

MISCELLANEOUS PUBLICATION
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Records of the Zoological Survey of India

Catalogue of birds in the Zoological Survey of
India, Calcutta
IV. Alcedinidae (Kingfishers)

by

A. K. MUKHERJEE
J. M. DASGUPTA

Issued by the Director
Zoological Survey of India, Calcutta

RECORDS
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Zoological Survey of India, Calcutta



सत्यमेव जयते

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CATALOGUE OF BIRDS IN THE
ZOOLOGICAL SURVEY OF INDIA, CALCUTTA.
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By

AJIT KUMAR MUKHERJEE AND JYOTSNAMOY DASGUPTA

Zoological Survey of India, Calcutta.

INTRODUCTION

Parts 1, 2 and 3 of the series of catalogues appeared in the Records Indian Museum, volumes 43, 45 and 52 covering the families Columbidae, Pteroclididae and Capitonidae respectively. The first two were contributed by Roonwal (1941 and 1947) and the last one by Mukherjee (1954). Since the Zoological Survey of India and the Indian Museum are two separate and independent institutions and the Indian Museum is also publishing its catalogues from time to time on Museum assets on various branches of Arts, Archaeology, Anthropology, etc., it has been thought desirable that catalogues of National Zoological Collections in the custody of Zoological Survey of India, should be published under a revised and more accurate title.

In part 3 of the Catalogue, Mukherjee (1954) gave an idea of the tremendous loss suffered by the bird collection of Zoological Survey of India in 1943 due to Varuna river floods at Varanasi, Uttar Pradesh. Regular ornithological survey have been conducted during the last two decades in various regions of India and adjacent countries in order to augment the bird collections in the department.

The present collection of the kingfishers (Alcedinidae) on which this part of the catalogue is based, consists of specimens representing 38 species and subspecies from the Indian subcontinent and such foreign territories like, Europe, Afghanistan, Burma, China, Australia, Philippines, United States of America and Africa.

As far as possible information on the following points for each specimen has been given :

- (i) Zoological Survey of India (Z.S.I.) Register Number.
- (ii) Sex.
- (iii) Locality.
- (iv) Date of collection.
- (v) Name of collector or Donor.
- (vi) Measurements.

The following abbreviations have been used :

'W' for wing

'Tl' for tail

'B' for length of bill measured from its base at skull to the tip.

'N' for length of bill from the anterior edge of the nares to the tip.

All specimens are adults except where indicated.

So far as synonymy is concerned, the original reference and subsequent changes if any, as provided in Ali and Ripley (1970) have been given. Taxonomical remarks have also been made where necessary.

Within the (British) Indian limits (India, Nepal, Bhutan, Burma, Pakistan, Bangladesh and Sri Lanka), Baker (1927) recognized nine genera of kingfishers but Peters (1945) and Biswas (1953) only six and Ali and Ripley (1970) only five.

The genera representing the species within the Indian limits as discussed by the above mentioned workers and the present authors are as follows :

Baker (1927) : *Ceryle* Boie, *Alcedo* Linnaeus, *Ceyx* Lacépède, *Ramphalcyon* Reichenbach, *Halcyon* Swainson, *Entomothera* Horsfield, *Sauropatis* Cabanis and Heine, *Caridagurus* Cabanis and Heine, *Caricineutes* Cabanis and Heine. The last two occur in the Indo-Malayan region, hence have not been taken into consideration.

Peters (1945) : *Ceryle* Boie, *Alcedo* Linnaeus, *Ceyx* Lacépède, *Pelargopsis* Gloger, *Lacedo* Reichenbach, *Halcyon* Swainson.

Biswas (1953) : *Ceryle* Boie, *Alcedo* Linnaeus, *Ceyx* Lacépède, *Pelargopsis* Gloger, *Lacedo* Reichenbach, *Halcyon* Swainson.

Ali and Ripley (1970) : *Ceryle* Boie, *Alcedo* Linnaeus, *Ceyx* Lacépède, *Pelargopsis* Gloger, *Halcyon* Swainson. They have, however, not mentioned about the genus *Lacedo*, the species of which occur in peninsular Burma. Ali and Ripley (1970, vol. 4) do not include Burma in their work, hence *Lacedo* has been excluded.

In the present text the authors have recognized the following genera : *Ceryle* Boie, *Alcedo* Linnaeus, *Ceyx* Lacépède, *Pelargopsis* Gloger, *Halcyon* Swainson, *Sauroptis* Cabanis and Heine.

The following species and subspecies are listed in the present catalogue :

1. *Ceryle laugubris guttulata* Stejneger
2. *Ceryle alcyon alcyon* (Linnaeus)
3. *Ceryle rudis rudis* (Linnaeus)
4. *Ceryle rudis leucomelanura* Reichenbach
5. *Ceryle rudis travancoreensis* Whistler and Kinnear
6. *Ceryle rudis insignis* Hartert
7. *Chloroceryle americana americana* (Gmelin)
8. *Alcedo hercules* Laubmann
9. *Alcedo atthis atthis* (Linnaeus)
10. *Alcedo atthis bengalensis* Gmelin
11. *Alcedo atthis taprobana* Kleinschmidt
12. *Alcedo meninting coltarti* Baker
13. *Alcedo meninting rufigaster* Walden
14. *Alcedo cristata vintsioides* Eydoux and Gervais
15. *Ispidina picta picta* (Boddaert)

16. *Ceyx erithacus erithacus* (Linnaeus)
17. *Ceyx erithacus macrocarus* Oberholser
18. *Pelargopsis amauroptera* (Pearson)
19. *Pelargopsis capensis capensis* (Linnaeus)
20. *Pelargopsis capensis burmanica* Sharpe
21. *Pelargopsis capensis intermedia* Hume
22. *Pelargopsis capensis osmastoni* (Baker)
23. *Halcyon coromanda coromanda* (Latham)
24. *Halcyon smyrnensis smyrnensis* (Linnaeus)
25. *Halcyon smyrnensis fusca* (Boddaert)
26. *Halcyon smyrnensis saturatior* Hume
27. *Halcyon pileata* (Boddaert)
28. *Sauropatis sancta sancta* (Vigors and Horsfield)
29. *Sauropatis chloris davisoni* (Sharpe)
30. *Sauropatis chloris occipitalis* (Blyth)
31. *Sauropatis chloris humii* (Sharpe)
32. *Sauropatis chloris collaris* (Scopoli)
33. *Tanysiptera galatea doris* Wallace
34. *Tanysiptera galatea galatea* G. R. Gray
35. *Tanysiptera (galatea) riedelii* J. Verreaux
36. *Tanysiptera carolinae* Schlegel
37. *Tanysiptera ellioti* Sharpe
38. *Tanysiptera sylvia sylvia* Gould

The following species and subspecies that occur within the Indian limits are not represented in our collection :

1. *Halcyon coromanda mizorhina* (Oberholser)
2. *Sauropatis chloris vidali* (Sharpe)

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Order CORACIIFORMES

Suborder ALCEDINES

Superfamily ALCEDINOIDEA

Family ALCEDINIDAE

Genus *Ceryle* Boie

Ceryle lugubris (Temminck)

The range of the species as given by Vaurie (1965 : 662) is "Foorthills of and lower Himalayas to Assam, Indo-Chinese countries, Hainan and Central and eastern China north to southern Hopeh, also Japan"

Out of three subspecies recognized by Peters (1945) our collection is represented by only one.

