

# NOTES ON A COLLECTION OF BIRDS FROM THE DARRANG DISTRICT, ASSAM.

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## INTRODUCTION.

In November 1939, a party of the Zoological Survey of India, consisting of Dr. B. Prashad, Dr. S. L. Hora, Dr. M. L. Roonwal, and a taxidermist, made a small collection of about 73 bird skins from the Darrang District, northern Assam. The following is a report on that collection along with some systematic notes based on comparison with specimens in the collections of the Zoological Survey of India.

*Physiography, etc., of the Darrang District*<sup>1</sup>.—The Darrang District (Text-fig. 1) consists of a narrow strip of land lying between the base of the Himalayas and the Brahmaputra river. It lies between the lat. 26° 12' and 27°N., and long. 91° 42' and 93° 47'E. The district is a level plain, the only hills being a few low *tilás* along the edge of the Brahmaputra and an outlying spur of the Himalayas north of Balipara. The land slopes from north to south. The foot-hills are clothed with forest, while the banks of the Brahmaputra are covered with jungle. The district is cut across by a large number of rivers and rivulets, which form the tributaries of the Brahmaputra.

The average temperature of the year is 66°F. (min.) to 82°F. (max.). The period from November to February is the coldest, during this period the minimum temperature being 51°F. and the maximum 76°F. The average rainfall near the Brahmaputra region is about 70 inches a year, and in the northern parts about 100 inches.

*Ornithology of the Darrang District*.—The published accounts of the birds of the Darrang district are few. Godwin-Austen (1876) gave a list of birds of the Aka and Dafla hills, including the north-eastern corner of the Darrang district, while Milburne (1939) presented a list of birds observed in a garden on the north bank of the Brahmaputra, within two miles of the Balipara Frontier Tract.

Mention may be made of the papers by Stevens (1914-15), who worked in the Lakhimpur district which adjoins the Darrang district.

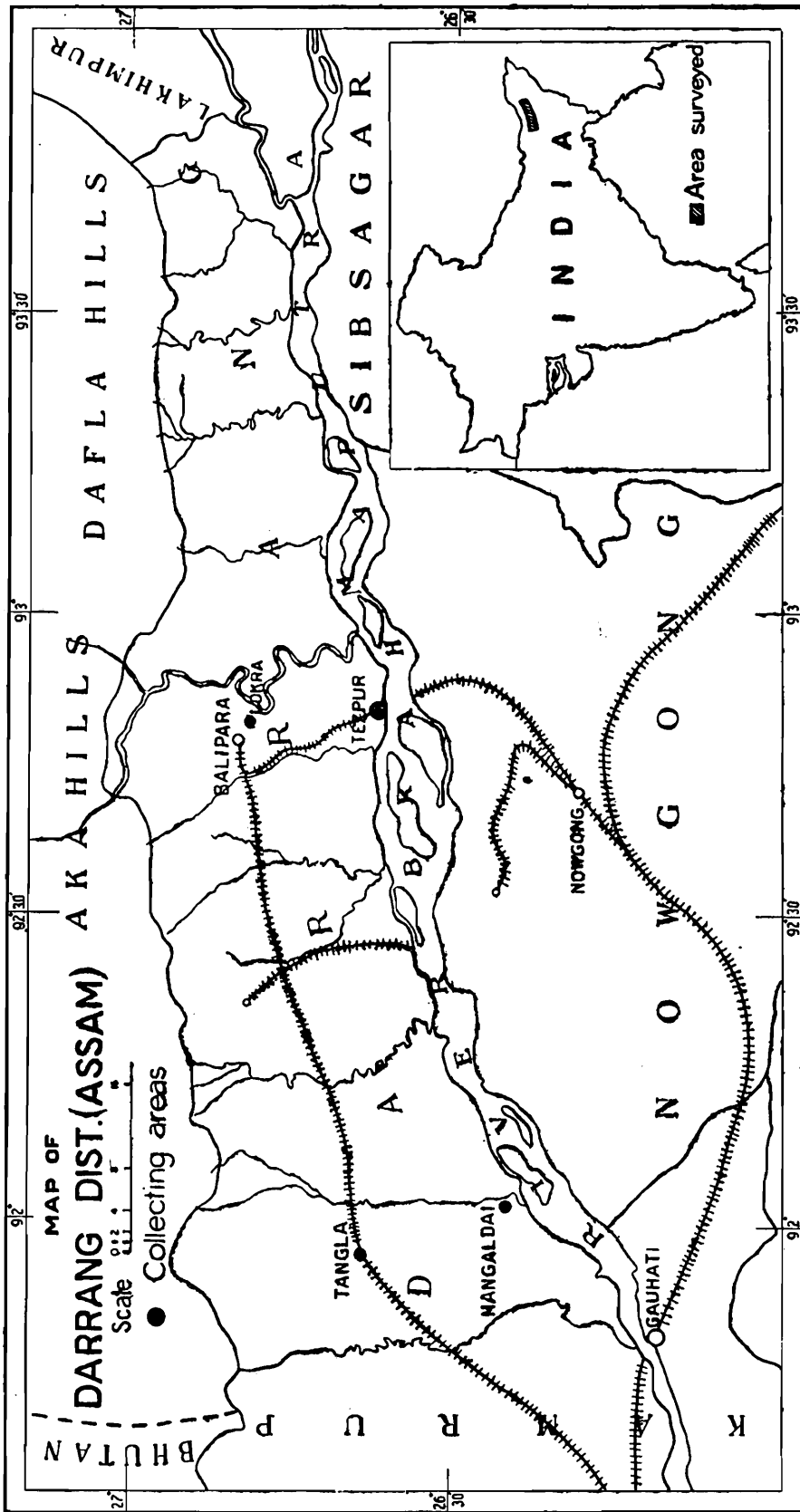
*Measurements, etc.*—Measurements (in mm.) of the skins were taken as follows: *Wing* (W.): Chord from the bend of the wing to the tip of the longest primary, the wing being flattened. *Tail* (Tl.): From the insertion of the median rectrices to the tip of the longest tail-feather. *Tarsus* (Tr.): From the middle point of the joint between tibio-tarsus and tarso-metatarsus behind to the middle of the metatarso-digital joint in front. *Bill* (B.): From the junction of the bill with the skull to the tip.

