal Valley upto at least 3,500 ft. elevation, perhaps more. It tended to be more frequent near human habitations. *Corvus splendens* was entirely absent in the valley.

The gonads were in the non-breeding condition. The testes measured 3 × 5 mm.; the ovary 7 × 12 mm., with the largest ova about 1.2 mm. in diameter.

Remarks.—Hume (1888, p. 256) found *C. m. intermedius* to be the common crow of Manipur. He also remarked upon the complete absence of *Corvus splendens* there.

2. *Urocissa erythrorhyncha magnirostris* (Blyth).

(The Burmese Red-billed Blue Magpie.)

1846. *Psilorhinus magnirostris*, Blyth, *J. Asiat. Soc. Bengal* XV, p. 27. (Ya Ma Dong Mt.)
 1922. *Urocissa melanocephala magnirostris*, Stuart Baker, *Fauna Brit. India Birds* (2nd ed.) I, p. 42.
 1930. *Urocissa erythrorhyncha magnirostris*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VIII, p. 594.

Specimen collected.—1 ♂ from Kanglatongbi area, 18 miles N. of Imphal on Dimapur Road, Manipur, ca. 3,500 ft., 22nd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♂ : W 194 ; Tl. 446 ; Tr. 46 ; B. 36.

Colour of soft parts.—Bill and legs coral red ; mouth and foot-pads orange ; claws smoky brown.

Field notes.—This magpie was common in the jungles around Imphal on the Dimapur Road. It usually occurred in small groups of a dozen or less, flying gracefully from tree to tree. Being very wary, it was difficult to shoot.

The gonads were in the non-breeding condition. The ovary measured 7 × 12 mm., with the largest ova about 1.2 mm. in diameter.

Remarks.—Hume (1888, p. 257) failed to notice this bird in Manipur although he wrote that one of his men saw it there. Godwin Austen (1874, p. 170) obtained it in the Naga Hills. Stuart Baker (1922, p. 42) had included Manipur area within its range.

3. Dendrocitta formosae himalayensis (Blyth).

(The Himalayan Tree-pie.)

1865. *Dendrocitta himalayensis*, Blyth, *Ibis* I, p. 45. (Himalayas.)
 1888. *Dendrocitta himalayensis*, Hume, *Str. Feath.* XI, p. 259.
 1922. *Dendrocitta sinensis himalayensis*, Stuart Baker,² *Fauna Brit. India, Birds* (2nd ed.) I, p. 52.
 1930. *Dendrocitta formosae himalayensis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VIII, p. 595.

Specimen collected.—1♀ from Tairenpokpi, ca. 3,000 ft., 7th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀: W 144; Tl. 208; Tr. 34; B. 30.

Remarks.—Hume (1888, p. 259) found this tree-pie in both the western and eastern hills of Manipur.

Fam. 2 TIMALIIDAE.

4. Dryonastes ruficollis (Jardine & Selby).

(The Rufous-necked Laughing Thrush.)

1838. *Garrulax ruficollis* Jardine and Selby, *Ill. Orn.* II, pl. 21. (Himalayas.)
 1888. *Garrulax ruficollis*, Hume, *Str. Feath.* XI, p. 158.
 1922. *Dryonastes ruficollis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 139.

Specimens collected.—2♂♂ as follows:—One from Karong (5th February 1936) and another from Luanglong Khulen (8th February 1936). (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂: W 100; Tl. 113; Tr. 37; B. 21.

Remarks.—(Hume 1888, p. 158) found this thrush very common in Manipur.

5. Garrulax pectoralis pectoralis (Gould).

(The Indian Black-gorgeted Laughing Thrush.)

1835. *Ianthocincla pectoralis* Gould, *Proc. zool. Soc. London*, p. 186. (Nepal.)
 1888. *Garrulax pectoralis*, Hume, *Str. Feath.* XI p. 859.
 1922. *Garrulax pectoralis pectoralis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 150.

Specimen collected.—1♀ from Kanglatongbi area, about 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 29th December 1945. (Major M. I. Roonwal.)

Measurements (mm.).—1♀: W 144; Tl. 132; Tr. 48; B. 32.

Colour of soft parts.—Bill horny; legs, feet and claws bluish horny.

Field notes.—This thrush was common in hillside forests, usually occurring in parties of 10-12.

The ovary was in the non-breeding condition, measuring 6 × 10 mm., with the largest ova about 1 mm. in diameter.

Remarks.—Hume (1888, p. 159) found it abundant in the Barak Valley between Kalanaga and Koombiron in Manipur.

² Stuart Baker wrongly gives the first reference of Blyth as "Catal., p.92 (1865)", whereas Blyth in his *Catal. Birds. Mus. Asiat. Soc. [Bengal]*, 1849, p. 92, refers only to "*D. sinensis*", and not *himalayensis*.

6. Pomatorhinus erythrogenys maclellandi Godwin Austen.

(McClelland's Scimitar-Babbler.)

1870. *Pomatorhinus McClellandi* Godwin Austen, *J. Asiat. Soc. Bengal*, XXXIX, p. 103. (Nenglo, beyond Asaly, Burreil Range, Khasia Hills, Assam.)
 1888. *Pomatorhinus maclellandi* Jerd. (=God. Aust.), Hume, *Str. Feath* XI, p. 149.
 1922. *Pomatorhinus erythrogenys maclellandi*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 221.

Specimen collected.—1♀ from Karong, 5th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀ : W 84 ; Tl. 98 ; Tr. 41 ; B. 29.

Remarks.—Hume (1888, p. 149) found this babbler common in Manipur.

7. Alcippe nipalensis nipalensis (Hodgson).

(The Nepal Babbler.)

1838. *Siva nipalensis* Hodgson, *Indian Rev.* II, p. 89. (Nepal.)
 1888. *Alcippe nipalensis*, Hume, *Str. Feath.* XI, p. 138.
 1922. *Alcippe nipalensis nipalensis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 275.

Specimen collected.—1♀ from Luagnlong Khunow, ca. 3,250 ft., 9th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀ : W 59 ; Tl. 55 ; Tr. 18 ; B. 12.

Remarks.—Hume (1888, p. 138) found this babbler very common in many parts of Manipur.

8. Alcippe poiocephala phayrei Blyth.

(The Arakan Quaker-Babbler.)

1845. *Alcippe phayrei* Blyth, *J. Asiat. Soc. Bengal* XIV (2), p. 601.
 1888. *Alcippe phayrei*, Hume, *S r. Feath.* XI, p. 139.
 1922. *Alcippe poiocephala phayrei*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 278.

Specimen collected.—1 ♀ from Nanglea Atrow, ca. 3,250 ft., 63 miles from Imphal on Silchar Road, Manipur, 12th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀ : W 66 ; Tl. 68 ; Tr. 24 ; B. 12.

Remarks.—Hume (1888, p. 139) found this bird occasionally in central Manipur, west of Imphal.

9. Leioptila gracilis (Horsfield).

(The Grey Sibia.)

1839. *Hypsipetes gracilis* Horsfield (ex McClelland MS.), *Proc. zool. Soc. London*, p. 159. (Assam.)
 1922. *Leioptila gracilis*, Stuart Baker, *Fauna Brit. India Birds* (2nd ed.) I, p. 298.

Specimen collected.—1♂ from Tairenpokpi, ca. 3,000 ft., 7th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂ : W 92 ; Tl. 119 ; Tr. 31 ; B. 21.

Remarks.—Hume (1888) did not record the Grey Sibia from Manipur, but Stuart Baker (1922, p. 298) had included that area within its range.

10. *Leioptila annectans annectans* Blyth.

(Blyth's Sibia.)

1847. *Leioptila annectans* Blyth, *J. Asiat. Soc. Bengal* XVI, p. 450. (Darjeeling, N. Bengal.)
 1888. *Lioptila* (sic!) *annectans*, Hume, *Str. Feath.* XI, p. 246.
 1922. *Leioptila annectans annectans*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 300.

Specimen collected.—1♂ from Tairenpokpi, 3,000 ft., 7th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂: W 81; Tl. 89; Tr. 25; B. 16.

Remarks.—Hume (1888, p. 246) found Blyth's Sibia common in the higher portions (above 4,500 ft.) of the eastern hills of Manipur.

11. *Siva cyanouroptera cyanouroptera* Hodgson.

(Hodgson's Blue-winged Siva)

1838. *Siva cyanouroptera* Hodgson, *Indian Rev.* II, p. 88. (Nepal.)
 1888. *Siva cyanouroptera*, Hume, *Str. Feath.* XI, p. 248.
 1922. *Siva cyanouroptera cyanouroptera*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 314.

Specimens collected.—3 (2♂♂, 1♀) from Nanglea Atrow, ca. 3,250 ft., 13th and 14th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2♂♂ .	61—62	71	23—25	12—13
1♀ .	60	69	22	13

Remarks.—Hume (1888, p. 248) found this bird common above 4,500 ft. in the western and eastern hills of Manipur.

12. *Chloropsis hardwickii hardwickii* Jardine & Selby.

(The Orange-bellied Chloropsis.)

1929. *Chloropsis Hardwickii* Jardine and Selby, *Ill. Orn.* II, Add. 1, p. 1. (Nepal.)
 1888. *Phyllornis hardwickii*, Hume, *Str. Feath.* XI, p. 185.
 1922. *Chloropsis hardwickii hardwickii*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 349.

Specimen collected.—1♀ from Regailous Camp, ca. 3,250 ft., 11th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀: W 87; Tl. 72; Tr. 19; B. 20.

The wing and tail in this case measure much less than the measurements given for this subspecies by Stuart Baker (1922, p. 349).

Remarks.—Hume (1888, p. 185) found this chloropsis common in many parts of Manipur even above 5,000 ft. There is also a specimen in the Zoological Survey of India Collection (No. 12981) labelled "Manipur, R. D. Oldham", obtained in 1882 or earlier.

13. *Mesia argentauris argentauris* Hodgson.

(The Silver-eared *Mesia*.)

1838. *Mesia argentauris* Hodgson, *Indian Rev.* II, p. 88. (Nepal.)

1888. *Mesia argentauris*, Hume, *Str. Feath.* XI, p. 247.

1922. *Mesia argentauris argentauris*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 354.

Specimen collected.—1♂ from Luanglong Khulen, 9th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂ : W 76 ; Tl. 70 ; Tr. 25 ; B. 15.

Remarks.—Hume (1888, p. 247) found this *mesia* rare in the western hills of Manipur but common in the eastern hills.

Fam. 3 PCYNONOTIDAE.

14. *Criniger gularis flaveolus* (Gould).

(The Indian White-throated Bulbul.)

1836. *Trichophorus flaveolus* Gould, *Proc. zool. Soc. London*, p. 6. (Himalayas—Nepal.)

1888. *Criniger flaveolus*, Hume, *Str. Feath.* XI, p. 178.

1922. *Criniger tephrogenys flaveolus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 363.

1930. *Criniger gularis flaveolus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VIII, p. 612.

Specimen collected.—1♂ from evergreen forest near Kanglatongbi, about 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 8th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♂ : W 106 ; Tl. 92 ; Tr. 21 ; B. 20.

Colour of soft parts.—Iris dark brown ; bill, legs, feet and claws horny grey.

Field notes.—This bulbul was met with in small numbers in evergreen forests ; it was usually found in parties of two or three.

The testes were in the non-breeding condition, measuring 1 × 3 mm.

Remarks.—Hume (1888, p. 178) found this bulbul common in the western hills of Manipur, frequenting dense scrub and creepers. He, however, failed to meet it in the Imphal Valley and in the eastern hills.

15. *Ixos macclellandi* ? *macclellandi* (Horsfield).

(The Rufous-bellied Bulbul.)

1839. *Hypsipetes macclellandi* Horsfield, *Proc. zool. Soc. London*, p. 59 (Assam)

1888. *Hypsipetes macclellandi*, Hume, *Str. Feath.* XI, p. 176.

1922. *Hemixus macclellandi macclellandi*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 377.

1930. *Ixos macclellandi macclellandi*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VIII, p. 613.

Specimens collected.—2♂♂ from Kalanaga, ca. 3,250 ft., 15th and 17th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—2♂♂ : W 105-107 ; Tl. 103-113 ; Tr. 20-22 B. 23-26.

Remarks.—Hume (1888, p. 176) found this bulbul fairly common in the eastern hills of Manipur but absent elsewhere.

Systematic note.—The present specimens are intermediate in coloration between *Ixos m. macclellandi* (Horsf.) and *Ixos m. tickelli* (Blyth).

16. *Molpastes cafer burmanicus* (Sharpe).

(The Burmese Red-vented Bulbul.)

1881. *Pycnonotus burmanicus* Sharpe, *Cat. Birds Brit. Mus.* VI, p. 125. (Pegu, Burma.)
 1888. *Molpastes burmanicus*, Hume *Str. Feath.* XI, p. 183.
 1922. *Molpastes haemorrhous burmanicus*, Stuart Baker, *Fauna Brit. India Birds* (2nd ed.) I, p. 385.
 1930. *Molpastes cafer burmanicus*, Stuart Baker, *Fauna Brit. India, Birds* VIII, p. 613.

Specimens collected.—6 as follows :—

1 ♂ from Luanglong Khulen, ca. 3,250 ft., 9th February 1936. (Naga Hills and Manipur Survey.)

5 (2♂♂, 3♀♀) from forest area about 9-16 miles N. of Imphal on Dimpur Road, ca. 3,000-3,500 ft., 14th, 28th and 29th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
3♂♂	98—106	101—106	24—27	19—21
3♀♀	98—99	98—100	25—26	20—21

Colour of soft parts.—Iris dark brown to chocolate ; bill, legs and feet dark olivaceous to black ; claws horny (in♀♀) ; foot-pads pale olivaceous.

Field notes.—This bulbul was very common in evergreen forests especially in the more open areas.

The pair shot on 14th December 1945 was evidently courting, but the gonads of the specimens collected during December 1945 were in the non-breeding condition. The ovary measured 4 × 8 mm., with the largest ova not more than 1 mm. in diameter ; the testes measured 1 × 1 mm.

Remarks.—Hume (1888, p. 183) also found this bulbul very common in the western hills of Manipur but less so in the eastern hills ; he reported that they were found in association with “ *Otocompsa emeira* ”

17. *Otocompsa flaviventris flaviventris* (Tickell).

(The Black-crested Yellow Bulbul.)

1133. *Vanga flaviventris* Tickell, *J. Asiat. Soc. Bengal* II, p. 573. (Dampara in Dholbhum, Bihar.)
 1888. *Ruliyula flaviventris*, Hume, *Str. Feath.* XI, p. 180.
 1922. *Otocompsa flaviventris flaviventris*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 397.

Specimens collected.—3 as follows (Naga Hills and Manipur Survey) :—
 1♂ from Luanglong Khulen, ca. 3,250 ft., 9th February 1936 ; and 2 (1♂, 1♀) from Kalanaga, ca. 3,250 ft., 16th February 1936.

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2♂♂	92	91—97	16—19	13—14
1♀	83	82	18	15

Remarks.—Hume (1888, p. 180) found this bulbul common in the western hills of Manipur but absent in the Imphal Valley and the eastern hills.

18. *Spizixos canifrons canifrons* Blyth.

(The Finch-billed Bulbul.)