Ceryle lugubris guttulata Stejneger

(The Great Himalayan Pied Kingfisher)

Ceryle guttulata Stejneger, 1892, *Proc. U. S. nat. Mus.*, 15 : 294 in text (India and China, restricted to Ningpo, China, Ali and Ripley 1970, *Handb. Bds. India and Pakistan*, 4 : 70). New name for *Alcedo guttulata* Vigors, 1831, not *Alcedo guttulata* Boddaert 1783.

Ceryle lugubris continentalis Hartert, 1900, *Novit. zool.* 7 : 534 (Sikkim).

Ceryle lugubris guttulata is represented by the following specimens : (Table 1)

TABLE 1 : *Ceryle lugubris guttulata*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
598	♀	Simla, Simla Dist., Himachal Pradesh	—	F. Stoliczka	183	101	76	56	Throat worn. Tips of central tail feathers broken.
597	♂	Mussoorie, Dehra Dun Dist., Uttar Pradesh	1 May 1873	Miss Milman	179	101	69	52	Hindneck damaged.
29690	♂	Sahasradhara, Dehra Dun Dist., Uttar Pradesh	5 Apr 1963	R. K. Bhatnagar	183	106	74	53	Hindneck damaged.
596	♀	Mussoorie, Dehra Dun Dist., Uttar Pradesh	1 May 1873	Miss Milman	186	106	81	61	Left median wing-coverts worn.
15138	♀	Sikkim	Jan 1876	J. Scully	178	100	75	58	
31249	♂	Wangdu Phodrang (c. 1372 m) Mo Chu (Punakha), Valley, Bhutan	25 Feb 1969	B. Biswas	177	106	73	56	

TABLE 1 : *Ceryle lugubris guttulata* (Contd.)

Reg. No	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
594	♂	South of Irrawaddy River, Northeast Burma	Mar 1873	Capt. Wood	188	—	74	58	Flood damaged. Tail missing.
595	♂	South of Irrawaddy River, Northeast Burma	Mar 1873	Capt. Wood	181	104	74	56	Hindneck damaged.
21203	♂	Minhow, Foochow, Fukien Dist., Southeast China	Dec 1889	C. B. Rickett	178	108	76	54	
21202	♀	Minhow, Foochow, Fukien Dist., Southeast China	Dec 1888	C B. Rickett	182	108	69	50	Tip of upper mandible broken.

Systematic notes :

Chinese and Burmese specimens when compared with those of Bhutan, Sikkim and western Himalayas, reveal that the alleged differences between *C. l. continentalis* and *C. l. guttulata* are nothing but clinal. Furthermore, there is a great deal of individual variation in many specimens. We are, therefore, unable to accept *C. l. continentalis* as a valid subspecies, and would agree with Peters (1945 : 165) in synonymizing it with *C. l. guttulata*. Vaurie (1965 : 662) has also not mentioned *continentails* but has recognized *guttulata* which includes specimens from the Himalayas.

***Ceryle alcyon* (Linnaeus)**

The range of the species as given by Vaurie (1965 : 664) is "In Palaearctic region this species has wandered to Greenland, Iceland, the Azores and the Netherlands and the North America"

Peters (1945) recognized two subspecies, of which only the nominate one is represented in our collection.

***Ceryle alcyon alcyon* (Linnaeus)**

(The American Belted Kingfisher)

Alcedo Alcyon Linné, 1758, *Syst. Nat.*, 10ed., 1 : 115 (South Carolina).

Ceryle alcyon alcyon is represented by the following specimens. (Table 2)

TABLE 2 : *Ceryle alcyon alcyon*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	W.	Measurements			Remarks
						Tl.	B.	N.	
13149	—	Ontario, Canada	—	J. H. Garner	156	—	69	45	Tail missing. Hindneck and sides of neck worn.
22451	—	Montgomery, Southeastern United States of America	—	—	160	89.5	70	46	By exchange with the Smithsonian Institution, Washington in 1845.

TABLE 3 : *Ceryle rudis rudis*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	W.	Measurements			Remarks
						Tl.	B.	N.	
30491	—	Greece (?)	1848	M. M. Malherbe	126	—	67	46	Tail missing. Fragile.
30492	—	South Africa	1845	Lord A. Hay	134	69	65	46	Fragile.

Ceryle rudis (Linnaeus)

The range of the species as given by Ripley (1961 : 214) is "Africa south and east of the Sahara, Middle East to India, the Indochinese subregion, southern China and Hainan Island"

Four subspecies recognized by Peters (1945) are represented in the collection.

Ceryle rudis rudis (Linnaeus)

(The African Pied Kingfisher)

Alcedo rudis Linné, 1758, *Syst. Nat.*, 10 ed., 1 : 116 (Egypt).

Ceryle rudis rudis is represented by the following specimens :
(Table 3)

Remarks

The specimen bearing the number 30491 (Table 3) has been labelled "Locality Greece" which obviously is incorrect. This is an endemic African form, and has never been recorded from Greece.

Ceryle rudis leucomelanura Reichenbach

(Indian Pied Kingfisher)

Ceryle leucomelanura Reichenbach, 1851, *Handb. spec. Orn.* : 21, pl. 309b, f. 3488 (Ceylon=Sri Lanka).

Ceryle rudis leucomelanura is represented by the following specimens :
(Table 4)

TABLE 4 : *Ceryle rudis leucomelanura*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
10423	♂	Khist, c. 549 m, Udhampur Dist., Jammu and Kashmir	Jan 1870	Capt. St. John	137	76	67	48	Persian Collection.
6081	♂	Jhelum River, Srinagar, Jammu and Kashmir	27 May 1870	Geo. Henderson	137	66	67	50	Yarkand Expedition.
20219	—	Srinagar, Jammu and Kashmir	i Aug 1873	F. Stoliczka	136	68	66	49	Forsyth's Expedition.
28438	♂	Balhiratal, Gorakhpur Dist., Uttar Pradesh	9 Mar 1956	Z. S. I. party	136	66	68	42	
28439	♂	Gorakhpur, Gorakhpur Dist., Uttar Pradesh	17 Mar 1956	Z. S. I. party	135	68	68	42	
28441	♂	Bhanapar, Gorakhpur Dist., Uttar Pradesh	23 Mar 1956	Z. S. I. party	141	69	67	51	
28440	♀	Bhanapar, Gorakhpur Dist., Uttar Pradesh	22 Mar 1956	Z. S. I. party	136	68	73	55	