The sex was determined in the field by an examination of the gonads, In some cases, however, sex was determined only from plumage, when it is indicated in brackets, e.g. (♂) or (♀).

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<sup>1</sup> Adapted from the Imperial Gazetteer of India.

The weights (in gms.) were taken in the field within a few hours after the birds were killed.



Text-figure 1.—Map of the Darrang District, Assam, showing the localities where collections were made. (The scale is in English miles.)

The colours of soft parts were noted in the field, but they are omitted in this report as they are similar to those described by Baker in his volumes on Birds in the Fauna of British India series.

Local names were ascertained from local sources in the field.

The specimen numbers refer to the Registration numbers in the Zoological Survey of India collections.

For complete synonymies of the various species dealt with in the present paper, Baker's volumes (VII and VIII) of Fauna of British India (Birds) may be referred to.

#### ACKNOWLEDGMENTS.

I am grateful to Dr. B. N. Chopra, D.Sc., F.N.I., the Director, and Dr. M. L. Roonwal, M.Sc., Ph.D. (Cantab.), F.N.I., Asstt. Superintendent, Zoological Survey of India, for permitting me to examine the entire collection from the Darrang District. To Dr. Roonwal I am further indebted for checking the identifications and for constant guidance throughout the preparation of this report.

#### SYSTEMATIC ACCOUNT.

#### Order PASSERIFORMES.

#### Family CORVIDAE.

#### *Dendrocitta vagabunda vagabunda* (Latham).

(The Eastern Indian Tree-pie.)

1922. *Dendrocitta rufa vagabunda* (Lath.), Baker, *Faun. Brit. India, Birds* (2nd ed.) I, p. 50.

1932. *Dendrocitta vagabunda vagabunda* (Lath.), Whistler and Kinnear, *J. Bombay nat. Hist. Soc.* XXXV, p. 514.

*Specimens collected.*—Nos. 26860, ♂, and 26861, ♀, Tangla, November 14, 1939.

	Measurements (mm).	W.	Tl.	Tr.	B.
1 ♂	. . . . .	144	237	34	?
1 ♀	. . . . .	143	227	33	33

*Weight.*—No. 26861, ♀, 116.0 gms.

*Systematic note.*—The number of subspecies of *Dendrocitta vagabunda* is a somewhat disputed question. Baker (1922, pp. 48-51) recognizes five subspecies from India and Burma, viz., *rufa*, *vagabunda*, *sclateri*, *kinneari* and *saturator*. Whistler and Kinnear (1932, pp. 514-516) have critically studied this question, and have recognized four subspecies, viz., *pallida*, *vagabunda*, *vernayi* and *parvula*. My examination of 39 specimens in the Zoological Survey of India collections upholds their conclusion. The measurements of these specimens are given in Table 1.

TABLE 1.

Table showing the measurements in mm. of the different subspecies of *Dendrocitta vagabunda* in the Zoological Survey of India collections.

Subspecies	Localities	No. of specimens	Sex	Measurements			
				W.	Tl.	Tr.	B.
<i>Dendrocitta vagabunda pallida</i> (Blyth).	Punjab (Kangra valley)	2	?	165—170	274 (One specimen)	34—35	30—31
	Rajputana (Mt. Aho)	1	?	166	?	34	29
	TOTAL	3	?	105—167 167	274	34—35 34	29—31 30
<i>Dendrocitta Vagabunda Vagabunna</i> (Lathan).	Burma (all over the country)	2	♀♀	155—157	252—264	32—35	29—31
		13		140—167	200—310	26—35	27—30
				148·5	241·5	31	29
<i>Dendrocitta Vagabunda Vagabunna</i> (Lathan).	Assam (including the Darrang Dist. specimens).	1	♂	144	237	34	?
		2	♀♀	143—146	227 (One specimen)	31—33	28—33
		1	?	146	282	31	29

<i>Dendrocitta vagabunda vagabunda</i> (Latham)	Bengal (mostly in or around Calcutta, one from Duars and one from Nadia Dist.).	7	♂♂	144—153 149	224—262 247	30—34 32	27—29 28
		3	♀♀	147—150	250—254	33—34	26—27
		3	??	148·5 143—153 149	251 214	34 30—34 33	28·5 28—29 (Two specimens) 28·5
	Bihar (Purnea Dist.)	1	♀	148	?	33	28
	Central India (Baroda)	1	?	150	262	31	?
<i>Dendrocitta vagabunda vernayi</i> Kinnear and Whistler.		8	♂♂	144—153 148	224—262 243·5	30—34 32	27—29 (Seven specimens) 28
	TOTAL	8	♀♀	143—157 149	227—264 (Six specimens) 249·5	31—35 33	26—33 29
		18	??	140—167 149	200—310 (Sixteen specimens) 240·5	26—35 31	27—30 (Sixteen specimens) 28
	Mysore (Bangalore).	1	♀	132	?	31	?
<i>Dendrocitta vagabunda parvula</i> (Latham).	Travancore (Trivandrum)	..	1	♂ 145	221	30	28

Thick figures indicate average measurements.