1845. *Spizixos canifrons* Blyth, *J. Asiat. Soc. Bengal* XIV, p. 571. (Khasia Hills, Assam.)1888. *Spizixus canifrons*, Hume, *Str. Feath.* XI, p. 180.1922. *Spizixus canifrons canifrons*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 400.*Specimen collected.*—1♂ from Kalanaga, ca. 3,250 ft., 16th February 1936. (Naga Hills and Manipur Survey.)*Measurements* (mm.).—1♂ : W. 95 ; Tl. 98 ; Tr. 21 ; B. 15.*Remarks.*—Hume (1888, p. 180) found this bulbul rare in Manipur ; he met with it only in the western hills.**19. *Microtarsus atriceps major* (Robinson & Kloss).**

(The Black-headed Bulbul.)

1922. *Microtarsus melanocephalus melanocephalus* (Gm.) (in part), Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) I, p. 423.1923. *Brachypodius atriceps major* Robinson & Kloss, *J. Fed. Malay States Mus.* XI, p. 55. (Cachar, Assam.)1930. *Microtarsus atriceps major*, Stuart Baker, *Fauna Brit. India, Birds* VIII, p. 617.*Specimen collected.*—1♂ from Nanglea Atrow, ca. 3,250 ft., 14th February 1936. (Naga Hills and Manipur Survey.)*Measurements* (mm.).—1♂ : W 85 ; Tl. 81 ; Tr. 15 ; B. 16.*Remarks.*—Neither Godwin Austen (1874) nor Hume (1888) recorded this bulbul from Manipur ; Stuart Baker (1922), however, had included that area within its range.

Fam. 4. TURDIDAE.

20. *Heteroxenicus cruralis cruralis* (Blyth).

(The White-browed Short-wing.)

1843. *Calliope(?) cruralis* Blyth, *J. Asiat. Soc. Bengal* XII, p. 933. (Darjeeling, N. Bengal.)1888. *Brachypteryx cruralis*, Hume *Str. Feath.* XI, p. 121.1924. *Heteroxenicus cruralis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 17.1949. *Heteroxenicus cruralis cruralis*, Roonwal & Nath, *Rec. Indian Mus.* XLV [1947], p. 321.*Specimens collected.*—3 (1♂, 2♀♀) from Nanglea Atrow, ca. 3,250 ft., 13th and 14th February 1936. (Naga Hills and Manipur Survey.)*Measurements* (mm.).—

	W.	Tl.	Tr.	B.
1♂	71	48	32	
2♀♀	65—68	46—47	29—30	15(1♀)

Remarks.—Hume (1888, p. 121) wrote that “ he never met with it in Manipur ” But later authors give its range as : Himalayas from Simla, through Sikkim and Assam to Karenni in N. Burma. The present specimens, however, constitute, we believe, the first actual record from Manipur.

Systematic note.—Some aspects of the systematics of this bird had been in a state of confusion, and the account in Stuart Baker's *Fauna* (1924, p. 17) only worsened that confusion. These points have been cleared by Roonwal and Nath (1949).

21. *Saxicola caprata burmanica* Stuart Baker.

(The Burmese Stone-chat.)

1888. *Pratincola caprata* Linn. (in part), Hume, *Str. Feath.* XI, p. 190.

1923. *Saxicola caprata burmanica* Stuart Baker, *Bull. Brit. orn. Cl.* XLIII, p. 19. (Pegu, Burma.)

1924. *Saxicola caprata burmanica*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 24.

Specimens collected.—2♂♂ as follows:—1♂ from Imphal Valley, ca. 2,500 ft., 3rd December; and 1♂ from 9 miles N. of Imphal on Dimapur Road, ca. 3,000 ft., 29th December 1945. (Major M. L. Roonwal.)

Measurements (mm).—2♂♂: W. 63-69; Tl. 52-53; Tr. (1♀) 23; B. 9-10.

Colour of soft parts.—Iris dark chocolate; bill black; legs, feet and claws dark horny.

Field notes.—The Burmese Stone-chat was found in small numbers in the Imphal Valley up to about 3,500 ft., but not in the higher altitudes.

The testes were in the non-breeding condition and measured 1 × 1 mm.

Remarks.—Hume (1888, p. 190) found the Burmese Stone-chat common in the Manipur basin but absent in the hills.

22. *Saxicola torquata* (Linn.) (subsp.?).

(The Indian Bush-chat.)

1766. *Muscicapa torquata* Linn., *Syst. Nat.* (12th ed.) I, p. 328. (West South Africa.)

1888. *Pratincola maurus*, Hume, *Str. Feath.* XI, p. 191.

1924. *Saxicola torquata* and its subspecies, Stuart Baker, *Fauna Brit. India Birds* (2nd ed.) II, p. 27.

Specimens collected.—2 as follows:—

1♂ from Karong, 5th February 1936. (Naga Hills and Manipur Survey.)

1 (unsexed) from Imphal Valley, ca. 3,000 ft., 3rd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—2♂♂: W 71-72; Tl. 52-60; Tr. 23-24; B. 13 (1♂).

Colour of soft parts.—Iris dark chocolate, bill black; legs, feet and claws horny black.

Field notes.—The Indian Bush-chat was fairly common in the Imphal Valley.

Remarks.—Hume (1888, p. 191) found it fairly common in Manipur.

Systematic note.—The differentiation of the various subspecies of *Saxicola torquata*, as given by Stuart Baker (1924, pp. 27-28) is not at all clear to us. An examination of the moderately large series of specimens in the collection of the Zoological Survey of India from India, Burma, Afghanistan and Central Asia (Yarkand) shows that the extent of white area at the extreme base of the tail feathers is a very variable character and cannot be used for subspecific distinction. In specimens from the same area the white may be either wholly absent or present in a variable degree. There is no other clear character known to us which would make subspecific distinction of the Indian examples possible beyond a reasonable measure of doubt. Pending a proper revision, therefore, we consider it desirable to designate Indian birds as *S. torquata* only.

23. *Enicurus immaculatus* Hodgson.

(The Black-backed Forktail.)

1836. *Enicurus immaculatus* Hodgson, *Asiat. Res.* XIX, p. 190. (Nepal.)
 1888. *Henicurus immaculatus*, Hume, *Str. Feath.* XI, p. 288.
 1924. *Enicurus immaculatus*, Stuart Baker, *Faun. Brit. India, Birds* (2nd ed.) II, p. 61.

Specimens collected.—2♀♀ from Nanglea Atrow, 63 miles from Imphal on Silchar Road, ca. 3,250 ft., 12th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—2♀♀ : W 87-90 ; Tl. 110-115 ; Tr. 26-27 ; B. 15.

Remarks.—Hume (1888, p. 228) found it common in the western hills of Manipur but absent in the eastern hills.

24. *Chaimarrhornis leucocephala* (Vigors).

(The White-capped Redstart.)

1831. *Phoenicura leucocephala* Vigors, *Proc. zool. Soc. London*, p. 35. (Himalayas.)
 1888. *Chaimarrhornis leucocephalus*, Hume, *Str. Feath.* XI, p. 197.
 1924. *Chaimarrhornis leucocephalus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 79.

Specimens collected.—2♂♂ from Kanglatongbi area about 16 miles N. of Imphal, ca. 3,500 ft., 26th November 1946. (Major M. L. Roonwal.)

Measurements (mm.).—2♂♂ : W 100 ; Tl. 77-80 ; Tr. 31 ; B. 15-16.

Colour of soft parts.—Iris dark brown ; bill, legs and claws black.

Field notes.—This redstart was frequently met with on rocky water-courses in or near forests.

The testes were in the non-breeding condition, measuring 1 × 1 mm.

Remarks.—Hume (1888, p. 197) found this redstart common in the western hills of Manipur but absent in the Imphal Valley and the eastern hills.

25. Rhyacornis fuliginosa fuliginosa (Vigors).

(The Plumbeous Redstart.)

1831. *Phoenicurus fuliginosa* Vigors, *Proc. zool. Soc. London*, p. 35. (Himalayas.)
 1888. *Rhyacornis fuliginosus*, Hume *Str. Feath.* XI, p. 196.
 1924. *Rhyacornis fuliginosa fuliginosa*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 81.

Specimens collected.—3(2♂♂, 1♀) from Kanglatongbi area, 18 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 19th, 22nd and 23rd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2♂♂	78—79	49—56	22—23	11—12
1♀	72	45	21	11

Colour of soft parts.—Iris, legs, feet and claws dark brown ; bill black.

Field notes.—This redstart was noticed occasionally on the banks of the Imphal River and other smaller streams either in or near evergreen forest.

The gonads were in the non-breeding condition. The testes measured 1 × 2 mm. ; and the ovary 4 × 7 mm., with largest ova not more than 1 mm. in diameter.

Remarks.—Hume (1888, p. 196) found this redstart common in the western hills of Manipur.

26. Copsychus saularis saularis (Linnaeus).

(The Indian Magpie-Robin.)

1758. *Gracula saularis* Linnaeus, *Syst. Nat.* (10th ed.) I, p. 109. (Asia = Bengal.)
 1888. *Copsychus saularis*, Hume, *Str. Feath.* XI., p. 189.
 1924. *Copsychus saularis saularis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 113.

Specimen collected.—1 (unsexed) from Kanglatongbi area, 17 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 10th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1 (unsexed) : W 95 ; Tl. 84 ; Tr. 28 ; B. 20.

Colour of soft parts.—Iris olive brown ; bill black ; legs, feet and claws dark horny.

Field notes.—This bird was found to be quite common in the open country around Imphal.

Remarks.—Hume (1888, p. 189) found it fairly common in Manipur.

27. Turdus boulboul (Latham).

(The Grey-winged Blackbird.)

1790. *Lanius boulboul* Latham, *Index Orn.* I, p. 80. (India ; subsequently restricted to Darjeeling, N. Bengal.)
 1888. *Merula boulboul*, Hume, *Str. Feath.* XI, p. 128.
 1924. *Turdus boulboul*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 130.

Specimens collected.—2(1♂?, 1♀) from Luanglong Khulen, Imphal-Silchar Road, Manipur, ca. 3,250 ft., 9th February 1936. (Naga Hills and Manipur Survey.)

The ♂ has the typical ♂ plumage, but was labelled “♀” in the field, probably by error.

Measurements (mm).—

	W.	Tl.	Tr.	B.
1♂ (?)	147	112	31	25
1♀	139	112	35	25

Remarks.—Hume (1888, p. 128) shot a pair of this blackbird in the Barak Valley (western hills of Manipur), but did not meet it elsewhere.

28. *Turdus dissimilis* Blyth.

(The Black-breasted Thrush.)

1847. *Turdus dissimilis* Blyth, *J. Asiat. Soc. Bengal* XVI, p. 144. (“Lower Bengal”; “in the south”, i.e., Peninsular India; and “the Himalaya”.)
 1924. *Turdus dissimilis*, Stuart Baker, *Fauna Brit. India. Birds* (2nd ed.) II, p. 140.

Specimen collected.—1♀ from Regailous Camp, about 63 miles west of Imphal on Silchar Road, Manipur, ca. 3,250 ft., 11th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm).—1♀ : W 123 ; Tl. 80 ; Tr. 32 ; B. 18.

Remarks.—Hume (1888) did not find this bird in Manipur, but Oates (1890, p. 133) recorded specimens from that area.

29. *Monticola solitaria affinis* (Blyth).

(The Burmese Blue Rock-Thrush.)

1842. “*Petrocincla Manillensis* (?)” Blyth, *J. Asiat. Soc. Bengal* XI, part 1, p. 460.
 1843. *Petrocincla affinis* Blyth, *J. Asiat. Soc. Bengal* XII, part 1, p. “177*” (bis). (“Tenasserim provinces” in Burma; and Darjeeling in N. Bengal. Restricted to “Tenasserim provinces”, *vide infra*.)
 1847. *Petrocincla affinis*, Blyth, *J. Asiat. Soc. Bengal* XVI, part 1, p. 151.
 1849. *Petrocincla affinis*, Blyth, *Catal. Birds. Mus. Asiat. Soc. [Bengal]*, Calcutta, p. 164, No. 961.
 1877. *Petrocossyphus cyaneus* (in part), Jerdon, *Birds of India* I, p. 511.
 1881. *Monticola cyanus* (in part), Seebohm, *Catal. Birds. Brit. Mus.* V, pp. 316-318.
 1881. *Monticola cyanus solitaria* (in part), Seebohm, *Catal. Birds Brit. Mus.* V, pp. 318-319.
 1888. *Cyanocinclus cyanus*, Hume, *Str. Feath* XI, p. 124.
 1890. *Petrophila cyanus* (in part), Oates, *Fauna Brit. India, Birds* II, p. 146.
 1910. *Monticola solitaria pandoo* (in part), Hartert, *Vögel paläarkt. Fauna* I, p. 675.
 1924. *Monticola solitaria affinis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 175.
 1935. *Monticola solitaria affinis*, Stanford [& Ticehurst], *J. Bombay nat. Hist. Soc.* XXXVII (4), p. 866.
 1938. *Monticola solitaria affinis*, Stanford and Ticehurst, *Ibis* (14) II, p. 397.

Specimens collected.—10 (6♂♂, 3♀♀, 1 unsexed) from Kanglatongbi area, about 17 miles N. of Imphal on Dimapur Road, Manipur, ca. 3,500 ft., 27th and 29th November and 3rd, 14th, 18th and 29th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
6♂♂	117—127	86—92	28—30	20—25
3♀♀	110—119	80—87	29	21—23
1 unsexed	127	94	30	24

Colour of soft parts.—Iris hazel to dark hazel brown; mouth yellow; bill, legs, feet and claws dark olivaceous horny to horny black; rim of eyelids also black.

Field notes.—This thrush was quite common in the Imphal valley and the foot-hills.

The gonads were in the non-breeding condition. The ovaries (3rd, 18th and 29th December) measured about 4×7 mm., with the largest ova not more than one mm. in diameter; the testes (27th November to 29th December) measured about 1×1 mm. In two of the males only the left testis was present, the right one being entirely wanting.

Remarks.—Hume (1888, p. 124) found "*cyanus* Linn." common in the western hills of Manipur, but he wrote that among the several specimens that he obtained, "not one showed a single rufous feather" This suggests that his specimens were not *affinis* Bly. but probably *pandoo* Sykes. Stanford (1935, p. 866) found *affinis* Bly. common in Lower Burma; and Stanford and Ticehurst (1938, p. 397) remarked that while none was procured in N. Burma, it certainly occurs there.

Systematic Note.

Both the males and females in the specimens collected from Manipur are clearly assignable to *affinis* Blyth. The males are greyish blue with a dirty brown tinge and there is a considerable amount of white mottling, in contrast to *pandoo* Sykes where such markings are practically absent. The female of *affinis* is similarly contrasted from *pandoo* as regards white markings specially above, and also differs in having more blue mixed with brown, whereas in *pandoo* there is hardly any blue.

One male (coll. 29th December) with a clear pair of testes (and no ovaries) had the female plumage—there cannot be any mistake about the sexing as it was done with special care for this series of rock-thrushes.

The rufous-chestnut patch on the under tail-coverts, which characterises the males of *affinis*, varies in extent from about 10×12 mm. to barely a touch of rufous on the tips of a few feathers. Even in the absence of the rufous-chestnut, however, it is quite easy to distinguish *affinis* from the other subspecies.

As the key and description given by Stuart Baker (1924, p. 173), for the separation of the subspecies of *Monticola solitaria* are not satisfactory, the following key is given for the separation of the subspecies *longirostris* Bly.(=*transcaspica* Hart.), *pandoo* Sykes and *affinis* Bly.

Key to Indian subspecies of Monticola solitaria.