TABLE 4 : *Ceryle rudis leucomelanura* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
28442	♀	Bhanapar, Gorakhpur Dist., Uttar Pradesh	22 Mar 1956	Z. S. I. party	136	67	68	52	
28443	♀	Bhanapar, Gorakhpur Dist., Uttar Pradesh	22 Mar 1956	Z. S. I. party	134	66	73	54	
30048	♂	Harda, Hosangabad Dist., Madhya Pradesh	1 Mar 1941	M. L. Roonwal	142	67	73	54	
30046	♀	Harda, Hosangabad Dist., Madhya Pradesh	1 Mar 1941	M. L. Roonwal	138	—	69	51	Tail missing.
30047	♀	Harda, Hosangabad Dist., Madhya Pradesh	1 Mar 1941	M. L. Roonwal	142	68	68	52.5	
27767	♂	Baihar, Balaghat Dist., Madhya Pradesh	2 Mar 1954	A. K. Mukherjee	137	70	57	50	
27768	♀	Moti Nallah, Mandla Dist., Madhya Pradesh	14 Mar 1954	A. K. Mukherjee	139	66	64	45	

TABLE 4 : *Ceryle rudis leucomelanura* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
14804	♂	Munshye, Purnea Dist., Bihar	10 Jan 1888	W. L. Sclater	142	69	70	53	Young.
592	—	Chotanagpur, Ranchi Dist., Bihar	7 Dec 1868	—	133	68	68	49	Young.
27263	♂	8 km Northeast of Patipukur, West Bengal	14 Jan 1951	B. Biswas	137	68	69	52	
27264	♂	8 km. Northeast of Patipukur, West Bengal	14 Jan 1951	B. Biswas	131	64	75	56	
29378	♂	Sambhunagar, 14 km. Southeast of Port Canning, 24-Parganas Dist., West Bengal	20 Oct 1955	A. K. Mukherjee	138	71	69	52	
586	♀	Moisrakha, Haora Dist., West Bengal	5 Jan 1870	J. Wood- Mason	139	71	72	53	

TABLE 4 : *Ceryle rudis leucomelanura* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	W.	Measurements			Remarks
						Tl.	B.	N.	
587	♀	Moisrakha, Haora Dist., West Bengal	4 Jan 1870	J. Wood- Mason	143	71	71	53	
588	♀	Moisrakha, Haora Dist., West Bengal	5 Jan 1870	J. Wood- Mason	135	68	68	54	Young.
589	♀	Moisrakha, Haora Dist., West Bengal	5 Jan 1870	J. Wood- Mason	137	69	70	51	
♀ 590		Moisrakha, Haora Dist., West Bengal	4 Jan 1870	J. Wood- Mason	141	68	71	52	
26911	♂	Tezpur, Darrang Dist., Assam	6 Nov 1939	M. L. Roonwal	139	68	72	54.5	
30201	♂	Palasbari, 24 km. West of Gauhati, Kamrup Dist. Assam	15 May 1950	B. Biswas	139	69	71	54	Subadult.

TABLE 4 : *Ceryle rudis leucomelanura* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W	Tl.	B.	N.	
30202	♂	Palasbari, 24 km. West of Gauhati, Kamrup Dist., Assam	15 May 1950	B. Biswas	135	63	71	54	Subadult.
27041	♀	Imphal Valley, c. 1067 m. Manipur	29 Nov 1945	M. L. Roonwal	137	70	68	52	
14912	♀	Kendrapara, Cuttack Dist., Orissa	Aug 1818	Museum Collector	138	64	71	52.5	
30203	♂	Pichawaram Reserve Forest, Portonovo, South Arcot Dist., Tamil Nadu	19 Jan 1957	—	138	65	70	54	Young.
11469	♂	Ratnagiri, Ratnagiri Dist., Maharashtra	—	J. Armstrong	130	66	71	53	
30493	♀	Palanpur, Banaskantha Dist., Gujarat	16 Mar 1948	K. S. Pradhan	138	67	69	47	

2A

TABLE 4 : *Ceryle rudis leucomelanura* (Concl'd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Fl.	B.	N.	
30494	♀	Palanpur, Banaskantha Dist., Gujarat	16 Mar 1948	K. S. Pradhan	140	67	67	51	
29983	♀	Vadwar, Vadodara (Boroda) Dist., Gujarat	8 Jan 1949	V. L. Devkar	136	70	74	54	
30496	♂	Akra-Bath, Abu, Udaipur Dist., Rajasthan	13 Sep. 1964	P. D. Gupta	132	67	67	50	
30495	♀	Phulad River, Jodhpur Dist Rajasthan	1 Mar 1948	P. N. Mitra	143	69	62	46	
579	♂	Irrawaddy River, Northeast Burma	Mar 1873	Museum Collector	136	69	67	53.5	Young.
578	♂	Irrawaddy River, Northeast Burma	Mar 1873	Museum Collector	141	68	61	50.5	Young.
8732	♂	Taping River, Bhamo Dist., Northeast Burma	3 Feb 1875	J. Anderson	138	64	70	58.5	Young.
8731	♀	Bhamo, Bhamo Dist., Northeast Burma	6 Feb 1868	J. Anderson	140	65	70	53	Yunnan Expedition
24136	♀	Pakokku, Pakokku Dist., Central Burma	25 Nov 1901	Capt. Wood	142	69	72	54	

***Ceryle rudis travancoreensis* Whistler and Kinnear**

(Kerala Pied Kingfisher)

Ceryle rudis travancoreensis Whistler and Kinnear, 1935, *J. Bombay nat. Hist. Soc.* 37 : 760 (Travancore).

Ceryle rudis travancoreensis is represented by the following specimens. (Table 5)

***Ceryle rudis insignis* Hartert**

(Chinese Pied Kingfisher)

Ceryle rudis insignis Hartert, 1910, *Novit. zool* 17 : 216 (Hoinon, Hainan).

Ceryle rudis insignis is represented by the following specimens. (Table 6)

Systematic notes :

Ceryle rudis insignis, described by Hartert (1910) from an isolated population from southeastern China has larger bill on average than *Ceryle rudis leucomelanura* a widely distributed form in southeast Asia. This subspecies was accepted by Peters (1945 : 167) but Vaurie (1965 : 663) later synonymized *insignis* with *leucomelanura*.

From an examination of comparative material both from India and southeastern China (Fukien District) we find that the bill of *insignis* is consistently larger than *leucomelanura*. Curiously, neither Hartert nor Vaurie noted the prominent malar spot of the specimens from southeast China (*insignis*). Apart from larger bill this malar spot, we think, is a unique character in distinguishing *insignis* from *leucomelanura* as a distinct subspecies.

TABLE 5 : *Ceryle rudis travancoreensis*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
581	♂	Trivandrum, Trivandrum Dist., Kerala	—	Purchased	133	66	64	50	Fragile. Young.
580	♀	Trivandrum, Trivandrum Dist., Kerala	—	Purchased	133	69	60	34	Fragile. Upper mandible broken.
582	—	Trivandrum, Trivandrum Dist., Kerala	—	Purchased	134	69	—	—	Damaged. Upper mandible broken.