## Family PARIDAE.

**Parus major nipalensis** Hodgson.

(The Eastern Grey-Tit.)

1922. *Parus major cinereus* Vieil. (part), Baker, *Faun. Brit. India, Birds* (2nd ed.) I, p. 14.1932. *Parus major nipalensis* Hodgson, Whistler and Kinnear, *J. Bombay nat. Hist. Soc.* XXXV, pp. 518-519.*Specimen collected*.—No. 26862, ♂, Tangla, November 14, 1939.*Measurements*.—1 ♂: W. 68; Tl. 60; Tr. 17.5; B. 12.*Weight*.—13.4 gms.

## Family TIMALIIDAE.

**Pellorneum ruficeps mandellii** Blanford.

(Mandelli's Spotted Babbler.)

*Specimen collected*.—No. 26863, ♂, Lokra, November 9, 1939.*Measurements*.—1 ♂: W. 65; Tl. 63; Tr. 26; B. 17 mm.*Weight*.—27.0 gms.**Aegithina tiphia tiphia** (Linné).

(The Common Iora.)

*Specimen collected*.—No. 26864, ♀, Lokra, November 9, 1939.*Measurements*.—1 ♀: W. 62; Tl. 53; Tr. 23; B. 17 mm.*Weight*.—15.1 gms.**Chloropsis aurifrons aurifrons** (Temminck & Laugier).

(The Gold-fronted Chloropsis)

*Specimen collected*.—No. 26865, ♀, Lokra, November 7, 1939.*Measurements*.—1 ♀: W. 89; Tl. 68; Tr. 21; B. 23 mm.*Weight*.—29.4 gms.

## Family PYCNONOTIDAE.

**Criniger gularis flaveolus** (Gould).

(The Indian White-throated Bulbul.)

*Specimen collected*.—No. 26866, ♂, Lokra, November 9, 1939.*Measurements*.—1 ♂: W. 100; Tl. 92; Tr. 22; B. 21 mm.*Weight*.—54.5 gms.**Molpastes cafer bengalensis** (Blyth).

(The Bengal Red-vented Bulbul.)

*Specimen collected*.—No. 26867, ♀, Lokra, November 7, 1939.*Measurements*.—1 ♀: W. 97; Tl. 100; Tr. 26; B. 16 mm.*Weight*.—41.0 gms.

**Otocompsa jocosa emeria** (Linné).

(The Bengal Red-whiskered Bulbul.)

*Specimen collected.*—No. 26868, ♀, Lokra, November 8, 1939.*Measurements.*—1 ♀ : W. 87 ; Tl. 90 ; Tr. 20 ; B. 16 mm.**Otocompsa flaviventris flaviventris** (Tickell).

(The Black-crested Yellow Bulbul.)

*Specimen collected.*—No. 26869, ♀, Lokra, November 10, 1939.*Measurements.*—1 ♀ : W. 79 ; Tl. 83 ; Tr. 19 ; B. 14 mm.*Weight.*—28.0 gms.

## Family TURDIDAE.

**Saxicola torquata** (subspecies ?).*Specimens collected.*—Nos. 26870 and 26871 (♂♂), Lokra, November 10 ; No. 26872, ♂, Tangla, November 14, 1939.*Measurements.*—3 ♂♂ : W. 71-76 ; Tl. 59-61 ; Tr. 23-27 ; B. 14-15 mm.*Weights.*—♂♂ : Nos. 26870, 14.2 ; 26871, 14.4 ; 26872, 13.7 gms.*Field note.*—Common all over.**Copsychus saularis saularis** (Linné).

(The Indian Magpie-Robin.)

*Specimen collected.*—No. 26873, ♂, Lokra, November 12, 1939.*Measurements.*—1 ♂ : W. 94 ; Tl. 90 ; Tr. 33 ; B. 21 mm.

## Family MUSCICAPIDAE.

**Culicicapa ceylonensis ceylonensis** (Swainson).

(The Grey-headed Flycatcher.)

*Specimens collected.*—Nos. 26874 and 26875, ♂♂, Tangla, November 14 ; Nos. 26876 and 26877, ♂♂, Tezpur, November 18, 1939.

<i>Measurements (mm).</i>				W.	Tl.	Tr.	B.
4 ♂♂	.	.	.	59—64	51—54	14—16	12—13
Av.	.	.	.	61	53	15	12

*Weights.*—♂♂ : Nos. 26875, 7.3 ; 26877, 7.0 gms.

## Family DICRURIDAE.

**Dicrurus macrocercus albirictus** Hodgson.

(The Black Drongo.)

1924. *Dicrurus macrocercus macrocercus* Vieill., Baker, *Faun. Brit. India, Birds* (2nd ed.) II, p. 356.1924. *Dicrurus macrocercus albirictus* Hodgs., Baker, *Ibid.*, p. 357.*Specimen collected*.—No. 26878, ♂, Lokra, November 9, 1939.*Measurements*.—1 ♂ : W. 148 ; Tl. 170 ; Tr. 24 ; B. 27 mm.

## Family SYLVIIDAE.

**Abroscopus superciliaris flaviventris** (Jerdon).

(The Yellow-bellied Flycatcher-Warbler.)

*Specimens collected*.—Nos. 26879 and 26880, ♂♂, Lokra, November 11, Nos. 26881 and 26882, ♂♂, Tezpur, November 18, 1939.

	<i>Measurements (mm).</i>	W.	Tl.	Tr.	B.
4 ♂♂	.	52—60	39—49	18—21	10—11
Av.	.	56	43.5	20	10

*Weights*.—♂♂ : Nos. 26879, 7.1 ; 26880, 6.0 ; 26881, 5.5 ; 26882, 5.5 gms.