(A) Colour all over grey-blue both above and below. White transverse mottlings almost wholly obsolete both above and below. No rufous-chestnut on breast, abdomen, under tail-coverts and around vent.

(a) Paler all over *M. s. longirostris* (Bly.), ♂

(b) Darker all over *M. s. pandoo* (Syk.), ♂.

(B) Colour all over dark grey-blue with a tinge of dark brown owing to feathers being so tipped. White transverse mottlings conspicuously present below and on the wings, and less so above. More or less rufous-chestnut present around vent and on under tail-coverts (occasionally wanting here), and sometimes even on breast and abdomen *M. s. affinis* (Bly.), ♂.

(C) Colour all over brown with or without a grey-blue tinge.

(a) Colour dark-brown. White transverse mottlings more or less conspicuously present below and on the wings, and less so above.

(aa) White transverse mottlings more conspicuous; colour tinged with grey-blue *M. s. affinis* (Bly.), ♀.

(bb) White transverse mottlings less conspicuous, especially above and on abdomen. Colour not tinged with grey-blue. *M. s. pandoo* (Syk.), ♀.

(b) Colour pale brown. White transverse mottlings almost obsolete.

.... *M. s. longirostris* (Bly.), ♀.

*Type-specimens and Type-localities.**M. s. affinis* (Blyth).—

Type-specimens.—The type series believed to be present in the Indian Museum (Zoological Survey of India), Calcutta, is no longer traceable, as shown below. Out of the 7 specimens, including the types, listed by Blyth in his *Catal.* (1849, p. 164, No. 961), only 5 are now present in the collection of the Indian Museum which received the entire collection of the Asiatic Society of Bengal. The particulars of these 5 specimens are given below, along with the particulars on the original A.S.B. parchment labels that they bear :—

1 and 2. Two males. “No. 961. *Petrocincla affinis* Blyth. Arakan. ♂. Capt. Abbott. 1843-5. A.S.B.” Evidently two out of the three, Nos. 961*A, B, C* of *Catal.*

3 and 4. Two females. “Type No. 961. *Petrocincla affinis* Blyth ♀. Arakan. Capt. Phayre. 1843-5. A.S.B.” In one of these (with the tail wanting), the word “Type” is absent. Evidently Nos. 961 *D, E* of *Catal.*

5. One male. “No. 961. Type of *Petrocincla affinis* Blyth. Darjeeling. F Mr. Webb. 1845. A.S.B.” ♂ with considerable rufous chestnut on belly and under tail-covers. Clearly No. 961 *F* of *Catal.*

The remaining two specimens, *viz.*, one out of Nos. 961 *A, B, C* (♂ from Arakan, Capt. Abbott, 1843-5) and No. 961 *G* (♂, “with more rufous on belly”, from “Tenasserim, E. O. Ryley Esq. (1847)”), are not traceable.

In the first account, Blyth (*op. cit.*, 1843, p. 177*, *bis*) wrote as follows :—“A second species appears to exist in the specimens from the Tenasserim provinces, and to this I refer a fine male from Darjeeling, where the collector lately employed by the Society never obtained more

than this one example. Judging from the Darjeeling specimen (for those from Tenasserim have the tail imperfect), it would appear readily distinguishable from *P. Manillensis* by the shape of the tail, which (instead of being squared) has its outermost feathers nearly half an inch shorter than the middle ones. The mottlings on the upper-parts are nearly obsolete, and those of the lower-parts but little more developed; and there would appear to be generally some trace of ferruginous, more or less: in the Darjeeling specimen this is confined to the lateral margins of two or three of the lower tail-coverts; and successively more developed in two from Tenasserim, as formerly described by me. I shall designate this presumed species *P. affinis*."

The earlier description referred to above by Blyth is to be found in his report published in 1842, pp. 460-461 (*op. cit.*, Synonymy) where two specimens were described from "Tenasserim", in addition to others from different localities, as "*Petrocincla Manillensis* (?)".

Subsequently, Blyth (*op. cit.*, 1847, p. 151) amplified the above description thus:—"Rare at Darjeeling; but common along the eastern side of the Bay of Bengal, from Tipperah and Arracan to the Tenasserim Provinces. The males of this species have generally some intermixture of rufous about the vent and lower tail-coverts, varying in quantity, but seldom nearly so much as in *P. Manillensis*; whereas in *P. pandoo*, I believe that there is never a trace of this rufous†..."

"† A Tenasserim specimen just received has much more rufous on the abdomen than I ever observed before in *P. affinis*, but its distinctness from *P. manillensis* is nevertheless obvious. This bird likewise inhabits Assam; and the Society has just received a specimen of it from Goalpara."

It is thus clear that Blyth's two type-specimens of *affinis* came from the "Tenasserim provinces".³ It must, however, be borne in mind that the Tenasserim of those days was not as restricted as it is to-day, but also included a considerable portion of Central Burma—it covered a narrow strip of territory from the Mergui Archipelago in the south (latitude 13.5° N.) to about latitude 19° N., as given in Hume's map.⁴

The two type-specimens of *affinis* Bly. (mentioned by Blyth in 1842 and 1843) were thus not listed in Blyth's *Catal.* (1849), nor are they traceable in the Indian Museum Collection; they must be presumed to be lost. The third specimen from Tenasserim, a topotype (Blyth, 1847), is also not traceable.⁵

M. s. longirostris (Bly.).—

Type-specimen.—Ticehurst⁶ (1922) has shown that *transcaspicus* Hartert⁷ (1909) is a synonym of *longirostris* Blyth⁸ (1847). The holotype of *longirostris* Bly. is in the Indian Museum (Z.S.I.), Calcutta. It is

³ Hartert, E. *Vög. paläark. Fauna* I, p. 675 (1910), wrongly gives the type-locality as Darjeeling.

⁴ Hume, A. *Stray Feath.* II (6), (1874), frontpiece.

⁵ Seebohm (1881, *op. cit.*) lists 3 specimens from Tenasserim, in the British Museum Collection, but these are not types.

⁶ Ticehurst, C. B. *Ibis* (11) IV, p. 641 (1922).

⁷ Hartert, C. B., *Bull. Brit. Orn. Cl.* XXIII, p. 43 (1909).

⁸ Blyth, E., *J. Asiat. Soc. Bengal* XVI (1) p. 150 (1847).

a faded, tailless female with a very long upper mandible (as Blyth had stated); the colour is pale, faded brown with grey tinge above; the lower parts are similar but with many dusky patches. It bears the following Asiatic Society of Bengal label on parchment:— “No. 960. Type of *Petrocincla longirostris* Blyth. Scinde. Capt. Boys. (C of Cat. ♀) 1847 A.S.B.” It is thus clearly No. 960C, *Petrocincla cyaneous* (syn. *P. longirostris* Bly.) of Blyth’s *Catalogue* (1849, p. 164). It measures (in mm.) as follows, Blyth’s measurements (1847, p. 150), in inches, being given for comparison:—

Wing	Tail	Tarsus	Bill
Blyth : 4½"	3½"	1"	1½" (from gape).
110 mm.		30 mm.	{ 33.5 mm. (from gape). 29.0 mm. (from base). 24.0 mm. (exposed culmen).

Type-locality.—Blyth (1847, p. 150) wrote that the type female was “presented to the Society by Captain Boys who procured it on the march from Scinde to Ferozepore”, though the label on the specimen merely states “Scinde” and the *Catal.* (Blyth, 1849, p. 164) gives the locality as “from Sindh”. Following the original description, the type-locality must be “between Sind and Ferozepore”, the latter place being in the Punjab⁹. Stuart Baker (1930, p. 124; 1930x, p. 625) gives the type-locality merely as “Ferozepore”, but without justification.

30. *Myophonus coeruleus temminckii* Vigors.

(The Himalayan Whistling Thrush.)

1831. *Myiophoneus temminckii* Vigors, *Proc. zool. Soc. London*, p. 171.
(Himalayas; restricted to Simla-Almora Districts, *vide* Ticehurst & Whistler, *Ibis*, 1924, pp. 468-473.)
1888. *Myiophoneus temminckii*, Hume, *Str. Feath.* XI, p. 122.
1924. *Myiophoneus temminckii temminckii*, Stuart Baker, *Faun. Brit. India, Birds* (2nd ed.) II, p. 180.
1930. *Myophonus coeruleus temminckii*, Stuart Baker, *Faun. Brit. India, Birds* (2nd ed.) VIII, p. 626.

Specimens collected.—9(3♂♂, 6♀♀) from Manipur, as follows:—

1♂ and 1♀ from Luanglong Khulen, 8th and 9th February 1936; 1♂ from Tairenpokpi, 7th February 1936; 1♀ from Nanglea Atrow, 14th February 1936. (Naga Hills and Manipur Survey.)

1♂ and 4♀♀ from Kanglatongbi area, 16-18 miles N. of Imphal on Dimapur Road, 23rd and 26th November, and 18th, 22nd and 23rd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
3♂♂	168—179	120—134	52—58	28—34
Av. :	(173)	(129)	(54)	(23)
6♀♀	167—177	121—139	49—56	26—34
Av. :	(170)	(128)	(52)	(31)
				(5♀♀ only)

⁹ There is a town called Ferozepore also in the United Provinces, but this probably is not the one meant.

Colour of soft parts.—Iris dark brown. Upper bill smoky, yellow at tip; lower bill orange. Legs, feet and claws black; pads olive green in male and smoky olivaceous in female.

Field notes.—This bird was commonly seen near hill-streams and on banks of the Imphal River.

The gonads were in the non-breeding condition. The ovary measured 6×9 mm., with the largest ova not more than 1 mm. in diameter; the testes measured 2×2 mm.

Remarks.—Hume (1888, p. 122) found this thrush common in the western hills of Manipur but absent in the eastern hills.

Fam. 5. MUSCICAPIDAE.

31. *Niltava sundara sundara* Hodgson.

(The Indian Rufous-bellied Niltava.)

1837. *Niltava sundara*, Hodgson, *Indian Rev.* I, p. 650. (Nepal.)

1888. *Niltava sundara*, Hume, *Str. Feath.* XI, p. 112.

1924. *Niltava sundara sundara*, Stuart Baker, *Faun. Brit. India, Birds* (2nd ed.) II, p. 259.

Specimen collected.—1♂ from Nanglea Atrow, 63 miles from Imphal on Imphal-Silchar Road, Manipur, 12th December 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂: W 85; Tl. 71; Tr. 22; B. 12.

Remarks.—Hume (1888, p. 112) did not find this bird in Manipur, but Stuart Baker (1924) includes that area within its range.

Fam. 6. LANIIDAE.

32. *Lanius nasutus tricolor* (Hodgson).

(The North India Black-headed Shrike.)

1837. *Collurio tricolor* Hodgson, *Indian Rev.* I, p. 446. (Nepal.)

1888. *Lanius nigriceps* (Fr.) (in part), Hume, *Str. Feath.* XI, p. 89.

1924. *Lanius nigriceps nigriceps* (in part), Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 292.

Specimens collected.—1♂ and 1♀, about 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 24th November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	96	122	31	
1♀	98	121	31	15

Colour of soft parts.—Iris chocolate brown; bill horny black, lower bill pale pinkish grey at base; legs, feet and claws black.

Field notes.—This shrike was common. It was usually found singly on telegraph wires and such other perches in the open.

The gonads were in the non-breeding condition. The ovary measured 4×7 mm., with the largest ova less than 1 mm. in diameter; the testes measured 2×2 mm.

Remarks.—Hume (1888, p. 89) found it common in Manipur.

Systematic note.—Whistler and Kinnear (1933, p. 334) have shown that the specific name for this shrike should be *nasutus*, and further that there are two subspecies in India, viz., a southern grey-headed *L. nasutus nigriceps* (Franklin) and a northern rufous-backed *L. nasutus tricolor* (Hodgson). The Manipur birds recorded here are, of course, *tricolor*.

33. *Lanius schach nipalensis* Hodgson.

(The Grey-backed Shrike.)

1837. *Lanius schach nipalensis* Hodgson, *Indian Rev.* I, p. 445. (Nepal.)

1888. *Lanius tephronotus* Vig., Hume, *Str. Feath.* XI, p. 88.

1924. *Lanius tephronotus* (in part), Stuart Barker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 297.

1933. *Lanius schach nipalensis*, Whistler and Kinnear, *J. Bombay nat. Hist. Soc.* XXXVI (2), p. 337.

Specimens collected.—3 specimens from Manipur, as follows :—

1♂ from Imphal, ca. 2,800 ft., 3rd February 1936; and 1♀ from Luang-long Khulen, 8th February 1936. (Naga Hills and Manipur Survey.)

1♂ from Kanglatongbi area, 15 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 14th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2♂♂	97-100	109-112	28-30	17-18
1♀	104	117	28	18

Colour of soft parts.—Iris dark chocolate; bill dark horny, pale at base; legs, feet and claws horny black.

Field notes.—This shrike was seen frequently perching singly on telegraph wires and such other perches in the open.

The testes were in the non-breeding condition and measured 1×1 mm.

Remarks.—Hume (1888, p. 88) found this shrike common in Manipur.

34. *Lanius cristatus cristatus* (Linnaeus).

(The Brown Shrike.)

1758. *Lanius cristatus* Linnaeus, *Syst. Nat.* (10th ed.), p. 93. (Bengal.)

1888. *Lanius cristatus*, Hume, *Str. Feath.* XI, p. 92.

1924. *Lanius cristatus cristatus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 300.

Specimen collected.—1♂ from Imphal Valley, ca. 2,500 ft., 3rd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♂: W 90; Tl. 86; Tr. 26; B. 16.

Colour of soft parts.—Bill black towards tip, pale horny at base; legs, feet and claws dark brown.

Field notes.—This species was seen occasionally and was less common than *Lanius nasutus tricolor* mentioned above.

The testes were in the non-breeding condition and measured 1 × 1 mm.

Remarks.—Hume (1888, p. 92) found this shrike fairly common in Manipur.

Fam. 7. DICRURIDAE.

35. *Dicrurus macrocercus macrocercus* Vieillot.

(The Black Drongó.)

1817. *Dicrurus macrocercus* Vieillot, *Nouv. Dict. d'Hist. Nat.* IX, p. 588. (Java.)

1888. *Buchanga atra* (Herm.), Hume, *Str. Feath.* XI, p. 98.

1924. *Dicrurus macrocercus albirictis* Hodgson, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) II, p. 356.

Specimens collected.—4 specimens from Manipur, as follows:—1♀ and 1 unsexed, from 9 miles N. of Imphal on Dimapur Road, ca. 3,000 ft., 29th December 1945; 1♂ and 1 juv. ♀ from Kanglatongbi area, 16-18 miles N. of Imphal, ca. 3,500 ft., 8th and 11th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂ (first winter?)	127	125	16	21
1 ad. ♀	150	153	24	23
1 ad. (unsexed)	148	152	19	23
1 juv. ♀	121	120	14	21

Colour of soft parts.—Iris (♂) brownish purple with a thin inner ring of brown; bill black; legs, feet and claws horny black.

Field notes.—The Black Drongó was fairly common in the open forest.

The gonads were in the non-breeding condition. The ovary measured 4 × 6 mm., with the largest ova less than 1 mm. in diameter; the testes measured 1 × 3 mm.

Remarks.—Hume (1888, p. 98) found the Black Drongó rare in northern and central Manipur, fairly common in the southern parts and absent in the eastern and western hills.

Systematic note.—Stuart Baker (1924) separates the Black Drongoes of India into two subspecies—a western *D. m. macrocercus* Vieillot and an eastern *D. m. albirictis* Hodgson. However, an examination of several skins from all over India has convinced us that no such distinction is possible, and all Indian birds, including those found in Manipur, are *D. m. macrocercus*.