TABLE 6 : *Ceryle rudis insignis*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
21196	♂	Foochow, Fukien Dist., Southeast China	Feb 1890	C. B. Rickett	141	73	74	53.5	
21197	♀	Foochow, Fukien Dist., Southeast China	Oct 1889	C. B. Rickett	141	73	74	53.5	
21199	♀	Foochow, Fukien Dist., Southeast China	Jan 1890	C. B. Rickett	141	69	73	52.5	
21200	♀	Foochow, Fukien Dist., Southeast China	Jan 1890	C. B. Rickett	135	69	73	53.5	Left scapulars worn.
21201	♀	Foochow, Fukien Dist., Southeast China	Jan 1890	C. B. Rickett	140	72	74	51.5	Tip of upper mandible broken.

Genus **Chloroceryle** Kaup

Chloroceryle americana (Gmelin)

The species is limited to Neotropics with eight subspecies as admitted by Peters (1945) of which only the nominate subspecies is represented in our collection.

Chloroceryle americana americana (Gmelin)

(Brazilian Green Kingfisher)

Alcedo americana Gmelin, 1788, *Syst. Nat.*, 13 ed., pt. 1 : 451
(Cayenne).

Chloroceryle americana americana is represented by the following specimens : (Table 7)

Genus **Alcedo** Laubmann

Alcedo hercules Laubman

The range of the species as given by Ripley (1961 : 215) is "From Sikkin through Assam to the Chin Hills, Tonkin, Hainan Island"

Alcedo hercules Laubmann

(Great Blue Kingfisher)

Alcedo grandis Blyth, 1845, *J. Asiat. Soc. Beng.*, 14, (1) : 190
(Darjeeling). Not *Alcedo grandis* Gmelin, 1788.

Alcedo hercules Laubmann, 1917, *Verh. Orn. Ges. Bayern*, 13 : 105.

New name for *Alcedo grandis* Blyth, preoccupied.

Alcedo hercules is represented by the following specimens :
(Table 8)

TABLE 7: *Chloroceryle americana americana*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
10945	♂	South America	1870	J. Anderson	76	53	41	29	
10946	♂	South America	1870	J. Anderson	77	53	43	28	
10947	♀	South America	1870	J. Anderson	76	53	40	26.5	
10948	♀	South America	1870	J. Anderson	80	56	44	32	

TABLE 8 : *Alcedo hercules*

Reg. No	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
577	♀	Darjeeling-Tarai, Darjeeling Dist., West Bengal	—	J. Anderson	99	—	54	36	Tail missing.
2278 ⁿ	♂	Hungron, North Cachar Hills Dist., Assam	26 May 1898	E. C. Stuart Baker	97	43	59	41	
26913	♂	Lokra, Balipara Frontier Tract, Darrang Dist., Assam	9 Sep 1939	M. L Roonwal	96	43	62	48	
34279	♂	Hornbill, c. 5 km. north of Deban, Namdapha, Tirap Dist., Arunachal Pradesh	12 Apr 1981	S. Biswas	97	44.5	58	43.5	
34280	♂	Hornbill, c. 5 km. north of Deban, Namdapha, Tirap Dist., Arunachal Pradesh	15 Apr 1981	S. Biswas	100	47	56.5	43	
34277	♀	Hornbill, c. 5 km. north of Deban, Namdapha, Tirap Dist., Arunachal Pradesh	11 Mar 1981	S. Biswas	99	48	47	49	
34278	♀	Hornbill, c. 5 km. north of Deban, Namdapha, Tirap Dist., Arunachal Pradesh	12 Mar 1981	S. Biswas	100	48	56	42	

Alcedo atthis (Linnaeus)

The range of the species as given by Ripley (1961 : 215) is "throughout Europe and Asia except the Arctic Zone, south through Malaysia to Australia as far as Solomon Island"

Out of nine subspecies admitted by Peters (1945) only two occur within the Indian limits.

Alcedo atthis atthis (Linnaeus)

(Common Kingfisher)

Gracula Atthis Linné, 1758, *Syst. Nat.*, 10 ed., 1 : 109 (Egypt).

Alcedo Pallasii Reichenbach, 1851, *Handb. spec. Orn.*, 3, pl. 392
figs. 3043-46. (Siberia).

Alcedo atthis atthis is represented by the following specimens :
(Table 9)

Alcedo atthis bengalensis Gmelin

(Small Blue Kingfisher)

Alcedo bengalensis Gmelin, 1788, *Syst. Nat.*, 13 ed., Pt. 1 : 450
(Bengal).

Alcedo atthis bengalensis represented by the following specimens :
(Table 10)

TABLE 9 : *Alcedo atthis atthis*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
14429	—	Europe	—	Hungarian Museum	74	—	44	29	Tail missing. Damaged specimen.
14430	—	Europe	—	Hungarian Museum	78	34	48	33	Asiatic Society of Bengal. (received in exchange).
15137	♀	Kandahar, Afghanistan	24 Jan 1881	—	73	30	43	34	Flood damaged
20217	—	Kashgar, Chinese Turkestan, Southwestern China	17 Dec 1873	F. Stoliczka	72	33	46	37	Forsyth's Expedition 1873—74. Unusual bill both mandibles curved upwards.
20218	—	Kashgar, Chinese Turkestan, Southwestern China	10 Feb 1874	F. Stoliczka	75	33	49	39	Forsyth's Expedition 1873—74.

TABLE 10 : *Alcedo atthis bengalensis*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
10354	♂	Kalagan, Baluchistan, Pakistan	18 Mar 1872	W. T. Blanford	73	32	48	36	Flood damaged.
9978	♀	Kalagan, Baluchistan, Pakistan	19 Mar 1872	W. T. Blanford	72	29	47	36	Neck broken.
28562	♂	Bareen, c. 8 km. east of Srinagar, Srinagar Dist., Jammu and Kashmir	25 Jun 1956	B. Roy	73	31	46	33	
7970	♀	Srinagar, Srinagar Dist., Jammu and Kashmir	May 1876	J. Biddulph	73	32	45	—	Tip of upper mandible broken.
20215	—	Srinagar, Srinagar Dist., Jammu and Kashmir	26 Jul 1873	F. Stoliczka	73	32	42	—	Tip of upper mandible broken.
30577	—	Kashmir	1870	G. Henderson	73	30	43	31	Lower mandible damaged.
28445	♂	Gopalpur, Gorakhpur Dist., Uttar Pradesh	23 Mar 1956	A. K. Mukherjee	74	31	47	37	
30582	♂	Tanda Falls, Mirzapur Dist., Uttar Pradesh	14 Dec 1946	B. Biswas	73	30	45	35	

TABLE 10 : *Alcedo atthis bengalensis* (Contd.)