## Family ORIOLIDAE.

**Oriolus xanthornus xanthornus** (Linné).

(The Indian Black-headed Oriole.)

1926. *Oriolus xanthornus xanthornus* (Linn.), Baker, *Faun. Brit. India, Birds* (2nd ed.) III, p. 11.1933. *Oriolus xanthornus maderaspatanus* Frankl., Whistler and Kinnear, *J. Bombay nat. Hist. Soc.* XXXVI, p. 584.*Specimen collected*.—No. 26883, ♂, Lokra, November 10, 1939.*Measurements*.—1 ♂ : W 131 ; Tl. 85 ; Tr. 24 ; B. 29 mm.

In the Zoological Survey of India collections there are three other specimens from the Darrang district collected by Maj. Godwin-Austen in the winter of 1874-75. Their measurements are as follows :

	<i>Measurements (mm).</i>	W.	Tl.	Tr.
2 ♂♂	.	140—143	90—94	25—27
1 ♀	.	139	85	27

The bills in all these specimens are broken.

*Weight*.—55.0 gms.*Local name*.—*Patmāḍé*.*Field note*.—Not common.



*Systematic note.*—There is some controversy regarding the subspecies of *Oriolus xanthornus* in India. Baker (1926, pp. 11-13) recognizes two subspecies—*xanthornus* Linn. and *ceylonensis* Bonap., but Whistler and Kinnear (1933, pp. 584-585) split up the former into *xanthornus* and *maderaspatanus* Frankl. They confine *xanthornus* to the north of the Gangetic plain and *maderaspatanus* to its south. Their basis of differentiating *maderaspatanus* from the typical race are smaller size and narrower extension of the yellow colour on the tips of the secondary wing feathers, together with a small difference in the colours of the first year birds. From *ceylonensis* it (*maderaspatanus*) is said to differ in its larger size and wider extension of the yellow on the tips of the secondaries, and in the colour of the first year birds; so that, *maderaspatanus* forms an intermediate race between *xanthornus* and *ceylonensis*.

I have carefully examined 46 skins of *O. xanthornus* collected from all over India excluding Burma, Andamans, south Travancore and Ceylon. Their measurements are given in Table 2 below:

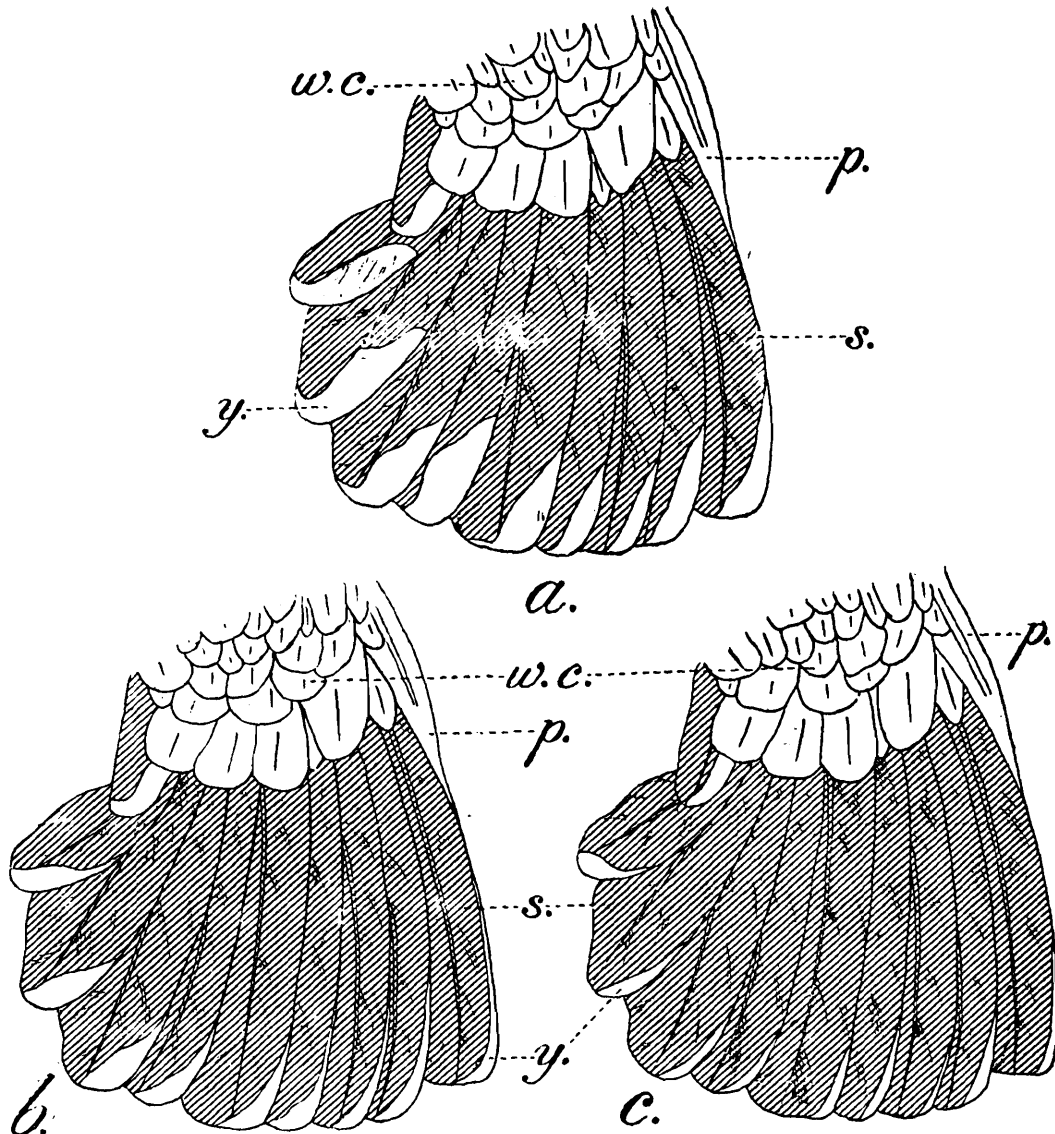
TABLE 2

Region	No. of specimens.	Sex	Measurements (mm)			
			W.	Tl.	Tr.	B.
Sub-himalayan Region (Lat. 26°—30° N.)	7	♂♂	132—146 <b>139</b>	87—100 <b>93·5</b>	22—27 <b>25</b>	30—31 <b>30</b>
	1	♀	139	85	26	?
	2	??	138—144	91—92	25—28	30 (one specimen)
Indo-gangetic Plain and adjacent southern land mass. (Lat. 22°—25° N.)	12	♂♂	127—142 <b>137·5</b>	82—100 <b>92</b>	22—27 <b>24</b>	27—31 <b>28·5</b>
	1	♀	128	91	28	25
	8	??	133—140 <b>138·5</b>	89—99 <b>93</b>	23—26 <b>24·5</b>	29—31 <b>29</b>
Central Peninsular India (Lat. 16°—18° N.)	8	♂♂	127—142 <b>134</b>	88—104 <b>94·5</b>	25—27 <b>25·5</b>	27—31 <b>28</b>
Southern India (Lat. 11°—12° N.)	2	♂♂	131—135	88	24—25	27—28
	1	♀	137	87	24	?
	4	??	131—138 <b>135</b>	84—89 <b>86·5</b>	23—25 <b>23·5</b>	28—29 <b>28·5</b>

Thick figures indicate average measurements.

Again as to the extension of yellow on the tips of the secondaries, I find that it varies greatly, even in birds from the same or adjoining

localities (Text-fig. 2), and it is, therefore, impossible to regard this as a subspecific character.



Text-figure 2.—Secondary wing feathers of *Oriolus x. xanthornus* to show the extent of yellow on their tips. *a*, WIDE in No. 8187, ♂, Darrang Dist., Assam; *b*, MEDIUM in No. 8188, ♀, Darrang Dist., Assam; *c*, NARROW in No. 5742 (sex ?), Samaguting, Naga Hills, Assam.

*p.*, primaries; *s.*, secondaries; *w.c.*, wing-coverts; *y.*, yellow on the tips of secondaries.

On these grounds, *maderaspatanus* cannot be accepted as a valid subspecies.

#### Family STURNIDAE.

#### *Sturnia malabarica malabarica* (Gmelin).

(The Grey-headed Myna.)

*Specimens collected.*—Nos. 26884, ♀, and 26885, ♂, Lokra, November 7 and 12, 1939, respectively.

	<i>Measurements(mm).</i>					<i>W.</i>	<i>Tl.</i>	<i>Tr.</i>	<i>B.</i>
1 ♂	:	:	:	:	:	102	73	26	21
1 ♀	:	:	:	:	:	99	66	27	20

*Weights.*—♂ : No. 26885, 44.5; ♀ : 26884, 40.4 gms.

**Acridotheres tristis tristis** (Linné).

(The Common Myna.)

*Specimen collected.*—No. 26886, ♂, Lokra, November 9, 1939.*Measurements.*—1 ♂ : W. 143 ; Tl. 100 ; Tr. 40 ; B. 22 mm.*Weight.*—138.7 gms.*Local name.*—*Hâlîkâ.***Sturnopastor contra contra**(Linné).

(The Indian Pied Myna.)

*Specimens collected.*—No. 26887, ♂, Tezpur, November 4 ; No. 26888, ♂, Tangla, November 14, 1939.*Measurements.*—2 ♂♂ : W. 116-119 ; Tl. 72-80 ; Tr. 39-41 ; B. 31 mm. (one specimen).*Weights.*—♂♂ : Nos. 26887, 87.0 ; 26888, 82.5 gms.

## Family FRINGILLIDAE.

**Passer domesticus indicus** Jardine and Selby.

(The Indian House-Sparrow.)

1926. *Passer domesticus indicus* Jard. and Selby, Baker, *Faun. Brit. India, Birds* (2nd ed.) III, p. 170.1928. *Passer domesticus nigricollis* Burt., Baker, *Faun. Brit. India, Birds* (2nd ed.) VIII, p. 656.*Specimens collected.*—Nos. 26889 and 26890, ♂♂, Lokra, November 12, 1939.*Measurements.*—2 ♂♂ : W. 71-74 ; Tl. 56-58 ; Tr. 20-22, B. 11 mm.*Weights.*—♂♂ : No. 26889, 23.3 ; 26890, 22.2 gms.*Systematic note.*—From an examination of all the specimens of *Passer domesticus* in the Zoological Survey of India collections, I could not find any difference between the supposed subspecies *indica* and *nigricollis*, as maintained by Baker (1926, pp. 170-172). A similar conclusion was also arrived at by Whistler and Kinnear (1933a, p 838).**Passer montanus malaccensis** Dubois.

(The Malay Tree-Sparrow.)

*Specimen collected.*—No. 26891, ♂, Lokra, November 10, 1939.*Measurements.*—1 ♂ : W. 68 ; Tl. 56 ; Tr. 19 ; B. 11 mm.*Weight.*—20.5 gms.*Local name.*—*Konchikâ.**Field note.*—Common in houses.

## Family HIRUNDINIDÆ.

**Riparia paludicola brevicaudata** (Horsfield).

(The Indian Sand-Martin.)

*Specimen collected.*—No. 26892 (sex ?), Tezpur (on the bank of R. Brahmaputra), November 6, 1939.