36. *Dicrurus leucophaeus hopwoodi* Stuart Baker.

(The Assam Grey Drongo.)

1888. *Buchanga pyrrhops* Hodgs.(?), Hume, *St. Feath.* XI, p. 99.
 1918. *Dicrurus leucophaeus hopwoodi* Stuart Baker, *Novit. Zool.* XXV, p. 294.
 (Dacca, E. Bengal.)
 1924. *Dicrurus leucophaeus hopwoodi*, Stuart Baker, *Fauna Brit. India, Birds*
 (2nd ed.) II, p. 361.

Specimen collected.—1♂ from Kanglatongbi area, about 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 29th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♂: W 140; Tl. 147; Tr. 21; B. 25.

Colour of soft parts.—Bill dull black; legs, feet and claws black.

Field notes.—The testes were in the non-breeding condition, measuring about 1 × 1 mm.

Remarks.—Hume (1888, p. 99) found it “not rare” in the eastern and western hills of Manipur but absent in the Imphal basin.

Fam. 8. IRENIDAE.

37. *Irena puella puella* (Latham).

(The Fairy Bluebird.)

1790. *Coracias puella* Latham, *Index. Orn.* I, p. 171. (India.)
 1888. *Irena puella*, Hume, *Str. Feath.* XI, p. 186.
 1926. *Irena puella puella*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.)
 III, p. 1.

Specimen collected.—1♀ from Nanglea Atrow, 63 miles from Imphal on Silchar Road, 9th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀: W. 136; Tl. 119; Tr. 19; B. 23.

Remarks.—Hume (1888, p. 186) found this bird very common in forests in certain parts of Manipur.

Fam. 9. ORIOLIDAE.

38. *Oriolus chinensis tenuirostris* Blyth.

(The Burmese Black-naped Oriole.)

1846. *Oriolus tenuirostris* Blyth, *J. Asiat. Soc. Bengal* XV, p. 48. (Central India.)
 1888. *Oriolus tenuirostris*, Hume, *Str. Feath.* XI, p. 187.
 1926. *Oriolus chinensis tenuirostris*, Stuart Baker, *Fauna Brit. India, Birds*
 (2nd ed.) III, p. 9.

Specimen collected.—1♀ from Imphal, ca. 2,600 ft., 4th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀: W 152; Tl. 91; Tr. 25; B. 30.

Remarks.—Godwin Austen (1874, p. 166) recorded it from Bishenpur a little west of Imphal, while Hume (1888, p. 187) found it fairly common in and immediately around the Imphal basin but not higher up in the hills.

39. *Oriolus traillii traillii* (Vigors).

(The Maroon Oriole.)

1831. *Pastor traillii* Vigors, *Proc. zool. Soc. London*, p. 175, (Darjeeling, Himalayas.)
 1889. *Oriolus traillii*, Oates, *Fauna Brit. India, Birds I*, p. 508.
 1926. *Oriolus traillii*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 14.

Specimen collected.—1 juv. ♂ from Luanglong Khulen, 9th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1 juv. ♂: W 141; Tl. 109; Tr. 30; B. 28.

Remarks.—Godwin Austen (1874) and Hume (1888) did not record this oriole from Manipur, but Oates (1889, p. 508) included that area within its range.

Fam. 10. STURNIDAE.

40. *Acridotheres tristis tristis* (Linnaeus).

(The Common Myna.)

1766. *Paradisea tristis* Linnaeus, *Syst. Nat.* (12th ed.) I, p. 167. (Philippines, *in errore*=Calcutta.)
 1888. *Acridotheres tristis*, Hume, *Str. Feath.* XI, p. 262.
 1926. *Acridotheres tristis tristis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 53.

Specimens collected.—4 (3♂♂, 1♀.), 10 miles N. of Imphal on Dimapur Road, Manipur, ca. 3,000 ft., 9th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
3♂♂	140-144	91-95	39-42	22-25
1♀	136	87	38	24

Colour of soft parts.—Irish brownish red, with a circle of about 14-15 white spots; these spots appear to be a regular feature, as they are present in all the specimens. Skin around eye orange. Bill, legs and feet yellow; claws greyish yellow at base, greyish horny at tips.

Field notes.—This Myna was very common in the Imphal Valley and higher up around Kanglatongbi (ca. 3,500 ft.).

The testes measured 2 × 4 mm.; and the ovary 4 × 10 mm., with the largest ova not more than 1 mm. in diameter.

Remarks.—Hume (1888, p. 262) found this bird fairly common in the Imphal Valley, but stated that it is never seen in the hills, though it is elsewhere by no means confined to the plains, being found, for instance, in the Himalayas up to over 7,000 ft. altitude. However, as mentioned above, I found it up to at least 3,500 ft. in the Kanglatongbi area in Manipur.

41. *Aethiopsar grandis infuscatus* Stuart Baker.

(The Assam Jungle Myna.)

1888. *Acridotheres siamensis* (Swin.), Hume, *Str. Feath.* XI, p. 264.
1889. *Acridotheres grandis* (Moore) (in part), Oates, *Fauna Brit. India, Birds* I, p. 541.
1918. *Aethiopsar grandis infuscatus* Stuart Baker, *Bull. Brit. orn. Club* XXXVIII, p. 70. (Lower Chindwin, Burma.)
1926. *Aethiopsar grandis infuscatus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 59.

Specimens collected.—3♂♂ from Kanglatongbi area, 15 miles N of Imphal on Dimapur Road, Manipur, ca. 3,500 ft., 14th November and 14th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—3♂♂ : W 133-137 ; Tl. 83-100 ; Tr. 37-40 ; B. 22-25.

Colour of soft parts.—Iris brown ; bill, legs and feet orange yellow ; claws yellowish horny.

Field notes.—This species was common in the open country near Kanglatongbi.

The testes were in the non-breeding condition, measuring 1 × 1 mm.

Remarks.—Hume (1888, p. 264) observed it only in south and south-east Manipur, and remarked that even there it is extremely rare.

42. *Aethiopsar albocinctus* (Godwin Austen & Walden).

(The Collared Myna.)

1875. *Acridotheres albocinctus* Godwin Austen and Walden, *Ibis*. (3) V, p. 251. ("Munipur Valley", Assam.)
1888. *Acridotheres albocinctus*, Hume, *Str. Feath.* XI, p. 262.
1926. *Aethiopsar albocinctus* Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.), III, p. 60.

Specimen collected.—1♀ from Kanglatongbi area, 18 miles, N. of Imphal on Dimapur Road, Manipur, ca. 3,500 ft., 22nd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♀ : W 125 ; Tl. 76 ; Tr. 39 ; B. 25.

Colour of soft parts.—Iris yellow ; bill yellow, pale orange at base ; legs and feet dirty orange ; claws pale smoky ; pads pale orange.

Field notes.—Godwin Austen and Walden (1875, p. 251), Godwin Austen (1876a, p. 200) and Hume (1888, p. 262) found it common in the Manipur Valley.

43. *Sturnopaster contra superciliaris* Blyth.

(The Burmese Pied Myna.)

1863. *Sturnopaster superciliaris* Blyth, *J. Asiat. Soc. Bengal* XXXII, p. 77. (Rangoon, Burma.)
1888. *Sturnopaster superciliaris*, Hume, *Str. Feath.* XI, p. 261.
1926. *Sturnopaster capensis superciliaris*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 64.
1930. *Sturnopaster contra superciliaris*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VIII, p. 651.

Specimens collected.—3 (2♂♂, 1♀) from 9-10 miles N. of Imphal on Dimapur Road, ca. 2,800-3,000 ft. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2 ♂♂	112-118	65-72	33-34	31
1 ♀	113	72	34	29

Colour of soft parts.—Iris yellow, with a white outer ring; skin around eyes yellow; eye-lids orange. Bill yellow, orange at base; legs and feet pinkish olivaceous; claws smoky horny.

Field notes.—This Myna was fairly common all over the Imphal Valley and the Kanglatongbi area at least up to 3,500 ft.

The gonads were in the non-breeding condition. The ovary measured 4×8 mm., with the largest ova not more than 1 mm. in diameter; the testes measured 2×2 mm.

Remarks.—Hume (1888, p. 261) also found this Myna fairly common in the Manipur Valley but absent in the hills.

Fam. 11. FRINGILLIDAE.

44. *Passer montanus malaccensis* Dubois.

(The Malay Tree-Sparrow.)

1885. *Passer malaccensis* Dubois, *Faun. III. Vert. Belge., Ois. I.*, p. 572. (Malacca.)

1888. *Passer montanus* Linn., Hume, *Str. Feath. XI*, p. 275.

1926. *Passer montanus malaccensis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 117.

Specimens collected.—6 specimens as follows:—

1♂, 1♀ from Imphal, ca. 2,600 ft., Manipur, 6th February 1936. (Naga Hills and Manipur Survey.)

2♂♂, 2♀♀ from Kanglatongbi area, 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 17th and 18th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
3 ♂♂	69-72	52-58	17-19	12
2 ♀♀	67-69	52-53	17	10-12

Colour of soft parts.—Iris hazel brown; bill horny black, yellowish at base; legs, feet and claws pale olivaceous.

Field notes.—This bird was very common near human habitations in the Imphal and Kanglatongbi areas (2,600-3,500 ft.), being found in groups of 10-20 on the ground. The House Sparrow (*P. domesticus*) was entirely absent.

The gonads were in the non-breeding condition. The ovary measured 4×5 mm., and the testes 1×1 mm.

Remarks.—Hume (1888, p. 275) also found this sparrow very common in the Imphal Valley.

Fam. 12. HIRUNDINIDAE.

45. *Hirundo rustica rustica* Linnaeus.

(The Common Swallow.)

1758. *Hirundo rustica* Linnaeus, *Syst. Nat.* (10th ed.) I, p. 191. (Europe = Sweden.)
1888. *Hirundo rustica*, Hume, *Str. Feath.* XI, p. 24.
1926. *Hirundo rustica rustica*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 240.

Specimens collected.—2♂♂ from Nanglea Atrow, 63 miles from Imphal on Silchar Road, Manipur, 12th and 14th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—2♂♂: W 114-119; Tl. 91-95; Tr. 11-12; B. 8-9.

Remarks.—Hume (1888, p. 24) recorded these swallows from Manipur and remarked that the Manipur birds ought rather to stand as *rustica* and not *H. r. gutturalis*. The present specimens, with fulvous chest and abdomen, are clearly assignable to *H. r. rustica*.

Fam. 13. MOTACILLIDAE.

46. *Motacilla alba dukhunensis* Sykes.

(The Indian White Wagtail.)

1832. *Motacilla dukhunensis* Sykes, *Proc. zool. Soc. London*, p. 91. (Deccan, S. India.)
1888. *Motacilla dukhunensis*, Hume, *Str. Feath.* XI, p. 230.
1926. *Motacilla alba dukhunensis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 257.

Specimens collected.—2♂♂ as follows:—One (21st December 1945) from Kanglatongbi area, 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft.; and another (23rd December 1945) from Imphal Valley, ca. 2,600 ft. (Major M. L. Roonwal.)

Measurements (mm.).—2♂♂: W 91-93; Tl. 92-95; Tr. 24; B. 15.

Colour of soft parts.—Iris dark brown, bill dark horny; legs, feet and claws horny black.

Field notes.—These birds were common, being usually found singly or in twos (not in flocks). They were present throughout the period of observation (July-December), being presumably resident in Manipur.

The testes were in the non-breeding condition, measuring 1×1 mm.

Remarks.—Hume (1888, p. 230) found this wagtail scarce in Manipur.

47. *Motacilla alboides* Hodgson.

(Hodgson's Pied Wagtail.)

1836. *Motacilla alboides* Hodgson, *Asiat. Res.* XIX, p. 191. (Nepal.)
 1888. *Motacilla hodgsoni* Bly. (ex. G. R. Gray, MS.), Hume, *Str. Feath.* XI, p. 230.
 1926. *Motacilla lugubris alboides*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 262.
 1930. *Motacilla alboides*, Stuart Baker, *Faun. Brit. India, Birds* (2nd ed.) VIII, p. 660.

Specimens collected.—2♀♀ from Manipur as follows:—One (18th December 1945) from Kanglatongbi area, 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft.; and another (22nd December 1945) from Imphal Valley, ca. 2,500 ft. (Major M. L. Roonwal.)

Measurements (mm.).—2♀♀: W 86-94; Tl. 88-92; Tr. 23-24; B. 14-15.

Colour of soft parts.—Bill, legs, feet and claws dull black.

Field notes.—This wagtail was very common throughout the period of observation (July-December) and is evidently resident in Manipur.

The ovaries (in December) were in the non-breeding condition measuring about 3 × 6 mm.

Remarks.—Hume (1888, p. 230) found this wagtail fairly common in the Imphal Valley (near Imphal and a little north of it), but more rare in the south.

48. *Motacilla leucopsis* Gould.

(The White-faced Wagtail.)

1837. *Motacilla leucopsis* Gould, *Proc. zool. Soc. London*, p. 78. (India.)
 1888. *Motacilla leucopsis*, Hume, *Str. Feath.* XI, p. 230.
 1926. *Motacilla lugubris leucopsis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 264.
 1930. *Motacilla leucopsis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VIII, p. 660.

Specimen collected.—1 (unsexed) from Imphal Valley, Manipur, ca. 3,000 ft., 20th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1 (unsexed): W 88; Tl. 90; Tr. 24; B. 13.

Colour of soft parts.—Iris dark brown; bill horny; legs, feet and claws dull horny black.

Field notes.—This wagtail was very common throughout the period of observation (July-December) in the Imphal Valley and in the Kanglatongbi area.

Remarks.—Hume (1888, p. 230) also found it very common in Manipur, specially in the basin.

49. *Motacilla cinerea caspica* (S. G. Gmelin).

(The Eastern Grey Wagtail.)

1774. *Parus caspicus* S. G. Gmelin, *Reise Russ. z. Unters. d. Natur-Reiche* III, p. 104, pl. xx, fig. 2. (Caspian Sea.)
 1888. *Calobates melanope* (Pall.), Hume, *Str. Feath.* XI, p. 231.
 1926. *Motacilla cinerea caspica*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 265.

Specimens collected.—4 (2♂♂, 1♀, 1 unsexed) from Kanglatongbi area, 16-18 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 8th, 22nd and 23rd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2♂♂	82-87	95-96	20-21	15
1♀	83	89	21	15
1 (unsexed)	85	93	22	15

Colour of soft parts.—Iris dark brown; bill smoky brown, base of the lower beak paler; legs and feet pale smoky fleshy; claws, fleshy horny.

Field notes.—This wagtail was common in open forest and oak scrub, being usually found singly or in twos (not in flocks). They were not met with in July and August. The first specimens were seen in early September following which they soon become common, and remained so until the end of December after which no observations were made.

The gonads were in the non-breeding condition. The ovary measured 3×6 mm., with the largest ova less than 1 mm. in diameter; the testes measured 1×1 mm.

Remarks.—Hume (1888, p. 231) found this wagtail fairly common in the western hills and the Imphal Valley in Manipur.

Systematic note.—The tail-length of *M. cinerea caspica* given by Stuart Baker (1926, p. 265) as “under 75 mm.” and “67-73 mm.” is incorrect, as already pointed out by Ticehurst¹⁰ (1927, p. 351). In the Manipur specimens the tail is 89-96 mm. long.