ω	Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
						W.	Tl.	B.	N.	
	15162	—	Dehra Dun, Dehra Dun Dist., Uttar Pradesh	1870	G. King	72	30	44	32	Flood damaged.
	27769	♂	Motinallah, Mandla Dist., Madhya Pradesh	14 Mar 1964	A. K. Mukherjee	72	30	46	36	Base of lower mandible broken.
	27770	♀	Ghislinalah, Mandla Dist., Madhya Pradesh	11 Apr 1964	A. K. Mukherjee	70	30	43	33	
	29959	♂	Harda, Hosangabad Dist., Madhya Pradesh	2 Mar 1941	M. L. Roonwal	69	29	46	36	
	30192	♂	Chachai, Rewa Dist., Madhya Pradesh	13 Mar 1955	K. K. Tiwari	70	30	44	32	
	15132	♂	Nepal Valley, Nepal	27 Sep 1877	J. Scully	69	28	44	30	
	15134	♂	Manoma, Nepal Valley, Nepal	17 Sep 1877	J. Scully	72	31	42	32	Flood damaged.
	15135	♀	Balaji Road, Nepal Valley, Nepal	26 Sep 1877	J. Scully	71	29	44	34	Flood damaged.

TABLE 10 : *Alcedo atthis bengalensis* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
15133	♀	Nepal valley, Nepal	—	—	74	29	—	—	Bill broken. Flood damaged.
30586	♂	Confluence of Arun and Kosi rivers at Triveni, East Nepal	14 Nov 1947	K. K. Tiwari	71	31	44	27	Damaged specimen.
15161	♀	Marku, Nepal	13 Dec 1877	J. Scully	71	31	45	31	
28218	♀	Hitaura, Dun, Nepal	28 May 1947	B. Biswas	73	30	48	32	
5118	♀	Kathmandu, Nepal	—	Museum collector	73	29	42	30.5	
5119	♀	Kathmandu, Nepal	—	Museum collector	72	27	44	34	
5120	♀	Kathmandu, Nepal	—	Museum collector	69	23	44	29	Tail somewhat damaged.
18915	♂	Nawada, Gaya Dist., Bihar	5 Jan 1891	Museum collector	72	28	43	30	
552	♂	Calcutta, West Bengal	Dec 1868	J. Anderson	73	30	47	35	
554	♂	Calcutta, West Bengal	Dec 1868	J. Anderson	70	30	45	35	Breast feathers damaged.
553	♀	Calcutta, West Bengal	Dec 1868	J. Anderson	70	31	47	36	
555	♀	Calcutta, West Bengal	Dec 1868	J. Anderson	70	29	43	32	

TABLE 10 : *Alcedo atthis bengalensis* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
557	♀	Calcutta, West Bengal	Dec 1868	J. Anderson	70	30	47	32	
27226	♂	Beliaghata, Calcutta, West Bengal	27 Nov 1950	B. Biswas	71	30	47	32.5	
27227	♀	Beliaghata, Calcutta, West Bengal	27 Nov 1950	B. Biswas	71	30	47	32	
558	♂	Botanical Garden, Haora Dist., West Bengal	17 Jan 1867	J. Anderson	71.5	30	44	32	
565	♂	Botanical Garden, Haora Dist., West Bengal	—	Museum collector	69	31	48	31	
566	♂	Botanical Garden, Haora Dist., West Bengal	—	Museum Collector	71	31	47	31.5	
567	♀	Botanical Garden, Haora Dist., West Bengal	—	Museum Collector	70	31	47	32	
569	♀	Botanical Garden, Haora Dist., West Bengal	—	Museum Collector	70	29	47	33	
571	♂	Matla, 24-Pargans Dist., West Bengal	—	Museum Collector	69	29	47	35	

TABLE 10 : *Alcedo atthis bengalensis* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30196	♂	Sambhunagar, (Sundarban) 24 Parganas Dist., West Bengal	7 Oct 1953	A. K. Mukherjee	70	28	48	31.5	
570	♀	Matla, 24-Parganas Dist., West Bengal	—	Museum Collector	68	30	44	33	
572	♀	Matla, 24-Parganas Dist., West Bengal	—	Museum Collector	70	30	45	34	
30583	♀	Salt Lakes, 24 Parganas, Dist., West Bengal	31 Dec 1951	B. Biswas	72	31	49	34	
26912	♂	Kenduguri Lake, near Mangaldai, Darrang Dist., Assam	16 Nov 1939	M. L. Roonwal	71	30	48	34	
547	♀	Cachar, Cachar Dist., Assam	1868	Museum Collector	69	30	43	30	
30195	♂	Burnihat, Khasi Hills Dist., Meghalaya	23 May 1949	R. V. Sherard (Z. S. I.)	70	29	43	32	

TABLE 10 : *Alcedo atthis bengalensis* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N	
27040	♀	c 15 km Northwest of Imphal, Manipur Central Dist., Manipur	3 Dec 1945	M. L. Roonwal	71	33	43	32.5	
1833	♀	Andamans	—	G. H. Booley	70	25	42	32	Old and damaged.
30584	♀	Campbell Bay, Great Nicobar Island	13 Mar 1966	Z. S. I. Party	70	31	41	30.5	
30585	♀	Galatea Bay, Great Nicobar Island	23 Mar 1966	Z. S. I. Party	71	20	43	25	Lower mandible damaged.
573	♂	South of Irrawady River, Northeast Burma	Mar 1873	Capt. Wood	70	30	45	32	
576	♂	South of Irrawady River, Northeast Burma	Mar 1873	Capt. Wood	69	30	43	32	
14431	♂	South of Irrawaddy River, Northeast Burma	Mar 1873	Capt. Wood	70	30	42	31.5	
574	♂	South of Irrawady River, Northeast Burma	Mar 1873	Capt. Wood	70	29	45	31.5	

TABLE 10 : *Alcedo atthis bengalensis* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	W.	Measurements			Remarks
						Tl.	B.	N.	
24276	♂	Bhamo, Bhamo Dist., Northeast Burma	—	Capt. Wood	72	32	50	35	
8798	♀	Bhamo, Bhamo Dist., Northeast Burma	6 Feb 1868	J. Anderson	71	29.5	44	33	
8797	♀	Mungla, Sanda Valley, Upper Burma	May 1868	J. Anderson	68	30	41	30.5	Mergui Expedition.
25685	♀	Lonton, Upper Burma	22 Oct 1926	Indawgyi Survey party of Z. S. I.	70	31	44	33	Damaged specimen.
8799	♂	Mandalay, Central Burma	26 Sep 1868	J. Anderson	71	29	47	32.5	Flood damaged.
12858	♂	Pilai, Lower Burma	13 Mar 1882	J. Anderson	71	31	44	33	Mergui Expedition.
12860	♂	Pilai, Lower Burma	5 Mar 1882	J. Anderson	71	30	42	32	Mergui Expedition.
12857	♀	Pilai, Lower Burma	9 Mar 1882	J. Anderson	70	30	43	33	Mergui Expedition.