*Measurements.*—1 (sex ?) : W. 92 ; Tl. 43 ; Tr. 10 ; B. 6 mm.

*Weight.*—8.2 gms.

*Local name.*—*Tâltâpi*.

## Family MOTACILLIDÆ.

**Motacilla alba dukhunensis** Sykes.

(The Indian White Wagtail.)

*Specimen collected.*—No. 26893, ♀, Tezpur (on the bank of R. Brahmaputra), November 6, 1939.

*Measurements.*—1 ♀ : W. 88 ; Tl. 93 ; Tr. 23 mm.

*Weight.*—16.5 gms.

*Local name.*—*Bâlimâti*.

**Motacilla alboides** Hodgson.

(Hodgson's Pied Wagtail.)

*Specimens collected.*—No. 26894, ♀, Tezpur (on the bank of R. Brahmaputra), November 6 ; No. 26895, ♀, on the bank of R. Bhareli, about 4 miles from Lokra, November 7, 1939.

*Measurements.*—2 ♀♀ : W. 87 ; Tl. 87-92 ; Tr. 23-24 ; B. 16-17 mm.

*Weights.*—♀♀ : Nos. 26894, 21.5 ; 26895, 20.7 gms.

*Local name.*—*Tiposi*.

**Motacilla cinerea caspica** (Gmelin).

(The Eastern Grey Wagtail.)

*Specimen collected.*—No. 26896, ♂, Lokra (on the bank of stagnant streamlet in forest), November 12, 1939.

*Measurements.*—1 ♂ : W. 81.5 ; Tl. 93 ; Tr. 22 ; B. 15 mm.

The tail length of "under 75 mm." given by Baker (1926, p. 266) is incorrect, as already pointed out by Ticehurst (1927, p. 351).

*Weight.*—16.6 gms.

**Motacilla citreola citreola** Pallas.

(The Yellow-headed Wagtail.)

*Specimens collected.*—Nos. 26897, ♀, and 26898, ♂, Lokra, November 7 and 11, 1939, respectively.

	<i>Measurements (mm).</i>	W.	Tl.	Tr.	B.
1 ♂	.	88	81	27	14
1 ♀	.	83	80	25	15

*Weights.*—♂ : No. 26898, 18.2 ; ♀ : No. 26897, 17.9 gms.

*Local name.*—*Tooni*.

*Field note.*—Common in flocks of about 20-30 in the vicinity of water.

**Anthus hodgsoni hodgsoni** Richmond.

(The Indian Tree-Pipit.)

*Specimens collected.*—Nos. 26899, ♂, and 26900, ♀, Lokra, November 8, 1939.

	<i>Measurements (mm).</i>	W.	Tl.	Tr.	B.
1 ♂	.	83	64	23	14
1 ♀	.	85	67	22	14

**Anthus richardi rufulus** Vieillot.

(The Indian Pipit.)

*Specimen collected.*—No. 26901, ♂, Tangla, November 14, 1939.

*Measurements.*—1 ♂ : W 81 ; Tl. 65 ; Tr. 26 ; B. 14 mm.

*Weight.*—20.8 gms.

## Family NECTARINIIDAE.

**Aethopyga siparaja seheriæ** (Tickell).

(The Indian Yellow-backed Sunbird.)

*Specimens collected.*—Nos. 26902, ♂, and 26903, ♂ (juv.), Lokra, November 12 ; No. 26904 (sex ?) (juv.), Tangla, November 15, 1939.

*Measurements.*—1 ad. ♂ : W 55 ; Tl. 67 ; Tr. 16 ; B. 21 mm.

*Weight.*—No. 26902, ad. ♂, 7.5 gms.

## Order PICIFORMES.

## Family CAPITONIDAE.

***Thereiceryx lineatus hodgsoni*** (Bonaparte).

(The Assam Lineated Barbet.)

*Specimens collected.*—Nos. 26906, ♀, and 26905, ♂, Tangla, November 10 and 14, 1939, respectively.

	<i>Measurements (mm).</i>	W.	Tl.	Tr.	B.
1 ♂	. . . . .	126	86	30	33
1 ♀	. . . . .	128	87	30	34

*Weights.*—♂: No. 26905, 128.9; ♀: No. 26906, 140.0 gms.

***Cyanops asiatica asiatica*** (Latham).

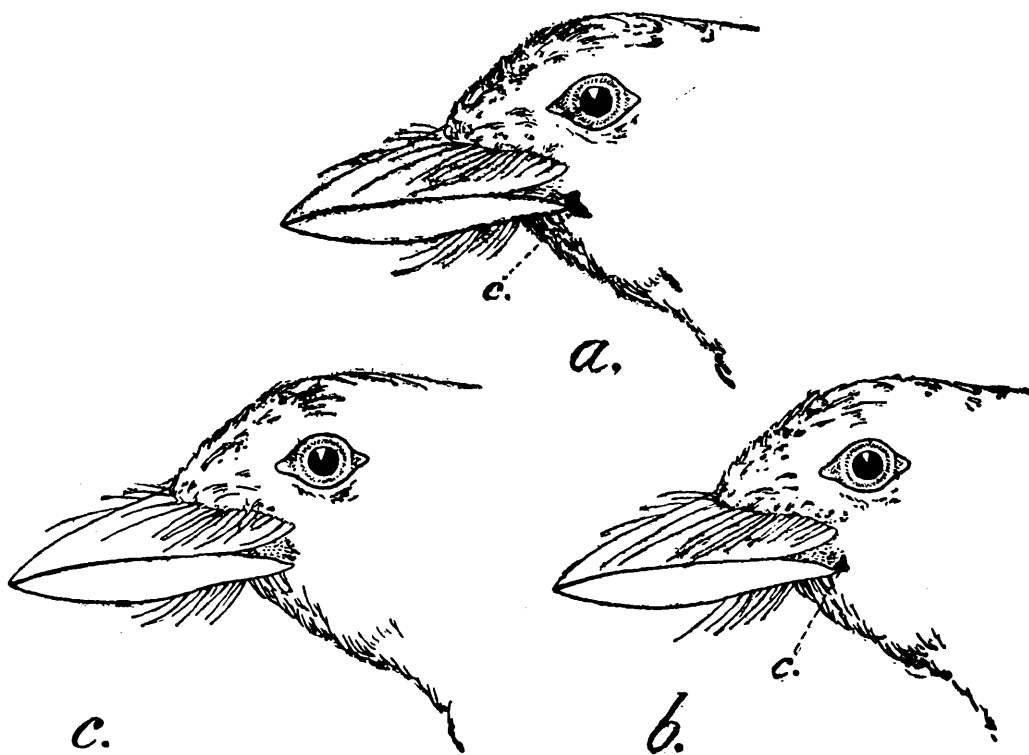
(The Blue-throated Barbet.)