50. *Anthus hodgsoni hodgsoni* Richmond.

(The Indian Tree-Pipit.)

1888. *Anthus maculatus* Hodgs., Hume, *Str. Feath.* XI, p. 233.
 1907. *Anthus trivialis hodgsoni* Richmond, *Blackwelder's Res. in China* II, p. 493. (Nepal.)
 1926. *Anthus hodgsoni hodgsoni*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 281.

Specimen collected.—1♂ from Kanglatongbi area, 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 23rd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♂: W 86; Tl. 63; Tr. 20; B. 12.

¹⁰ Ticehurst, C. B. 1927. *J. Bombay nat. Hist. Soc.* XXXII, p. 351.

Colour of soft parts.—Iris dark brown. Bill dark brown, base of the lower bill fleshy. Legs, feet and claws pale fleshy.

Field notes.—This pipit was met with infrequently.

The testes were in the non-breeding condition and measured 1×1 mm.

Remarks.—Hume (1888, p. 233) found this pipit very common in the western hills, but more rare in the eastern hills of Manipur. He also recorded that there occasionally occurs a peculiar variety in which the upper plumage is grey instead of the normal olive green and the wing bands white instead of buffy; in other respects they are exactly like the normal birds.

Fam. 14. ZOSTEROPIDAE.

51. *Zosterops palpebrosa palpebrosa* (Temminck).

(The Indian White-Eye.)

1824. *Sylvia palpebrosa* Temminck, *Pl. Col. d'Ois.*, pl. 203, fig. 3. (Benga vide Ticehurst *infra*.)
 1888. *Zosterops palpebrosa* Hume, *Str. Feath.* XI, p. 253.
 1922. *Zosterops palpebrosa cacharensis*, Stuart Baker, *Ibis* (11) IV, p. 144.
 1926. *Zosterops palpebrosa cacharensis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 361.
 1927. *Zosterops palpebrosa palpebrosa*, Ticehurst, *J. Bombay. nat. Hist. Soc.* XXXII, p. 354.

Specimen collected.—1♀ from Ragailous Camp, about 63 miles from Imphal on Silchar Road, Manipur, ca. 3,250 ft., 11th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀: W 53; Tl. 36; Tr. 16; B. 11.

Remarks.—(Hume 1888, p. 253) found this white-eye common in the Imphal Valley but absent in the hills.

Fam. 15. NECTARINIIDAE.

52. *Aethopyga saturata saturata* (Hodgson).

(The Black-breasted Sunbird.)

1837. *Cinnyris saturata* Hodgson, *Indian Rev.* I, p. 273. (Nepal.)
 1888. *Aethopyga saturata*, Hume, *Str. Feath.* XI, p. 82.
 1926. *Aethopyga saturata saturata*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) III, p. 388.

Specimen collected.—1♂ from Nanglea Atrow, 63 miles from Imphal on Silchar Road, Manipur, 14th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂: W 51; Tl. 71; Tr. 16; B. 18.

Remarks.—Hume (1888, p. 82) found this bird common in both the eastern and western hills of Manipur.

Fam. 16. EURYLAIMIDAE.

53. *Psarisomus dalhousiae* (Jameson).

(The Long-tailed Broadbill.)

1835. *Eurylaimus dalhousiae* Jameson, *Edinb. new philos. J.* XVIII, p. 389.
(North India.)
1888. *Psarisomus dalhousiae*, Hume, *Str. Feath.* XI, p. 48.
1926. *Psarisomus dalhousiae*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.)
III, p. 472.

Specimens collected.—2 (1♀, 1♂) from Nanglea Atrow, 63 miles from Imphal on Silchar Road, Manipur, 13th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	102	124	27	18
1♀	100	112	27	19

Remarks.—Hume (1888, p. 48) found this bird common in both the eastern and western hills of Manipur, but not in the Valley.

Ord. 2. CORACIIFORMES.

Subord. *PICI*.

Fam. 17. PICIDAE.

54. *Dryobates atratus* (Blyth).

(The Stripe-breasted Pied Woodpecker.)

1849. *Picus atratus* Blyth, *J. Asiat. Soc. Bengal* XVIII, p. 803. ("Tenasserim provinces", S. Burma.)
1888. *Picus atratus*, Hume, *Str. Feath.* XI, p. 58.
1927. *Dryobates atratus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.)
IV, p. 41.

Specimens collected.—1♀ from "Manipur" (= Imphal), ca. 2,600 ft., Manipur, 4th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀ : W 110 ; Tl. 71 ; Tr. 23 ; B. 21.

Remarks.—Hume (1888, p. 58) found it only in the eastern hills of Manipur and remarked that it was rare.

55. *Yungipicus nanus canicapillus* (Blyth).

(The Burmese Pigmy Woodpecker.)

1845. *Picus canicapillus* Blyth, *J. Asiat. Soc. Bengal* XIV, pt. 1, p. 197.
(Arakan, Burma.)
1888. *Yungipicus canicapillus*, Hume, *Str. Feath.* XI, p. 60.
1927. *Yungipicus hardwickii canicapillus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 51.

Specimens collected.—1♀ (labelled ♂) from Tairenpokpi, ca. 3,000 ft. 7th February 1936. (Naga Hills and Manipur Survey.) There are no crimson feathers on head, and hence we regard the specimen as a ♀.

Measurements (mm.).—1♀ : W 92 ; Tl. 45 ; Tr. 15 ; B. 16.

Remarks.—Hume (1888, p. 60) found it fairly common in Manipur.

Fam. 18. CAPITONIDAE.

56. *Cyanops asiatica asiatica* (Latham).

(The Blue-throated Barbet.)

1790. *Trogon asiaticus* Latham, *Index Orn.* I, p. 201. (India.)
 1874. *Cyanops asiatica*, Godwin Austen, *J. Asiat. Soc. Bengal* XLIII (2), p. 176.
 1888. *Megalema asiatica*, Hume, *Str. Feath.* XI, p. 67.
 1927. *Cyanops asiatica*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 116.

Specimen collected.—1♂ from Regailous Camp, on Imphal-Silchar Road, Manipur, ca. 3,250 ft., 11th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂: W 105; Tl. 69; Tr. 25; B. 25.

Remarks.—Both Godwin Austen (1874, p. 176) and Hume (1888, p. 67) recorded this barbet from Manipur, the later remarking that it is common all over Manipur upto 4,000 ft. or a little higher.

Subord. *CUCULI*.

Fam. 19. CUCULIDAE.

57. *Centropus sinensis intermedius* (Hume).

(Hume's Crow-Pheasant.)

1873. *Centroccocyx intermedius* Hume, *Str. Feath.* I, p. 454. ("Dhoon, Dacca, Thayetmyo". Restricted to Thayetmyo, Burma, by Stuart Baker, 1927, *infra*.)
 1888. *Centroccocyx intermedius*, Hume, *Str. Feath.* XI, p. 77.
 1927. *Centropus sinensis intermedius*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 192.

Specimen collected.—1 (unsexed) from Kanglatongbi area, 16 miles N. of Imphal, ca. 3,500 ft., 10th November 1945. (Major M.L. Roonwal.)

Measurements (mm.).—1 (unsexed): W 197; Tl. 238; Tr. 60; B. 36.

Colour of soft parts.—Iris red; bill, feet and claws horny black.

Field notes.—This crow-pheasant was quite common in the forests skirting the Imphal Valley, upto at least 3,500 ft. altitude.

Remarks.—Hume (1888, p. 77) also found it common in that area but stated that he did not find it in the hills.

Subord. *CORACII*

Fam. 20. CORACIIDAE.

58. *Coracias benghalensis affinis* Horsfield.

(The Burmese Roller or Blue Jay.)

1839. *Coracias affinis* Horsfield (*ex* McClelland MS.), *Proc. zool. Soc. London*, p. 164. (Assam.)
 1888. *Coracias affinis*, Hume, *Str. Feath.* XI, p. 43.
 1927. *Coracias benghalensis affinis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 226.

Specimens collected.—2 (1♂, 1♀) from Kanglatongbi area, about 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., Manipur, 26th November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	183	132	27	37
1♀	188	130	27	40

Colour of soft parts.—Bill and claws horny; legs and feet ochreous yellow.

Field notes.—This roller was found commonly, but was rarer in November and December as compared to the period July-October.

The gonads were in the non-breeding condition. The ovary measured 7×10 mm., with the largest ova about 1 mm. in diameter; the testes measured 2×2 mm.

Remarks.—Hume (1888, p. 43) found it absent both in the eastern and western hills of Manipur, and rare in the basin. This does not agree with my observations, for it was seen commonly throughout the Imphal Valley, upto at least 3,500 ft. altitude.

Fam. 21. ALCEDINIDAE.

59. *Ceryle rudis leucomelanura* Reichenbach.

(The Indian Pied Kingfisher.)

1851. *Ceryle leucomelanura* Reichenbach, *Icon. Syst. Av. Alced.*, p. 21. (Ceylon.)

1888. *Ceryle rudis* Reich. (not Linn.), Hume, *Str. Feath.* XI, p. 47.

1927. *Ceryle rudis leucomelanura*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 246.

Specimen collected.—1♀ from Imphal Valley, Manipur, ca. 2,600 ft., 29th November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♀: W 137; Tl. 80; Tr. 11; B. 63.

Colour of soft parts.—Bill, legs and claws horny black.

Field notes.—This bird was met with fairly commonly though much less so than the other species of kingfishers. It was usually seen singly near water or on telegraph wires.

The ovary was in the non-breeding condition, measuring about 7×11 mm.

Remarks.—Hume (1888, p. 47) found it very rare in the Imphal Valley and entirely absent in the hills.

60. *Alcedo atthis bengalensis* Gmelin.

(The Common Indian Kingfisher.)

1788. *Alcedo bengalensis* Gmelin, *Syst. Nat.* (13th ed.) I (1), p. 450. (Bengal.)

1888. *Alcedo bengalensis*, Hume, *Str. Feath.* XI, p. 46.

1927. *Alcedo atthis bengalensis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 250.

Specimen collected.—1♀ from 10 miles N. of Imphal, Manipur, ca. 2,800 ft., 3rd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♀: W 71; Tl. 35; Tr. 10; B. 42

Colour of soft parts.—Iris dark chocolate. Upper bill horny black; lower bill orange-pink at base, smoky at tip. Legs and feet smoky in front, orange-pink behind. Pads orange-pink; claws horny black.

Field notes.—The ovary was in the non-breeding condition, measuring 2×4 mm.

Remarks.—Hume (1888, p. 46) found it “not uncommon” in the western hills, but rare in the eastern hills of Manipur.

61. *Halcyon smyrnensis fusca* (Boddaert).

(The Indian White-breasted Kingfisher.)

1783. *Alcedo fusca* Boddaert, *Tabl. Pl. Entom.*, p. 54 (based on *Pl. Entom.*, 894). (Malabar.)

1888. *Halcyon smyrnensis* (Linn.), Hume, *Str. Feath.* XI, p. 44.

1927. *Halcyon smyrnensis fusca*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 269.

Specimens collected.—2, collected in Manipur on 26th November 1945, as follows:—1♂ from Kanglatongbi area, about 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft.; and 1♀ from Imphal Valley, ca. 2,800 ft. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	113	83	20	60
1♀	125	87	16	63

Colour of soft parts.—Bill dark red, smoky at edges. Legs and feet in front dark red; behind bright red in ♂ and orange in ♀.

Field notes.—The bird was seen quite frequently.

The gonads were in the non-breeding condition. The ovary measured 6×9 mm., with the largest ova less than 1 mm. in diameter; the testes measured 2×2 mm.

Remarks.—Hume (1888, p. 44) found it “not rare” around Imphal and in the valley, but absent in the eastern and western hills of Manipur.

Fam. 22. BUCEROTIDAE.

62. *Hydrocissa malabarica malabarica* (Gmelin).

(The Large Indian Pied Hornbill.)

1788. *Buceros malabaricus* Gmelin, *Syst. Nat.* I, p. 359. (Malabar, *errore* = Chandranagar, W. Bengal, *vide* Stuart Baker, *infra*.)

1888. *Hydrocissa albirostris* (Sh. & Nod.), Hume, *Str. Feath.* XI, p. 51.

1927. *Anthracosceros malabaricus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 288.

1930. *Hydrocissa malabarica*, Stuart Baker, *Fauna Brit. Indic, Birds* (2nd ed.) VIII, p. 678.

Specimen collected.—1♀ from Naglea Atrow, 63 miles from Imphal on Silchar Road, ca. 3,250 ft., 13th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♀: W 294; Tl. 273; Tr. 62; B. 142.

Remarks.—Hume (1888, p. 51) found it common in the western hills of Manipur but absent in the eastern hills.

Fam. 23. UPUPIDAE.

63. *Upupa epops epops* Linnaeus.

(The European Hoopoe.)

1758. *Upupa epops* Linnaeus, *Syst. Nat.* (10th ed.) I, p. 117. (Sweden).

1888. *Upupa epops*, Hume, *Str. Feath.* XI, p. 87.

1927. *Upupa epops epops*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 308.

Specimens collected.—3 (1♂, 2♀♀) from Imphal Valley, about 6-9 miles N. of Imphal; ca. 2,600-3,000 ft., 21st November and 29th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	150	115	25	59
2♀♀	140—145	101—103	21—23	52 (one ♀)

Colour of soft parts.—Bill dark smoky horny, lower bill fleshy at base. Legs, feet and claws dark horny.

Field notes.—Both *U. e. epops* and *U. e. longirostris* were found in Manipur. They were met with occasionally and were distinctly infrequent. They first arrived about early November, and were not in evidence during July-October.

In *U. e. epops* the gonads were in the non-breeding condition. The ovaries measured 5×7 mm., with the largest ova not more than 1 mm. in diameter; the testes measured 1×1 mm.

Remarks.—Hume (1888, p. 87) found this hoopoe sparingly; he recorded both this and the following subspecies (*U. e. longirostris*) from Manipur.

64. *Upupa epops longirostris* Jerdon.

(The Burmese Hoopoe.)

1862. *Upupa longirostris* Jerdon, *Birds of India* I, p. 293. (Burma.)

1888. *Upupa longirostris*, Hume, *Str. Feath.* XI, p. 88.

1927. *Upupa epops longirostris*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 312.

Specimen collected.—1♂ from Kanglatongbi area, 18 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 22nd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♂: W, 148; Tl. 110; Tr. 25; B. 65.

Colour of soft parts.—Bill smoky; legs and feet pinkish smoky; claws horny.

Field notes.—The testes were in the non-breeding condition, measuring about 2×2 mm.

Subord. *TROGONES*.

Fam. 24. TROGONIDAE.

65. Harpactes erythrocephalus erythrocephalus (Gould).

(The Red-headed Trogon.)

1834. *Trogon erythrocephalus* Gould, *Proc. zool. Soc. London*, p. 25. (Rangoon, Burma.)
 1888. *Harpactes erythrocephalus*, Hume, *Str. Feath.* XI, p. 41.
 1927. *Pyrotrygon erythrocephalus erythrocephalus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 318.
 1930. *Harpactes erythrocephalus erythrocephalus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VII, p. 362.

Specimen collected.—1♂ from Luanglong Khunow, ca. 3,250 ft., 9th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂: W 149; Tl. 187; Tr. 16; B. 20.

Remarks.—Hume (1888, p. 41) found it common in Manipur.

Subord. *CAPRIMULGI*.

Fam. 25. CAPRIMULGIDAE.

66. Caprimulgus macrourus ?albonotus Tickell.

(The Indian Long-tailed Nightjar.)