TABLE 10 : *Alcedo atthis bengalensis* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
8051	♀	Hungdaraw River, Moulmein Dist., Lower Burma	1877	Tenasserim Expedition party of Indian Museum	71	30	43	33	Purchased.
8052	♀	Hungdaraw River, Moulmein Dist., Lower Burma	1877	Tenasserim Expedition. party of Indian Museum	70	31	44	33	Purchased.
21018	♂	Foochow, Fukien Dist., Southeast China	May 1890	—	70	30	42	25	
21019	♂	Foochow, Fukien Dist., Southeast China	Jul 1890	—	71	28	40	30	
21020	♂	Foochow, Fukien Dist., Southeast China	Sep 1889	—	71	29	42	30.5	
21021	♀	Foochow, Fukien Dist., Southeast China	May 1891	—	73	30	43	32	Central tail- feathers moulting.
13563	♀	Malacca, Malaysia	—	Bengal Economic Museum	71	32	42	32	

Systematic notes :

There is some controversy regarding the subspecies of *Alcedo atthis* in the Indian subregion. Baker (1927 : 250-253) recognized three subspecies in the Indian subregion, viz., *Alcedo atthis bengalensis* (eastern and central India), *Alcedo atthis pallasii* (north and north-western India) and *Alcedo atthis taprobana* (southern India and Sri Lanka). Peters (1945 : 171-172) although recognized these three subspecies yet he did not include the birds of north and northwest India under *pallasii* but placed them under *bengalensis*. Vaurie (1965 : 669) did not recognize *pallasii* and he maintained the birds of Central Asia and those of the north and northwestern Indian subregion under the nominate subspecies *Alcedo atthis atthis*. Ali and Ripley (1970 : 75-78) more or less agreed with Baker in recognizing the three subspecies and their distribution in the Indian region.

After examining of a series of examples from western Asia, we are unable to differentiate between the nominate form (*Alcedo atthis atthis*) and *Alcedo atthis pallasii* and agree with Vaurie in synonymizing *Alcedo atthis pallasii* with *Alcedo atthis atthis*. We, however, do not agree with Vaurie that the birds of northwest India belong to the nominate subspecies. The birds of northern and northwestern Indian region are not separable from eastern Indian birds (*bengalensis*), since the tone of plumage varies to a great extent and the alleged size difference is insignificant. We would, therefore, treat the birds of northern and northwestern Indian region as *Alcedo atthis bengalensis*.

The southern Indian birds south of Godavari have been considered a separate subspecies (*Alcedo atthis taprobana*) which differs from *Alcedo atthis bengalensis* in having the upper plumage markedly blue in colour against green in the latter. After comparing specimens of eastern India with southern India (winter plumage) we agree with Vaurie (1965 : 668) that the subspecific identification of many individuals is uncertain in the wintering quarters and the variation is clinal. On examination of the topotypical specimens of *bengalensis* it is found to be absolutely inseparable from *taprobana* of Western Ghats, Kerala in winter. At present 20° N Lat., may be considered as an arbitrary geographical limit to separate the ranges of *bengalensis* and *taprobana*, until some topotypical *taprobana* from Sri Lanka are available to be examined.

***Alcedo atthis taprobana* Kleinschmidt**

(Ceylon Small Blue Kingfisher)

Alcedo ispida var. *taprobana* Kleinschmidt, 1894, *Orn. Mber.*
2 : 126 (Ceylon = Sri Lanka).

Alcedo atthis taprobana is represented by the following specimens :
(Table 11)

***Alcedo meninting* Horsfield**

The range of the species as given by Ripley (1961 : 216) is "Eastern and Southern India east through the Indochinese and Malayasian subregions to Palawan and the Sulu Islands in the Philippines, Lombok and the Sula Islands"

Out of the ten subspecies admitted by Peters (1945) four occur within the Indian limits. Our collection is represented by two subspecies only.

***Alcedo meninting coltarti* Baker**

(Indian Blue-eared Kingfisher)

Alcedo meninting coltarti Baker, 1919. *Bull. Br. orn. Cl.* 39 : 39
(Saddyia = Sadyia, Assam).

Alcedo laubmanni Mathews, 1925, *Bull. Br. orn. Cl.* 46 : 21. New name of *Alcedo asiatica* Swainson, preoccupied.

Alcedo meninting coltarti is represented by the following specimens :
(Table 12)

TABLE 11 : *Alcedo atthis taprobana*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	W.	Measurements			Remarks
						Tl.	B.	N.	
30193	♂	Pathakannam village, Pondicherry	28 Dec 1956	—	69	29	39	28	Young.
30194	♂	Vaithikuppam village, Pondicherry	29 Dec 1956	—	70	33	44	34	
23889	♂	Trivandrum, Trivandrum Dist., Kerala	—	—	70	30	44	29	
550	—	Trivandrum, Trivandrum Dist., Kerala	—	—	70	32	46	32	
551	—	Trivandrum, Trivandrum Dist., Kerala	—	—	70	30	44	32.5	Purchased.
18433	♂	Bangalore, Bangalore Dist., Karnataka	—	Museum collector	72	32	43	30	
31034	♂	Khed Shivapur, Pune Dist., Maharashtra	17 Dec 1971	T. D. Soota	67	32	44	32	

TABLE 11 : *Alcedo atthis taprobana* (Contd.)

Reg. No.	Sex	Locality	Date of Collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
11514	♂	Kasarde, Ratnagiri Dist., Maharashtra	20 Mar 1878	J. Armstrong	69	30	42	44	
11581	♂	Kasarde, Ratnagiri Dist., Maharashtra	22 Mar 1878	J. Armstrong	70	30	43	32.2	
11454	♂	Ratnagiri, Ratnagiri Dist., Maharashtra	10 Nov 1877	J. Armstrong	70	30	44	33	
11513	♀	Ratnagiri, Ratnagiri Dist., Maharashtra	20 Mar 1878	J. Armstrong	69	31.5	43	34	
11202	♀	Ratnagiri, Ratnagiri Dist., Maharashtra	15 Jun 1879	J. Armstrong	71	31	41	30	
11203	♀	Ratnagiri, Ratnagiri Dist., Maharashtra	2 Jan 1879	J. Armstrong	70	30	44	33	Feathers of the hindneck worn.

TABLE 12 : *Alcedo meninting coltarti*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
7979	—	Naga Hills, Nagaland	24 Jan 1899	A. W. Chennel	67	29	43	32	Purchased.
7980	—	Naga Hills, Nagaland	24 Jan 1899	A. W. Chennel	69	29	47	35.5	Purchased.
23880	♂	Trivandrum, Trivandrum Dist. Kerala	—	—	71	28	—	—	Bill damaged
24481	—	South Sylhet, Sylhet Dist., Bangladesh	—	C. B. Antram	65	26	45	35	Purchased.

TABLE 13 : *Alcedo meninting rufigaster*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
540	♀	Andamans	Apr 1872	D. E. Dobson	65	24	44	33	Damaged specimen.
541	♀	Andamans	Apr 1872	D. E. Dobson	65	24	45	33	Damaged specimen.
31033	♀	Rangat, Middle Andaman	30 Jan 1972	A. K. Mukherjee	67	26	42	31	

Systematic notes :

Peters (1945 : 173-174) recognized three subspecies *coltarti*, *laubmanni*, and *phillipsi* from the Ind'... subregion but Biswas (1961 : 112) and Ripley (1961 : 216) did not recognize *laubmanni*. We are also unable to separate *laubmanni* from *coltarti* and agree with Biswas and Ripley in synonymising *laubmanni* with *coltarti*.