*Specimen collected.*—No. 26907, ♂, Lokra, November 11, 1939.

*Measurements.*—1 ♂: W. 103; Tl. 67; Tr. 28; B. 27 mm.

*Weight.*—84.7 gms.

*Systematic note.*—The crimson specks at the base of the lower mandible, which Baker (1927, p. 116) mentions as a general character of the subspecies, was long ago considered by Godwin-Austen (1874, pp. 176-177) and Hume (1888, pp. 67-68) to be characteristic of the birds of



Text-figure 3.—Variation of crimson patches at the base of the lower mandible in *Cyanops a. asiatica*. *a*, in No. 26907, ♂, Lokra (Darrang Dist., Assam); *b*, in No. 15245 (sex ?), Nepal; *c*, in No. 688 of Mr. King's collections, ♂, Dehra Dun (U. P.).  
c, crimson patch at base of lower mandible.

the Assam hills. My examination of 12 specimens in the Zoological Survey of India collections corroborates this conclusion. I find that in the Dehra Dun (U. P.) birds they are absent ; of the four Nepal specimens one lacks them altogether and the other three have only slight traces of crimson patches ; in Bengal specimens they are present as very small specks ; while the Assam and Burma birds have them quite conspicuously (Text-fig. 3).

### Order PSITTACIFORMES.

#### Family PSITTACIDAE.

#### ***Psittacula krameri borealis*** Neumann.

(The Northern Indian Rose-ringed Paroquet.)

*Specimen collected.*—No. 26908, ♀, Mangaldai, November 16, 1939.

*Measurements.*—1 ♀ : W. 162 ; Tl. 183 ; Tr. 17 ; B. 25 mm.

*Weight.*—135.0 gms.

*Systematic note.*—Baker (1927, p. 204) gives the colour of the lower bill in this subspecies as wholly red ; but in the present specimen its colour is mixed dusky red and black. Whistler and Kinnear (1935, p. 752) have already pointed out the nature of mixed coloration of the lower bill in this subspecies, and they did not attach any subspecific value to the colour of the lower bill.

### Order CORACIIFORMES.

#### Family CORACIDAE.

#### ***Coracias benghalensis affinis*** Horsfield.

(The Burmese Roller.)

*Specimen collected.*—No. 26909, ♂, Mangaldai, November 15, 1939.

*Measurements.*—1 ♂ : W. 193 ; Tl. 140 ; Tr. 27 ; B. 47 mm.

*Weight.*—192.0 gms.

#### Family MEROPIDAE.

#### ***Merops orientalis birmanus*** Neumann.

(The Burmese Green Bee-eater.)

*Specimen collected.*—No. 26910, ♂, Lokra, November 11, 1939

*Measurements.*—1 ♂ : W. 92 ; Tl. 124 ; Tr. 10 ; B. 33 mm

*Weight.*—11.4 gms.

## Family ALCEDINIDAE.

**Ceryle rudis leucomelanura** Reichenbach.

(The Indian Pied Kingfisher.)

*Specimen collected.*—No. 26911, ♂, Tezpur (on the bank of R. Brahmaputra), November 6, 1939.

*Measurements.*—1 ♂ : W. 135 ; Tl. 76 ; Tr. 11 ; B. 68 mm.

*Weight.*—89.5 gms.

*Local name.*—*Hanumān*.

**Alcedo atthis bengalensis** Gmelin.

(The Common Indian Kingfisher.)

*Specimen collected.*—No. 26912, ♂, Kenduguri Bhil (Lake), a few miles from Mangaldai, November 16, 1939.

*Measurements.*—1 ♂ : W. 69 ; Tl. 35 ; Tr. 7 ; B. 41 mm.

*Weight.*—25.5 gms.

*Local name.*—*Hanumān*. (Same as above.)

**Alcedo hercules** Laubmann.

(Blyth's Kingfisher.)

*Specimen collected.*—No. 26913, ♂, Lokra, November 9, 1939.

*Measurements.*—1 ♂ : W. 95 ; Tl. 48 ; Tr. 12 ; B. 59 mm.

*Weight.*—59.7 gms.

*Local name.*—*Masrokhá*.

*Remarks.*—The name of this species has suffered a variety of changes within recent years. Blyth's *grandis*, being preoccupied, was changed to *hercules* by Laubmann. Kinnear (1929, p. 121) changed it to *megalia* without assigning any reason, and this was supported by Ticehurst (1930, p. 472). Later Ticehurst and Stanford (1939, p. 25) revived *hercules*.