1833. *Caprimulgus albonotus* Tickell, *J. Asiat. Soc. Bengal* II, p. 580. ("Boralhum, Bengal").
 1888. *Caprimulgus macrourus* Horsf., Hume, *Str. Feath.* XI, p. 39.
 1927. *Caprimulgus macrourus albonotus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 364.

Specimen collected.—1♂ from Imphal Valley, Manipur, ca. 3,000 ft., 18th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♂: W 206; Tl. 158; Tr. 24; B. 7.

Colour of soft parts.—Bill dark horny at tip, fleshy at base. Legs and feet smoky fleshy; claws horny black; middle claw with a horny brown membranous frill.

Field notes.—This specimen, which was shot at night in oak scrub, was the only one ever met with.

The testes were in the non-breeding condition, measuring 2×4 mm.

Remarks.—Hume (1888, p. 39) recorded it from both the western and eastern hills of Manipur.

Subord. *STRIGES.*

Fam. 26. TYTONIDAE.

67. *Tyto alba javanica* (Gmelin).

(The Indian Barn-Owl.)

1788. *Strix javanica* Gmelin, *Syst. Nat.* I, p. 295. (Java.)

1888. *Strix javanica*, Hume, *Str. Feath.* XI, p. 18.

1927. *Tyto alba javanica*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 385.

Specimen collected.—1♂ from Imphal Valley, Manipur, ca. 2,500 ft., 14th November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♂: W 289; Tl. 116; Tr. 72; B. 37.

Field notes.—Only one specimen was obtained in the jungles.

The testes were in the breeding condition and measured 4×13 mm.

Remarks.—Hume (1888, p. 18) found it rare in Manipur.

Fam. 27 ASIONIDAE.

68. *Strix indranee newarensis* (Hodgson).

(The Himalayan Brown Wood-Owl.)

1836. *Ulula newarensis* Hodgson, *Asiat. Res.* XIX, p. 168. (Nepal.)

1888. *Syrnium newarensis*, Hume, *Str. Feath.* XI, p. 19.

1927. *Strix indranee newarensis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 400.

Specimens collected.—3♀♀ from hill forests around Modbung village (ca. 3,750 ft.) and Kanglatongbi area (ca. 3,500 ft.), about 16 miles N. of Imphal, Manipur, 23rd November and 6th and 13th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—3♀♀: W 372-385; Tl. 223-238; Tr. 68-69; B. 39-42.

Colour of soft parts.—Iris dark brown; bill dull pale grey, whitish at tip; pads dirty white; claws pale horny, white at base and smoky at tips.

Field notes.—In Manipur the Naga tribesmen, from whom all the three specimens were purchased, stated that it is frequently trapped by them. The specimens were bought alive and kept in captivity, but they refused to eat bird-flesh and died within a few days. When disturbed in captivity they make a loud, clicking sound with the tongue, and also a hissing sound, both of which have probably not been recorded before.

The ovaries in the 3♀♀ were in the non-breeding condition and measured 5×25, 7×24, and 10×22 mm., with the largest ova not more than 1 mm. in diameter.

Remarks.—Hume (1888, p. 19) found this owl "not uncommon" in Manipur.

69. *Otus bakkamoena manipurensis* subsp. nov.

(The Manipur Collared Scops Owl.)

(Plate V, figs. 2, 2a, 3, 3a.)

Description.—Dorsum deep brown, streaked and vermiculated all over with buff or rufous. Venter white to buff, boldly streaked with dark brown to black and vermiculated with the same. Forehead in front and the stiff feathers around the sides of beak and above it white, tipped with black and buff and ending in black bristles. Sides of forehead and lores white; feathers around the eyes brown. Crown, nape and back deep brown, the individual feathers mottled with buff and rufous at the sides; in some the deep brown is reduced to a central streak and transverse vermiculations. The feathers behind the nape buff, tipped with brown, forming a dorsal collar which is sometimes obsolescent. Upper tail-coverts same as back. Lower tail-coverts white to buff. Tail feathers above dull brown, with 7-9 transverse wavy bars of fulvous; tail below similar but much paler. Upper wing-coverts and tertiaries like back. Primary wing-quills dark smoky brown, with a series of large buff spots at edges of outer webs and pale wide transverse bars on inner, these latter becoming obsolescent on the outer primaries. Secondaries like primaries, but with the buff spots and bars mottled with brown. Bastard wing buff, mottled with dark brown. Inner surface of wing silvery smoky, transversely barred with whitish, especially on the secondaries. Under wing-coverts and axillaries whitish buff with grey bases. Chin and throat whitish buff, the feathers barred or mottled with brown, especially on the middle and lower throat. Rest of ventrum white to buff, each feather with a bold brown streak (reduced to a fine one in some) in centre and fine wavy transverse vermiculations. Feathers on legs white to buff with brown vermiculations, the feathers well covering the bases of toes in some and in others leaving them naked.

Colour of soft parts.—Iris brown to dark olivaceous brown. Bill horny to ashy, with more or less yellow towards base. Legs and toes pale pink-olivaceous to dirty horny. Claws horny, sometimes with some yellow; tips of claws smoky.

Specimens collected.—5 (2♂♂, 1♀, 2 unsexed), 5-10 miles, N. of Imphal on Dimapur Road, Manipur, Assam, ca. 2,600-2,800 ft., 19th November to 27th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2♂♂	172	81—86	35—37	25
1♀	174	86	39	24
2 unsexed	169—171	83—87	35—38	22—24
Range	169—174	81—87	35—38	22—25
Average	171.6	84.6	36.4	23.4

Type-specimen.—(Plate V, figs. 2, 2a) HOLOTYPE: Z. S. I. Reg. No. 27,082, ♂, deposited in the Zoological Survey of India. Imphal Valley, 6 miles north of Imphal, Manipur, Assam, ca. 2,600 ft., above sea-level. Collected by Major M. L. Roonwal, 17th December 1945. Measurements (mm.) of type: W 172; Tl. 81; Tr. 35; B. 22. PARATYPE: Z. S. I. Reg. No. 27,083, unsexed.

Field notes.—This owl was quite common in the Imphal Valley and the bases of the surrounding hills in Manipur. It is nocturnal in habits, sitting solitarily on telegraph wires and such other perches. Hume (1888, p. 22) also found it common in Manipur, "throughout the basin and along the lower spurs of all the surrounding hills", though of course he did not recognize it as a distinct subspecies.

The gonads were in the non-breeding condition, the ovary in ♀ No. 27,084 (7th December) measuring about 8×10 mm., with the largest ova less than 1 mm. in diameter; the testes in 2♂♂, Nos. 27,086 and 27,082 (19th November and 17th December) measured about 3×4 mm.

Distribution.—*O. b. manipurensis*: The Himalayas from Manipur Valley (Assam) in the east to Darjeeling (N. Bengal) in the west; from the foot-hills to 4,000 feet or higher. Darjeeling specimens, in both size and coloration, are intermediate between *O. b. manipurensis* and *O. b. lettia*, though closer to the former, but a specimen from further down (Jalpaiguri District) is referable to the latter.

O. b. lettia: Eastern Himalayas from Nepal in the west to Jalpaiguri District (Bengal Duars) in the east, but not Darjeeling.

Systematic Note.

Otus bakkamoena is a very variable species distributed over a large portion of eastern and southern Asia, viz., Manchuria, Shakalin and the Japanese Islands, central and southern China, India, south-eastern Arabia, Burma, Malaya, Siam, Indo-China, the whole of the East Indies and the Philippines. Peters (1940, pp. 98-100) recognizes 18 subspecies, of which about 9 belong to India, S. China and Malayasia. For the latter regions the following are the available names with their type-localities; those recognized as valid by Peters are marked with an asterisk (*), the remaining ones being synonymies:—

- *1769. *Otus bakkamoena*, Pennant, *Indian Zool.*, p. 3. (Ceylon.)
- 1788. *Otus indica*, Gmelin, *Syst. Nat.* I, pt. 1, p. 289. (Ceylon.) New name for *Otus bakkamoena* Pennant.
- *1821. *Strix Lempiji*, Horsfield, *Trans. Linn. Soc. London*, XIII (1), p. 140. (Java.)
- *1836 (after September). *Scops lettia*, Hodgson, *Asiat. Res.* XIX, p. 176. ("Central and northern hills" of Nepal.)
- 1845. *Scops malabaricus*, Jerdon, *Madras J. Lit. & Sci.* XIII, pt. 2, p. 119. (Malabar, S. India.)
- 1845. *Scops griseus*, Jerdon, *Madras J. Lit. & Sci.* XIII, pt. 2, p. 119. (Western Ghats, S. India.)
- 1845 (January to June). *Strix lettioides*, Blyth (ex Jerdon MS.), *J. Asiat. Soc. Bengal* XIV, p. 182. ("Coromandel Coast", S. India.)
- *1869. *Ephialtes Plumipes*, Hume, *My Scrap-book or Rough Notes Indian Orn.*, p. 397. (Murree, Kotegarh and Garhwal; restricted to Murree, Punjab.) This date is given by many authors as 1870, but the date given on the reference present in Zoological Survey of India Library is 1869.
- 1870 (June). *Ephialtes jerdoni*, Walden, *Ann. Mag. nat. Hist.* (4) V, p. 417. ("Malabar" and "Western Ghats of India".)

- *1870 (August). *Ephialtes glabripes*, Swinhoe, *Ann. Mag. nat. Hist.* (4) VI, p. 152. (South China and Formosa.)
 *1922 (January 3). *Otus bakkamoena deserticolor*, Ticehurst, *Bull. Brit. orn. Cl.* XLII, p. 57. (Hyderabad, Sind, India.)
 *1922 (May 5). *Otus bakkamoena gangeticus*, Ticehurst, *Bull. Brit. orn. Cl.* XLII, p. 122, line 17. (Fatehgarh, United Provinces, India.)
 *1922 (May 5). *Otus bakkamoena marathae*, Ticehurst, *Bull. Brit. orn. Cl.* XLII, p. 122, line 26. (Raipur, Central Provinces, India.)
 1939. *Otus bakkamoena stewarti*, Koelz, *Proc. biol. Soc. Washington* LIII, p. 80. (Bajinath, Kangra District, Punjab, India.)

Both Stuart Baker (1927, p. 427) and Peters (1940, p. 98) accept the range of *O. b. lettia* Hodgs. (type-locality Nepal) as: Eastern Himalayas from Nepal to eastern Assam, south to eastern Bengal; all of Burma and northern Siam. No fresh material has been available from Central Nepal since Hodgson's type-material was obtained about 1842. However, a comparison of recently (1947) collected fresh material from Central Nepal¹¹ with our fresh material from Manipur, clearly shows that the latter are definitely not *lettia*. The Nepal birds are smaller, have plenty of grey and much less of rufous, while the dark markings all over are much less extensive, whereas the Manipur birds are larger, and are very dark, with plenty of dark rufous, no grey and with the dark markings very extensive. The Manipur birds also differ from *O. b. bakkamoena* Penn. and *O. b. lempiji* (Horsf.). As no name is available for the Manipur specimens, we had to give a new one, *manipurensis*. In the absence of material, we cannot say whether Burmese specimens are *manipurensis*; if they are not, another new name would be necessary; and the same applies to so called *lettia* from Siam.¹²

The following key would separate the various Himalayan and other Indian subspecies, and including *O. b. lempiji* :—

- (A) Toes feathered to the subterminal phalanx. Size largest, wing ca. 162-186 mm. *plumipes* Hume.
 (B) Toes not feathered to the subterminal phalanx.
 (a) Size large, wing 161-175 mm. Feathers usually extending to base of toes or a little beyond.
 (aa) Very pale all over, with hardly any rufous. Wing 165-175 mm. *deserticolor* Ticeh.
 (bb) Less pale, with some grey and rufous. Wing 161-167, av. 163.3 mm. *lettia* Hodgs.
 (cc) Very dark, with plenty of dark brown above. Wing 169-174, av. 171.6 mm. *manipurensis* Roon. & Nath.
 (b) Size small; wing 135-167 mm.
 (aa) Size smallest, wing 135-157, av. ca. 148 mm. Dark with plenty of rufous and no grey. . . *bakkamoena* Penn., *lempiji* Horsf.
 (bb) Size larger, wing 151-167. Paler. . . *gangeticus* Ticeh., *marathae* Ticeh.

¹¹ Collected by Messrs. B. Biswas and P. N. Mitter of the Zoological Survey of India, June 1947, from "Forest at Phare Ghat west of Hitaura (and ca. 44 miles south of Kathmandu), Nepal Terai, ca. 2,000 ft."

¹² Since writing the above, we received a communication from Mr. B. Biswas who has kindly examined for us all the specimens of *Otus bakkamoena* from S. E. Asia available in the British Museum (Natural History), London. The specimens thus examined come from the following places :—Eastern Nepal Terai; Sikkim; Assam (Cachar, Sadiya, Naga Hills, Manipur); Burma (Lower Chindwin, Tounghoo); and Indo-China (Annam). He concludes that, on the whole, there is a distinct darkening of colour as we proceed from west to east, although exceptions do occur which make the separation into races difficult. Mr. Biswas did not measure his birds; we are convinced that had he done so, he would have noticed a clear difference between the smaller birds from Central Nepal and the larger ones from the eastern Himalayas. It must be remembered that the separation of subspecies here is somewhat complicated by the fact that two colour phases probably occur—a paler greyish one and a darker rufous one. It would appear that the paler phase is more common in the west (Nepal, etc.), and the darker one more common in the east (Assam, etc.).

We are quite unable to differentiate between *O. b. bakkamoena* from South India and *O. b. lempiji* from Malaya. This is evidently an example of the faunal similarity between the Malayan region and Peninsular India.

The Indian subspecies are arranged below in order of wing-length (in mm.) :—

1. *O. b. plumipes* (Hume).—171-186 (Hume, 1869, p. 397). 162-182 (Stuart Baker, 1927, p. 426). 173-176 (Hartert, 1913, *Vög. pal. Fauna* II, p. 977). SYN.—*O. b. stewarti* Koelz. Wing 163.
- 2 { 2a. *O. b. manipurensis* Roonwal & Nath.—169-174, average 171.6.
2b. *O. b. deserticolor* Ticeh.—165-175 (Ticehurst, 1922, p. 57).
3. *O. b. lettia* (Hodgs.) as restricted here.—161-167, average 163.3. (From type-locality, e.g., Central Nepal.)
4. *O. b. gangeticus* Ticeh.—153-167, mostly 155-162 (Ticehurst, 1922, p. 122).
5. *O. b. marathae* Ticeh.—151-159. 152-162, once 165 (Ticehurst, 1922, p. 122).
6. *O. b. bakkamoena* (Penn.).—143-153, average 147.3. 146-157 (Hartert, 1913, *Vög. pal. Fauna* II, p. 975). 135-152, once 154 (Stuart Baker, 1927, p. 423.) SYN.—*O. indica* Gm. ; *S. malabaricus* Jerd. ; *S. griseus* Jerd. ; *S. lettioides* Bly. ; *E. jerdoni* Wald.

Note.—*O. b. glabripes* (Swinh.) from S. China (wing 180-191, Hartert, 1913, *loc. cit.*, p. 977) is even larger than *O. b. plumipes*. *O. b. lempiji* (Horsf.) from Malaya (wing 147-156, average 151.5 ; and 153-165, Blanford, 1895, III, p. 299) is subequal in size to *O. b. bakkamoena*, and, as mentioned above, not separable from the latter, in our opinion.