On examination of the plumage of a single specimen from Trivandrum, Kerala that we have in our collection, it matches with *coltarti* and not with *phillipsi* of Sri Lanka. It has therefore, been treated as *coltarti*. However, more specimens from Kerala need to be examined before the correct range of *coltarti* is determined.

***Alcedo meninting rufigaster* Walden**

(Andaman Blue-eared Kingfisher)

Alcedo rufigaster Walden, 1873, *Ann. Mag. nat. Hist.* 12 (4) : 487
(South Andaman Island).

Alcedo meninting rufigaster is represented by the following specimens : (Table 13)

***Alcedo cristata* Pallas**

The range of the species as given by Bannerman (1933 : 253) is "This widely spread species occurs all over Africa South of Sahara to Cape but only locally in the forest country of lower Guinea"

Out of six subspecies admitted by Peters (1945) our collection is represented by a single subspecies.

TABLE 14 : *Alcedo cristata vintsioides*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
2192	♂	Madagascar, Africa	1871	W. T. Blanford	59	27	43	29	

TABLE 15 : *Ispidina picta picta*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
9341	♂	Anseba Valley, Ethiopia, Africa	24 Jul 1868	W. T. Blanford	53	24	29	22.5	
9343	♀	Anseba Valley, Ethiopia, Africa	4 Aug 1868	W. T. Blanford	54.5	24	25	19	Tip of upper mandible broken.

Alcedo cristata vintsioides Eydoux and Gervais

(Dusky-crested Kingfisher)

Alcedo Vintsioides Eydoux and Gervais, 1836, *Voy. de la 'Fabou-rite'*, in *Mag. Zool.* : 30, pl. 74 (Madagascar).

Alcedo cristata vintsioides is represented by the following specimen:
(Table 14)

Genus **Ispidina** Kaup

Ispidina picta (Boddaert)

This species is distributed in greater part of Africa south of Sahara desert.

Three subspecies of *Ispidina picta* have been admitted by Peters (1945) of which our collection is represented by the nominate subspecies.

Ispidina picta picta (Boddaert)

(Pygmy Kingfisher)

Todus pictus Boddaert, 1783, *Table Pl. enlum.* 49 (Juida = St. Louis, Senegal).

Ispidina picta picta is represented by the following specimens:
(Table 15)

Genus **Ceyx** Lacépède

Ceyx erithacus (Linnaeus)

The range of the species as given by Ripley (1961 : 217) is "From India (including Andaman and Nicobar Group of Islands) east through the Indochinese and Malaysian subregions to southeastern China, Hainan Island, and Mindoro Island in the Philippines"

Peters (1945) recognized five subspecies. Our collection is represented by two subspecies that occur within the Indian limits.

TABLE 16 : *Ceyx erithacus erithacus*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
34282	♂	Gibonsland, Namdapha, Tirap Dist., Arunachal Pradesh	3 May 1981	S. Biswas	55	22	37.5	31	
34283	♂	Miao, Namdapha, Tirap Dist., Arunachal Pradesh	4 May 1981	S. Biswas	56	21	34.5	30	
34281	♀	Gibonsland, Namdapha, Tirap Dist., Arunachal Pradesh	3 May 1981	S. Biswas	55	22	36	28	
34284	♀	Miao, Namdapha, Tirap Dist., Arunachal Pradesh	5 May 1981	S. Biswas	56	20	36	29.5	
10848	—	Rangoon, Burma	—	W. Hardinge	56.5	22	35	28	
23011	—	—	—	E. C. Stuart Baker	56	21	35	27	Tip of upper mandible slightly broken.

Ceyx erithacus erithacus (Linnaeus)

(Indian Threetoed Kingfisher)

Alcedo erithaca Linné, 1758, *Syst. Nat.* 10 ed., 1 : 115 (Benghala).

Ceyx erithacus erithacus is represented by the following specimens :
(Table 16)

Ceyx erithacus macrocarus Oberholser

(Andaman Threetoed Kingfisher)

Ceyx tridactylus macrocarus Oberholser, 1917, *Bull. U. S. natn. Mus.* No. 98 : 24 (Great Nicobar Island, Nicobar Islands).

Ceyx erithacus macrocarus is represented by the following specimens : (Table 17)

Genus Pelargopsis Gloger

Pelargopsis amauroptera (Pearson)

The range of the species as given by Ripley (1961 : 217) is
“ confined to the estuarine areas of the Bay of Bengal
from the eastern Sundarban to the northern Malay Peninsula ”

Pelargopsis amauroptera (Pearson)

(Brownwinged Storkbilled Kingfisher)

Halcyon Amauropterus Pearson, 1841, *J. Asiat. Soc. Beng.* 10 (2) :
635 (Calcutta, India).

Pelargopsis amauroptera is represented by the following specimens :
(Table 18)

TABLE 17 : *Ceyx erithacus macrocarus*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30574	♂	Campbell Bay, Great Nicobar Island	13 Mar 1966	Great Nicobar Island Expedition party, Z.S.I.	58.5	22	38	30	Tip of upper mandible broken.
30575	♂	Dagmar river Great Nicobar Island	9 Apr 1966	Great Nicobar Island Expedition party, Z.S.I.	60	23	37	27.5	
30576	♂	c 10 km inside Galatea river, Great Nicobar Island	27 Mar 1966	Great Nicobar Island Expedition party, Z.S.I.	58	22	39	30	

TABLE 18 : *Pelargopsis amauroptera*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	W.	Measurements			Remarks
						Tl.	B.	N.	
28557	♂	Sajnakhali, Sundarban, 24-Parganas Dist., West Bengal	13 Mar 1957	A. K. Mukherjee	141	83	92	67	Subadult. Feathers of abdomen worn.
12848	♂	Yeemeekke, Lower Burma	24 Feb 1882	J. Anderson	142	—	78	56	Tail missing Flood damaged.
12849	♂	Pilai, Lower Burma	13 Mar 1882	J. Anderson	141	—	81	59	Tail missing Flood damaged.

Pelargopsis capensis (Linnaeus)

The species is distributed throught India (except the arid parts of Rajasthan and Punjab), Bangladesh, Sri Lanka, Burma and Malaya to the Lesser Sunda Islands, Philippines, Sulawesi (Celebes) and Sula Islands.

Among fifteen subspecies admitted by Peters (1945) only three are represented in our collection :

Pelargopsis capensis capensis (Linnaeus)

(Brownheaded Storkbilled Kingfisher)

Alcedo capensis Linné, 1766, *Syst. Nat.* 12 ed., 1 : 180 (Cape of Good Hope = Chandannagar, *vide* Stresemann 1952, *Ibis*, 94 : 517—21).

Alcedo Gurial Pearson, 1841, *J. Asiat. Soc. Beng.* 10 (2) : 633 (Midnapore, Bengal, India).

Pelargopsis capensis capensis is represented by the following specimens (Table 19)

Systematic notes :

The specimens from Assam and Meghalaya have the head albescent grey instead of dark chocolate-brown and it matches better with the Burmese subspecies but in other respects with the nominate subspecies ; it appears that the birds of Assam and Meghalaya are more or less intermediate (*capensis* $\begin{matrix} > \\ < \end{matrix}$ *burmanica*). However, at present this is kept under *capensis* till more specimens from northeast India are obtained and examined.