**Halcyon smyrnensis fusca** (Boddaert).

The Indian White-breasted Kingfisher.)

*Specimens collected.*—Nos. 26914 and 26915, ♂♂, Tezpur (on the bank of R. Brahmaputra), November 4 and 6, respectively ; No. 26916, ♂, Mangaldai, November 15, 1939.

*Measurements.*—3 ♂♂ : W. 117-123 ; Tl. 87-93 ; Tr. 15-17 ; B. 62-63 mm.

*Weights.*—♂♂ : Nos. 26914, 86.4 ; 26915 73.0 gms.



## Order COLUMBIFORMES.

## Family COLUMBIDAE.

***Dendrophasa pompadora phayrei* (Blyth).**

(The Ashy-headed Green Pigeon.)

*Specimen collected.*—No. 26917, ♂, Lokra, November 11, 1939.*Measurements.*—1 ♂; W. 156; Tl. 92; Tr. 24; B. 16 mm.***Streptopelia chinensis suratensis* (Gmelin).**

(The Indian Spotted Dove.)

*Specimens collected.*—Nos. 26918, ♂, and 26919, ♀, Lokra, November 9, 1939.

	<i>Measurements(mm).</i>	W	Tl.	Tr.	B.
1 ♂	.	135	134	22	20
1 ♀	.	138	136	22	18

*Weights.*—♂: No. 26918, 119.0; ♀: Nos. 26919, 115.7 gms.*Local name.*—*Kaposrā*.

*Systematic note.*—These specimens are somewhat intermediate between the Indian subspecies *suratensis* and the Burmese *tigrina*, but close to the former. From specimens from western India they differ in having their backs, wing-coverts, scapulars and secondaries less heavily spotted with rufous, and in having the outer webs of the median wing coverts more ashy. In the under-parts there is no appreciable difference

## Order CHARADRIIFORMES.

## Family JACANIDAE.

***Metopidius indicus* (Latham).**

(The Bronze-winged Jacana.)

*Specimens collected.*—Nos. 26920 and 26921, ♀♀, Kenduguri Bhil (Lake), a few miles from Mangaldai, November 16, 1939.*Measurements.*—2 ♀♀: W. 178-181; Tl. 50-51; Tr. 71-77; B. 39-40 mm.

## Family STERNIDAE.

**Sterna melanogaster** Temminck and Laugier.

(The Black-bellied Tern.)

*Specimens collected.*—Nos. 26922, ♂, and 26923, ♀, Tezpur (on the bank of R. Brahmaputra), November 4 and 6, 1939, respectively.

	<i>Measurements(mm).</i>	W.	Tl.	Tr.	B.
1 ♂	. .	226	160	15	41
1 ♀		223	110	15	37

(Outer tail-feathers not properly developed).

*Weights.*—♂ : No. 26922, 65.2 ; ♀ : No. 26923, 63.0 gms.

*Local name.*—*Siloni* and *Gangāsiloni*.

*Remarks.*—In No. 26923, ♀, it appears from the coloration that the specimen has not yet assumed the winter plumage.

## Family CHARADRIIDAE.

**Leucopoliu alexandrinu alexandrinu** (Linné).

(The Kentish Plover.)

*Specimen collected.*—No. 26924, ♀, Tezpur (on the bank of R. Brahmaputra), November 6, 1939.

*Measurements.*—1 ♀ : W. 105 ; Tl. 47 ; Tr. 26 ; B. 19 mm.

*Weight.*—36.0 gms.

*Local name.*—*Titiāli*.

## Family SCOLOPACIDAE.

**Tringa hypoleucos** Linné.

(The Common Sandpiper.)

*Specimens collected.*—Nos. 26925 and 26926, ♀♀, Tezpur (on the bank of R. Brahmaputra), November 4, 1939.

*Measurements.*—2 ♀♀ : W. 111 ; Tl. 57-61 ; Tr. 23-26 ; B. 26-27 mm.

*Weights.*—♀♀ : Nos. 26925, 49.0 ; 26926, 52.0 gms.

**Tringa glareola** Linné.

(The Wood Sandpiper.)

*Specimen collected.*—No. 26927, ♂, Kenduguri Bhil (Lake), a few miles from Mangaldai, November 16, 1939.

*Measurements.*—1 ♂ : W. 118 ; Tl. 48 ; Tr. 36 ; B. 31 mm.

*Weight.*—56.4 gms.

## Order CICONIIFORMES.

## Family ARDEIDAE.

***Egretta garzetta garzetta* (Linné).**

(The Little Egret.)

*Specimen collected.*—No. 26928, ♀, Tezpur (on the bank of R. Brahmaputra), November 4, 1939.

*Measurements.*—1 ♀: W. 261; Tl. 95; Tr. 94; B. 84 mm.

*Local name.*—*Bogulá.*

***Ardeola grayii* (Sykes).**

(The Pond Heron.)

*Specimens collected.*—Nos. 26929, ♀, and 26930, ♂, Tezpur (on the bank of R. Brahmaputra), November 4 and 6 respectively; No. 26931, ♂, Kenduguri Bhil (Lake), a few miles from Mangaldai, November 16, 1939.

	<i>Measurements (mm).</i>	W.	Tl.	Tr.	B.
2 ♂♂		215—227	84—94	62	72—73
1 ♀		210	82	60	65

*Local name.*—*Kânámoshûri.*

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

(The Indian Little Green Heron.)

*Specimens collected.*—Nos. 26932, ♂, and 26933, ♀, Tezpur (on the bank of R. Brahmaputra), November 6, 1939.

	<i>Measurements (mm).</i>	W.	Tl.	Tr.	B.
1 ♂		181	70	49	65
1 ♀		174	64	48	71

*Local name.*—*Wák.*

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