Type-specimens of Otus bakkamoena lettia (Hodgs.).

Hodgson, who collected in Nepal, presented most of his birds to the British Museum, London, before 1846, which is the date of publication of *Catal. Specimens & Draw. Mam. Birds, etc. of Nepal & Tibet pres. by B. H. Hodgson to Brit. Mus.* (2nd ed. 1863). Hodgson did not designate type-specimens, but most of his type-material must be presumed to have gone to the British Museum. But Hodgson also presented or sold some birds to the *Asiatic Society of Bengal*, Calcutta, and such birds which were acquired by the Society prior to 1846 must be regarded as one of the type-series if they came from the type-locality of Hodgson ; these have exactly the same value as the British Museum specimens.

Blyth (*Catal. Birds Asiat. Soc. Bengal*, 1849, pp. 36-37, No. 148A, "*Scops lempiji*" Var. B.) listed two such birds (*G, H*) of Hodgson, viz., specimens :

"*G. H.* Two ditto [*i. e.*, purchased] from Nepal. B. H. Hodgson, Esq. (1842)."

One of these birds (whether *G* or *H* is not mentioned on the label) is present in the collection of the Indian Museum (Zoological Survey of India), Calcutta, and bears the Indian Museum label : "148-A, B.", no doubt meaning No. 148A, var. B. of Blyth's *Catal.* On an old outer paper wrapper the following is written :

"148 (a)/A. S. B./Type/Scops lettia Hodgson/B. Neapl./B. H. Hodgson, Esq. 1842/See Godwin/MSS. . ."

On the same wrapper, but in another handwriting, is written: "*Scops lettia*. Nepal Hodgs. Not a type." This is evidently in Sclater's handwriting, as he had listed (1892) the types in the Indian Museum. But, like so many of Sclater's remarks in connection with Indian Museum types, this one was without foundation.

Sharpe (*Catal. Birds Brit. Mus.* II, *Striges*, 1875, p. 86) lists 4 Hodgson skins from Nepal, but no date of collection or acquirement is given. If they were collected prior to 1846, they constitute the type-series along with the two specimens of the A. S. B. But if they were collected after 1846, they cannot be regarded as belonging to the type-series, in which case the A. S. B. birds alone are the types.

70. *Otus sunia modestus* (Walden).

(The Burmese Scops Owl.)

1874. *Scops modestus* Walden, *Ann. Mag. nat. Hist.* (4) XIII, p. 123. (Port Blair, South Andamans.)
 1888. *Scops pennantus*, Hume, *Str. Feath.* XI, p. 21.
 1927. *Otus sunia modestus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 437.

Specimen collected.—1♀ from Kanglatongbi area, 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 14th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♀: W 152; Tl. 71; Tr. 25; B. 20.

Colour of soft parts.—Iris bright yellow; bill, cere and claws horny; feet pale olivaceous; foot-pads dirty cream.

Field notes.—The ovary was in the non-breeding condition and measured 5×13 mm., with the largest ova about 1 mm. in diameter

Remarks.—Hume (1888, p. 21) recorded this owl from Manipur.

Systematic note.—The Manipur specimen seems to be hardly distinguishable from a specimen from Darjeeling and another from Simla, but in the absence of a series we cannot say whether *modestus* is really separable from typical *sunia* or not.

71. *Glaucidium cuculoides rufescens* Stuart Baker.

(The Burmese Barred Owlet.)

1888. *Glaucidium cuculoides*, Hume, *Str. Feath.* XI, p. 23.
 1926. *Glaucidium cuculoides rufescens* Stuart Baker, *Bull. Brit. orn. Cl.* XLVII p. 59. (Noong-zai-ban, Manipur.)
 1927. *Glaucidium cuculoides rufescens*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) IV, p. 445.

Specimen collected.—1♂ from Nanglea Atrow, 63 miles from Imphal on Silchar Road, ca. 3,250 ft. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂: W 150; Tl. 101; Tr. 29; B. 18.

Remarks.—Hume (1888, p. 23) found this owl very common in the western hills of Manipur, but absent in the basin and the southern and eastern hills.

Ord. 3. ACCIPETRES.

Fam. 28. AEGYPIIDAE.

72. *Gyps himalayensis* Hume.

(The Himalayan Griffon.)

1869. *Gyps himalayensis* Hume, *Rough Notes Indian Oology & Orn.* I, pp. 12-18. (Himalayas; restricted to Simla, Punjab, by Stuart Baker, 1928, *infra*.)
 1928. *Gyps himalayensis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 13.

Specimen collected.—1♀ from Imphal Valley, 6 miles north of Imphal on Dimapur Road, ca. 2,500 ft., 25th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♀: W 755; Tl. 370; Tr. 128; B. 73.

Colour of soft parts.—Iris brown; bill smoky, darker at edges; cere smoky, legs dirty greenish white; claws horny.

Field notes.—The ovaries were in the non-breeding condition and measured 9×20 mm., with the largest ova not more than 2 mm. in diameter.

Remarks.—Hume (1888) did not record the Griffon in his Manipur list. Stuart Baker (1928, p. 14) gave its distribution thus: "Throughout the Himalayas from Afghanistan to Western Assam and north to Turkestan and Tibet."

The present is evidently the first record from eastern Assam (Manipur) and from a rather lower altitude (2,500 ft.) than hitherto known.

Fam. 29. FALCONIDAE.

73. *Cerchneis tinnunculus interstinctus* (Horsfield).

(The Himalayan Kestrel.)

1839. *Falco interstinctus* Horsfield, *Proc. zool. Soc. London*, p. 154. (Assam.)
 1888. *Cerchneis tinnunculus*, Hume, *Str. Feath.* XI, p. 4.
 1928. *Cerchneis tinnunculus interstinctus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 62.

Specimens collected.—5 (3♀♀, 2♂♂) as follows:—

Imphal, 1♂, 3rd February 1936. (Naga Hills and Manipur Survey.)

Imphal Valley, 3♀♀, 20th and 26th November and 13th December 1945, ca. 2,500 ft.; 1♂, Kanglatongbi area, 16 miles north of Imphal on Dimapur Road, ca. 3,500 ft. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2♂♂	239—252	161—181	40—45	14—19
3♀♀	247—255	171—186	40—44	15—17

Colour of soft parts.—Iris dark brown; cere and skin around eyes yellow; bill bluish grey, shading into yellow at base; legs and feet yellow; claws dark horny; pads dirty white.

Field notes.—This kestrel was met. with commonly, either soaring high or sitting on telegraph wires, and always singly.

The gonads were in the non-breeding condition. The ovary measured 7×10 mm., with the largest ova not more than 1 mm. in diameter; the testes measured 2×2 mm.

Remarks.—Hume (1888, p. 4) found this kestrel common in the Imphal Valley, but comparatively rare in the hills.

74. *Haliastur indus indus* (Boddaert).

(The Brahminy Kite.)

1783. *Falco indus* Boddaert, *Tabl. Pl. Enlum.*, p. 25, pl. 416. (Pondicherry, East Coast of India.)
 1888. *Haliastur indus*, Hume, *Str. Feath.* XI, p. 15.
 1928. *Haliastur indus indus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 118.

Specimen collected.—1♀ from Kanglatongbi area, 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 2nd December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♀: W 384; Tl. 223; Tr. 57; B. 36.

Colour of soft parts.—Iris hazel brown; bill greyish cream; cere and legs cream; claws horny black.

Field notes.—This kite was rare, and only one pair was seen in 6 months (July-December).

The ovaries were in the non-breeding condition and measured 9×17 mm., with the largest ova not more than 2 mm. in diameter.

Remarks.—Hume (1888, p. 15) also found it rare in Manipur.

75. *Milvus migrans govinda* Sykes.

(The Common Pariah Kite.)

1832. *Milvus govinda* Sykes, *Proc. zool. Soc. London*, p. 81. (Deccan.)
 1888. *Milvus affinis*, Hume, *Str. Feath.* XI, p. 15.
 1928. *Milvus migrans govinda*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 122.

Specimens collected.—2 (1♂, 1♀) from Imphal Valley, ca. 2,500 ft.; and Kanglatongbi area, about 16 miles N. of Imphal on Dimapur road, ca. 3,500 ft., 20th and 21st November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	438	251	54	34
1♀	431	265	58	34

Colour of soft parts.—Iris dark brown; bill and claws black; cere greyish yellow; legs dirty cream.

Field notes.—This kite was common in the Imphal Valley but less common in the hills a few miles north of it where it was found at least upto 3,500 ft. This and the larger subspecies with the conspicuous white spot on the lower wing-coverts (*Milvus migrans lineatus*, see below) were both seen in this area during the winter months.

The gonads were in the non-breeding condition. The ovary measured 9×12 mm., and the testes 2×4 mm.

Remarks.—Hume (1888, p. 15) found this small kite fairly common in Manipur, but called it *affinis* and erroneously considered it as different from *govinda* Sykes.

76. *Milvus migrans lineatus* (Gray).

(The Black-eared or Large Indian Kite.)

1831. *Haliaeetus lineatus* Gray, in Hardwicke's *Illust. Ind. Zool.* I, pl. 18. (China.)

1888. *Milvus melanotis*, Hume, *Str. Feath.* XI, p. 15.

1928. *Milvus migrans lineatus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 124.

Specimens collected.—2 (1♂, 1♀) from Imphal Valley, ca. 2,500 ft., 21st November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	497	333	62	36
1♀	431	281	60	27

Colour of soft parts.—Iris brown; bill and claws dark horny; cere cream; legs dirty white.

Field notes.—This large kite occurs in the Imphal Valley in winter, side by side with the subspecies *govinda* Sykes, and in about equal numbers.

The ovary of the female was moderately enlarged and measured 10×21 mm., with the largest ova about 5 mm. in diameter, suggesting proximity to breeding.

Remarks.—Hume (1888, p. 15) recorded it as uncommon in Manipur.

Systematic note.—The female listed here is rather too small for *lineatus*, but as it has a conspicuous white patch on the lower wing-coverts we have placed it here.

77. *Elanus coeruleus vociferus* (Latham).

(The Black-winged Kite.)

1790. *Falco vociferus* Latham, *Index Orn.* I, p. 46. (Coromandel Coast, India.)

1888. *Elanus coeruleus*, Hume, *Str. Feath.* XI, p. 17.

1928. *Elanus coeruleus vociferus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 125.

Specimens collected.—2 (1♀, 1 unsexed) from 11-16 miles N. of Imphal on Dimapur Road, ca. 3,000-3,500 ft., 19th and 26th November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	273	123	37	23
1 (unsexed)	279	131	37	21

Colour of soft parts.—Iris orange red ; bill and claws black ; legs and feet yellow.

Field notes.—This kite was fairly common throughout July-December, at least upto 3,500 ft. It was always noticed soaring high up solitarily.

The ovary of the female collected on 26th November was enlarged and measured 13×17 mm., with the largest ova about 5 mm. in diameter, suggesting proximity to breeding.

Remarks.—Hume (1888, p. 17) recorded it as very common in the Imphal Valley and Kopum Thull, but “practically unknown” in the hills of Manipur.

Ord. 4. COLUMBAE.

Fam. 30. COLUMBIDAE.

78. *Ducula badia griseicapilla* Walden.

(The Grey-headed Imperial Pigeon.)

1875. *Ducula griseicapilla* Walden, *Ann. Mag. nat. Hist.* (4) XVI, p. 228. (Karen Hills, 4,000-4,200 ft., Burma.)
 1888. *Carpophaga griseicapilla*, Hume, *Str. Feath.* XI, p. 295.
 1928. *Ducula badia griseicapilla*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 204.
 1941. *Ducula badia griseicapilla*, Roonwal, *Rec. Indian Mus.* XLIII, p. 311.

Specimen collected.—1♂ from Nanglea Atrow, 63 miles W. of Imphal on Silchar Road, Manipur, 13th February 1936. (Naga Hills and Manipur Survey.) [This is No. 26466 recorded by Roonwal, 1941, p. 311.]

Measurements (mm.).—1♂ : W 244 ; Tl. 207 ; Tr. 31 ; B. 25.

Remarks.—Hume (1888, p. 295) recorded this pigeon from the Imphal Valley, while Higgins (1934a, p. 302) found it common there.

79. *Streptopelia orientalis agricola* (Tickell).

(The Indian Rufous Turtle Dove.)

1833. *Columba agricola* Tickell, *J. Asiat. Soc. Bengal* II, p. 581. (Jungles of Borabhum and Dholbhum, Bihar.)
 1888. *Turtur meena*, Hume, *Str. Feath.* XI, p. 298.
 1928. *Streptopelia orientalis meena*, Stuart Baker, *Fauna Brit. India Birds* (2nd ed.) V, p. 240.
 1934. *Streptopelia orientalis meena*, Higgins, *J. Bombay nat. Hist. Soc.* XXXVII, p. 303.
 1941. *Streptopelia orientalis agricola*, Roonwal, *Rec. Indian Mus.* XLIII, p. 331.

Specimens collected.—2♂♂ from Kanglatongbi area, 16-18 miles N. of Imphal on Dimapur Road, Manipur, ca. 3,500 ft., 11th December 1945 (Major M. L. Roonwal.)

Measurements (mm.).—2♂♂: W 175-185; Tl. 123-137; Tr. 23-25; B. 17-18.

Colour of soft parts.—Iris orange; bill purplish grey; front portion of legs and feet purple; back of legs and pads dirty white; claws pale horny.

Field notes.—This dove was met with frequently on the roadside and in and around oak scrub. It was less common in December than in October and November.

The testes in both the males were greatly enlarged and measured about 6×15 mm., suggesting proximity to breeding.

Remarks.—Hume (1888, p. 298) recorded it as rare in the western hills and basin of Manipur and absent in the eastern hills. Higgins (1934a, p. 303) found it fairly common in the Imphal Valley during the rains and stated that it begins to appear about the end of May.

Systematic note.—The birds recorded here have dark grey under tail-coverts and are, therefore, *agricola* Tickell (*vide* Roonwal, 1941, pp. 328-329).

80. *Streptopelia chinensis tigrina* Temminck.

(The Burmese Spotted Dove.)

1816. *Columba tigrina* Temminck, in Knip, *Les Pigeons* I, p. 94, pl. 43. (Timor and Batavia in E. Indies. However, according to Hartert, *Vög. paläarkt. Fauna* II (1920), p. 1491, the type-specimen in the Paris Museum is from Java.)

1928. *Streptopelia chinensis tigrina*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 244.

1941. *Streptopelia chinensis tigrina*, Roonwal, *Rec. Indian Mus.* XLIII, p. 337.

Specimens collected.—3 (2♂♂, 1 unsexed) from Kanglatongbi area, 15-16 miles N. of Imphal on Dimapur Road, ca. 3,000 ft., and from Imphal Valley, ca. 2,600 ft., 6th November and 14th December, 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2♂♂	138—145	136—144	22—25	17—18
1 (unsexed)	143	143	24	17

Colour of soft parts.—Iris greyish pink; bare skin below the eye pinkish ashy; edges of eye-lids purple; bill dark slaty; legs and feet purple; claws horny.

Field notes.—This dove was very common in the foot-hills near Kanglatongbi and in the Imphal Valley.

The testes were enlarged and measured 3×8 mm. and 4×9 mm. in the two males, suggesting proximity to breeding.

Remarks.—Hume (1888, p. 298) reported only *S. c. suratensis* (rare) from Manipur, and definitely stated that *S. c. tigrina*, although common in Burma, was absent in Manipur. Stuart Baker (1928, pp. 242-244) placed Manipur birds as intermediate between *suratensis* and *tigrina*. We, however, find the Manipur specimens very much closer to *tigrina* than to *suratensis*.

Higgins (1934a, p. 303) also found this dove very common in Manipur.

81. *Streptopelia decaocto decaocto* (Frivaldszky).

(The Indian Ring-Dove.)

1838. *Columba risoria* Linn., var. *decaocto* Frivaldszky, *K. magyar tudos Társaság Evkönyv* III, pt. 3, p. 183. ("Turkei".)
 1888. *Turtur risorius*, Hume, *Str. Feath.* XI, p. 299.
 1928. *Streptopelia decaocto decaocto*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 248.
 1940. *Streptopelia decaocto decaocto*, Roonwal, *Rec. Indian Mus.* XLII (3), p. 440.

Specimens collected.—2♀♀ from Kanglatongbi area, 16 miles N. of Imphal on Dimapur Road, Manipur, ca. 3,500 ft., 13th November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

2♀♀ : W 170-174 ; Tl. 131-136 ; Tr. 23-26 ; B. 17-18.

Colour of soft parts.—Bare orbital skin around eye pure grey, without any yellow tinge.

Field notes.—The Ring-Dove was uncommon and seen only occasionally. It was certainly far less common than other doves.

The ovaries, in the 2♀♀ examined, were enlarged and measured 7×17 and 10×16 mm., with the largest ova about 4 mm. in diameter, thus suggesting proximity to breeding.

Remarks.—Hume (1888, p. 299) found the Ring-Dove common in Manipur, although of course, he did not distinguish it from the subspecies *S. d. xanthocyclus* Newman. He wrote : " We saw this nowhere in the hills, but found it common in the Manipur basin."

The demarcation between *S. d. decaocto* and the Burmese subspecies, *S. d. xanthocyclus*, calls for some comments. Stuart Baker (1928, pp. 248-249) gave the eastern limit of *S. d. decaocto* in India simply as " North Eastern Himalayas ", and of *S. d. xanthocyclus* as " All Burma " and other eastern areas (Indo-China, etc.). Higgins (1934a, p. 303), however, identified the Manipur birds as *xanthocyclus*, and wrote : " This species is common in the Manipur Valley, especially near the foot-hills." In my review of the Ring-Doves (Roonwal, 1940) I had accepted Higgins's identification and included Manipur within the range of *xanthocyclus*.

The 5 or 6 specimens (including the 2♀♀ collected) that I examined in the field near Imphal, however, had pure grey orbital skins without any trace of yellow, and should, therefore, be considered as *S. d. decaocto*—a yellow orbital skin being characteristic of *S. d. xanthocyclus*¹³.

82. *Macropygia unchall tusalia* (Blyth).

(The Bar-tailed Cuckoo-Dove.)

1843. *Columba tusalia* Blyth (ex. Hodgson MS.), *J. Asiat. Soc. Bengal* XII, p. 936. (Darjeeling, N. Bengal.)
 1888. *Macropygia tusalia*, Hume, *Str. Feath.* XI, p. 297.
 1928. *Macropygia unchall tusalia*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 253.
 1941. *Macropygia unchall tusalia*, Roonwal, *Rec. Indian Mus.* XLIII, p. 343.

¹³ Rarely, *S. d. decaocto* also may have the orbital skin yellowish, as noticed by one of us (Roonwal, 1943) in a male collected near Chittorgarh (Rajputana, W. India).

Specimen collected.—1♂ from Kanglatongbi area, 16 miles N. of Imphal on Dimapur Road, ca. 3,500 ft., 20th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—1♂ : W 178 ; Tl. 178 ; Tr. 20 ; B. 17

Colour of soft parts.—Iris pale violet, ashy on inner side and then, on the innermost side, with a thin ring of pale yellow. Bill dull horny black ; legs and feet vinous smoky, feet darker ; claws vinous horny

Field notes.—A single specimen was obtained from the forest near Imphal ; no others were seen.

The testes were in the non-breeding condition, measuring about 2×4 mm.

Remarks.—Hume (1888, p. 297) did not observe it in the western hills of Manipur but found it “ not uncommon ” in the eastern hills. Higgins (1934a, p. 303) found it rare in Manipur, having seen a single specimen “ in a glen off the Manipur Valley in the South West ”

Ord. 5. GALLINAE.

Sub-ord. *ALECTOROPODES.*

Fam. 31. PHASIANIDAE.

83. *Polyplectron bicalcaratum bakeri* Lowe.

(The Bhutan Peacock-Pheasant.)

1888. *Polyplectron tibetanum*, Hume, *Str. Feath* XI, p. 300.

1925. *Polyplectron bicalcaratum bakeri* Lowe, *Ibid* (12) I, p. 477. (Bhutan Duars.)

1928. *Polyplectron bicalcaratum bakeri*, Stuart Baker, *Fauna, Brit. India, Birds* (2nd ed.) V, p. 291.

1934. *Polyplectron bicalcaratum bakeri*, Higgins, *J. Bombay nat. Hist. Soc.* XXXVII (1), p. 88.

Specimen collected.—1♂ from Ragailous Camp, ca. 3,250 ft., 11th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂ : W 241 ; Tl. 410 ; Tr. 74 ; B. 22.

Remarks.—Hume (1888, p. 300) recorded it as common in the western hills of Manipur, but absent in the Valley and the eastern hills. Higgins (1934, p.88) found it fairly common in the hills, especially in the evergreen forests of western Manipur.

84. *Gennaeus horsfieldii horsfieldii* (G. R. Gray).

(The Black-breasted Kalij-Pheasant.)

1848. *Gallophasis horsfieldii* G. R. Gray, *Genera Birds* III, p. 498, pl. cxxvi. (“ India ” ; restricted to Assam.)

1888. *Euplocamus horsfieldi*, Hume, *Str. Feath.* XI, p. 303.

1928. *Gennaeus horsfieldii horsfieldii*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 324.

1934. *Gennaeus horsfieldii horsfieldii*, Higgins, *J. Bombay nat. Hist. Soc.* XXXVII (1), p. 89.

Specimen collected.—1♂ from Nanglea Atrow, 63 miles W of Imphal on Silchar Road, ca. 3,250 ft., 13th February 1936. (Naga Hills and Manipur Survey.)

Measurements (mm.).—1♂ : W. 256 ; Tl. 295 ; Tr. 84 ; B. 33.

Remarks.—Both Hume (1888, p. 303) and Higgins (1934, p. 89) found it common in Manipur. The latter author also recorded *G. h. williamsi* Oates from northern Manipur, viz., at Karong and in the Barak Valley.

85. *Bambusicola fytchii hopkinsoni* Godwin Austen.

(The Assam Bamboo-Partridge.)

1874. *Bambusicola hopkinsoni* Godwin Austen, *Proc. zool. Soc. London*, p. 44. (Khasia Hills, Assam.)
 1888. *Bambusicola fytchii*, Hume, *Str. Feath.* XI, p. 308.
 1928. *Bambusicola fytchii hopkinsoni*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) V, p. 366.
 1934. *Bambusicola fytchii hopkinsoni*, Higgins, *J. Bombay nat. Hist. Soc.* XXXVII (1), p. 94.

Specimens collected.—4 (3♂♂, 1♀) from Kanglatongbi area, 18 miles N. of Imphal on Dimapur Road, Manipur, ca. 3,500 ft., 7th November and 10th and 11th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.	•
3♂♂	138—150	100—115	44—46	20—24	
1♀	141	103	44	23	

Colour of soft parts.—Iris brown in ♂, hazel brown in ♀; bill horny; legs, feet and claws olivaceous horny.

Field notes.—This partridge was common in oak scrub and was usually seen in groups of twos or threes.

The gonads were in the non-breeding condition. The ovary measured 3×9 mm. and the testes 1.3×5.7 mm.

Remarks.—Hume (1888, p. 308) obtained it in the eastern hills of Manipur and remarked upon its rarity. Higgins (1934, p. 94) found it common throughout the Manipur Hills, upto 6,000 ft. He remarked that it occurs almost invariably in coveys, but I found them in twos and threes only. Higgins found them common in oak scrub in the Kanglatongbi area, the same locality where I obtained them.

86. *Arborophila atrogularis* (Blyth).

(The White-cheeked Hill-Partridge.)

1849. *Arboricola atrogularis* Blyth *J. Asiat. Soc. Bengal* XVIII, p. 819. ("Asám, Sylhet, and Arakan")
 1888. *Arboricola atrogularis*, Hume, *Str. Feath.* XI, p. 306.
 1928. *Arborophila atrogularis*, Stuart Baker *Fauna Brit. India, Birds* (2nd ed.) V, p. 393.
 1934. *Arborophila atrogularis*, Higgins, *J. Bombay nat. Hist. Soc.* XXXVII (1), p. 95.

Specimens collected.—2 (1♂, 1♀) from Regailous Camp, ca. 3,250 ft., and "Manipur" (= Imphal ca. 2,500 ft., 9th and 11th February 1936. (Naga Hills & Manipur Survey.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	145	65	37	20
1♀	131	60	36	20

Remarks.—Hume (1888, p. 306) found it very rare in Manipur, having met with only one specimen. Higgins (1934, p. 95) recorded it as “not uncommon” in the hills of Manipur, but wrote that it was very difficult to obtain.

Ord. 6. CHARADRIIFORMES.

Subord. LIMICOLAE.

Fam. 32. CHARADRIIDAE.

87. *Hoplopterus duvauceli* (Lesson).

(The Spur-Winged Plover.)

1826. *Charadrinus duvauceli* Lesson, in Levrault, *Dict. Sci. Nat.* XLIII, p. 38. (Calcutta.)
 1888. *Hoplopterus ventralis* Cuv. (=Wag.), Hume, *Str. Feath.* XI, p. 316.
 1929. *Hoplopterus ventralis* (Wag.), Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VI, p. 184.
 1930. *Hoplopterus duvauceli*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VIII, p. 696.

Specimens collected.—3 specimens, as follows:—

1♀ from Karong, 5th February 1936. (Naga Hills and Manipur Survey.)

2♂♂ from Kanglatongbi area, about 10-20 miles N. of Imphal on Dimapur Road, ca. 3,000-3,500 ft., 2nd and 8th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
2♂♂ . . .	193—196	93—99	64—66	81
1♀ . . .	194	100	66	28

Colour of soft parts.—Iris dark chocolate; bill black; legs, feet and claws horny black.

Field notes.—This plover was occasionally seen near water-courses.

The testes were in the non-breeding condition and measured 2×5 mm.

Remarks.—Hume (1888, p. 316) found this plover common in the central portion of Manipur. Higgins (1934, p. 82) reported it as resident and breeding there, but “not particularly common”.

88. *Lobivanellus indicus atronuchalis* Jerdon.

(The Burmese Red-wattled Lapwing.)

1864. *Lobivanellus atronuchalis* Jerdon (ex. Blyth MS.), *Birds of India* III, p. 648. (Burma.)
 1888. *Lobivanellus atronuchalis*, Hume, *Str. Feath.* XI, p. 316.
 1929. *Lobivanellus indicus atronuchalis*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VI, p. 189.

Specimens collected.—2 (1♂, 1♀) from Imphal Valley, ca. 2,600 ft., 25th November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	220	118	77	33
1♀	222	117	79	36

Colour of soft parts.—Iris red, with yellow outer ring; bill red, black at tip; wattle yellowish grey; claws horny.

Field notes.—This lapwing was not common. It was seen in the vicinity of water-pools.

Remarks.—Hume (1888, p. 316) found this lapwing rare in the Manipur basin and absent in the hills. Higgins (1934, p. 82) too found it rare in Manipur; according to him, it breeds there.

In one specimen the white streak on one side of the neck extends to the breast (as in *L. indicus indicus*), but the other side is typical of *atronuchalis*.

Fam. 33. SCOLOPACIDAE.

89. *Tringa ochropus* Linnaeus.

(The Green Sandpiper.)

1758. *Tringa ochrophus* Linnaeus, *Syst. Nat.* (10th ed.) I, p. 149. (Sweden.).
 1888. *Totanus ochropus*, Hume, *Str. Feath.* XI, p. 324.
 1929. *Tringa ochropus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VI, p. 215.

Specimens collected.—2♀♀ from 6 miles north of Imphal on Dimapur Road, ca. 2,800 ft., 4th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—2♀♀: W 142-147; Tl. 61-66; Tr. 32-35; B. 37-40.

Colour of soft parts.—Iris dark chocolate; bill olive green, dark smoky at tip; legs and feet ashy olive green; claws horny brown.

Field notes.—This sandpiper was occasionally seen near pools of rainwater and was distinctly uncommon.

The ovaries were in the non-breeding condition and measured about 4×7 mm.

Remarks.—Hume (1888, p. 324) found it very common in Manipur.

Ord. 7. HERODIONES.

Subord. ARDEAE.

Fam. 34. ARDAEIDAE.

90. *Bubulcus ibis coromandus* (Boddaert).

(The Cattle Egret.)

1783. *Cancroma coromanda* Boddaert, *Tabl. Pl. Enlum.*, p. 54, pl. 910. (Coromandel Coast, India.
 1888. *Bubulcus coromandus*, Hume, *Str. Feath.* XI, p. 333.
 1929. *Bubulcus ibis coromandus*, Stuart Baker, *Fauna Brit. India, Birds* (2nd ed.) VI, p. 349.

Specimens collected.—2 (unsexed) from Imphal Valley, ca. 2,600 ft., 5th November 1945. (Major M. L. Roonwal.)

Measurements (mm.).—2 (unsexed) : W 244-247 ; Tl. 83-92 ; Tr. 91-92 ; B. 56-60.

Colour of soft parts.—Iris, bare skin around eye, and bill yellow ; legs, feet and claws black.

Field notes.—The Cattle Egret was very common all over the Imphal Valley, both in the north (Kanglatongbi area) and in the south-east (Palel area).

Remarks.—Hume (1888, p. 333) also found it very common in meadows in Manipur. According to Higgins (1934, p. 86) it is resident and breeds there.

91. *Ardeola grayii* (Sykes).

(The Indian Pond Heron.)

1832. *Ardea grayii* Sykes, *Proc. zool. Soc. London*, p. 158. (Deccan.)

1888. *Ardeola grayii*, Hume, *Str. Feath.* XI, p. 334.

1929. *Ardeola grayii*, Stuart Baker, *Fauna Brit. India Birds* (2nd ed.) VI, p. 354.

Specimens collected.—2 (1♂, 1♀) from 6 miles north of Imphal on Dimapur Road, ca. 2,800 ft., 4th December 1945. (Major M. L. Roonwal.)

Measurements (mm.).—

	W.	Tl.	Tr.	B.
1♂	228	87	67	68
1♀	201	72	59	68

Colour of soft parts.—Iris golden yellow ; naked skin around eye and around base of bill bluish yellow. Upper bill ashy blue in ♂, smoky black in ♀ ; lower bill greyish yellow, tip smoky in ♀ and yellowish ashy in ♂. Legs, feet and pads bluish yellow ; claws horny.

Field notes.—The Pond Heron was common near water, but less so than the Cattle Egret.

The gonads were in the non-breeding condition. The ovary measured 6×15 mm., with the largest ova not more than 1 mm. in diameter ; the testes measured 2×5 mm.

Remarks.—Hume (1888, p. 334) found the Pond Heron sparsely distributed in the Manipur basin. Higgins (1934, p. 86), however, found it common, resident and breeding there.

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