TABLE 19: *Pelargopsis capensis capensis*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30205	♂	Nishangara, Bahraich Dist., Uttar Pradesh	3 Sep 1956	A. K. Mukherjee	158	102	91	71	Feathers of abdomen worn.
28444	♀	Ramgarh, Gorakhpur Dist., Uttar Pradesh	18 Mar 1956	A. K. Mukherjee	163	106	103	84	
31245	♀	Botanical Garden, Haora Dist., West Bengal	21 Jun 1963	V. G. Gogate	153	94	94	69	Subadult.
29467	♀	Jamduar, c 77 km north of Dhubri, Goalpara Dist., Assam	6 Mar 1955	Z. S. I. party	159	103	93	73	Young.
30204	♂	Sarengma, c 10 km north of Duduai, Garo Hills Dist., Meghalaya	1 Jul 1949	R. V. Sherard (Z. S. I.)	152	92	92	69	
470	—	Dacca, Bangladesh	11 May 1889	Museum Collector	156	100	90	57	Tip of mandible damaged. Flood damaged.

***Pelargopsis capensis burmanica* Sharpe**

(Burmese Brownheaded Storkbilled Kingfisher)

Pelargopsis burmanica Sharpe, 1870, *Proc. zool. Soc. Lond.*, 62 (in key) : 67 (Tavoy, Tenasserim, Burma, Siam, Andaman Islands = Tonghoo, Burma).

Pelargopsis capensis burmanica is represented by the following specimen : (Table 20)

***Pelargopsis capensis intermedia* Hume**

(Nicobar Storkbilled Kingfisher)

Pelargopsis intermedia Hume, 1874, *Str. Feath.* 2 : 166.

Southern Nicobars, restricted to Galatea Bay, Great Nicobar Island, by Oberholser, 1909, *Proc. U.S. nat. Mus.* 35 : 666.

Pelargopsis capensis intermedia is represented by the following specimen : (Table 21)

***Pelargopsis capensis osmastoni* (Baker)**

(Andaman Storkbilled Kingfisher)

Ramphalcyon capensis osmastoni Baker, 1934, *Nidif. Bds. Indian Empire.* 3 : 416 (Andaman Islands).

Pelargopsis capensis osmastoni is represented by the following specimen : (Table 22)

TABLE 20 : *Pelargopsis capensis burmanica*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
15575	—	Myitkyina, Northeast Burma	23 Oct 1926	B. N. Chopra	168	108	92	72	Young. In the specimen only six rectrices are present of which centrals and third from the left are moulting

TABLE 21 : *Pelargopsis capensis intermedia*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30573	♀	c 10 km inside the Galatea River, Great Nicobar Island	27 Mar 1966	Great Nicobar Expedition party, Z. S. I.	153	90	87	—	Young. Nostril damaged.

TABLE 22 : *Pelargopsis capensis osmastoni*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30963	♂	Rangat, Middle Andaman	28 Jan 1972	A. K. Mukherjee	146	93	90	69	

Systematic notes :

Peters (1945 : 186) did not separate the Andaman birds from Burma, and maintained them under *burmanica*. Baker (1934 : 446) found the Andaman population separable from the Burmese, and recognized it as *osmastoni*. On examination of the single specimen available in our collection from the Middle Andaman it is found to be distinctly separable from the Burmese specimen. It has therefore, been treated as *osmastoni*.

Genus *Halcyon* Swainson*Halcyon coromanda* (Latham)

The range of the species as given by Ripley (1961 : 218) is "From Nepal east to Korea and Japan, the Indochinese and Malaysian subregions, islands in the China Sea, Philippines, Sulawesi (Celebes) and Sula Islands"

Out of eight subspecies recognized by Peters (1945) two subspecies belong to the Indian subregion. Our collection is represented by the nominate subspecies only.

***Halcyon coromanda coromanda* (Latham)**

(Indian Ruddy Kingfisher)

Alcedo coromanda Latham, 1790 *Index orn.* 1 : 252 (Coromandel, India).

Halcyon coromanda coromanda is represented by the following specimen : (Table 23)

TABLE 23 : *Halcyon coromanda coromanda*

5	Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements			Remarks	
						W.	Tl.	B.		N.
	34272	♂	Deban, Namdapha, Tirap Dist., Arunachal Pradesh	28 Apr 1981	S. Biswas	112	62.5	58	48	
	34273	♂	Gibonsland, 15 km from Miao, Namdapha, Tirap District, Arunachal Pradesh	29 Apr 1981	S. Biswas	114	61	57	47	
	34274	♂	Miao, Namdapha, Tirap District, Arunachal Pradesh	5 May 1981	S. Biswas	110	59.5	57	46	
	34275	♀	Miao, Namdapha, Tirap District, Arunachal Pradesh	4 May 1981	S. Biswas	112	62	58	48	
	34276	♀	Miao, Namdapha, Tirap District, Arunachal Pradesh	4 May 1981	S. Biswas	114	62	59	48	

TABLE 24 : *Halcyon smyrnensis smyrnensis*

	Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements			Remarks	
						W.	Tl.	B.		N.
	25698	♀	Manchhar Lake, Sind, Pakistan	15 Nov 1927	Manchhar Survey Party of Z. S. I.	126	83	53	39	Flood damaged.

Halcyon smyrnensis (Linnaeus)

The species is distributed as given by Ripley (1961 : 219) "From the Middle East through the Indochinese subregion to southern China, Hainan Island, Formosa, and the Philippines"

Our collection is represented by three subspecies, out of five recognized by Peters (1945) from the Indian subregion.

Halcyon smyrnensis smyrnensis (Linnaeus)

(Whitebreasted Kingfisher)

Alcedo smyrnensis Linné, 1758, *Syst. Nat.*, 10 ed., 1 : 116
(Africa and Asia) = Smyrna, Turkey, ex Albin.

Halcyon smyrnensis smyrnensis is represented by the following specimen : (Table 24)

Halcyon smyrnensis fusca (Boddaert)

(Indian Whitebreasted Kingfisher)

Alcedo fusca Boddaert, 1783, *Table Pl. enlum.* : 54 (Malabar Coast, ex Daubenton, Pl. enlum. No. 894).

Halcyon perpulchra Madarász, 1904, *Ann. Mus. nat. Hungar.* 2 : 85 (Singapore).

Halcyon smyrnensis fusca is represented by the following specimens : (Table 25)

TABLE 25 : *Halcyon smyrnensis fusca*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
25836	♂	Nainital, Nainital Dist., Uttar Pradesh	18 Nov 1928	S. C. Law	123	—	52	41	Flood damaged. Tail missing. Tip of upper mandible broken Both the 1st- primaries moulting.
28599	♂	Varanasi, Varanasi Dist., Uttar Pradesh	27 Sep 1956	N. Dutta	120	76	58	45	Third rectrices from the right in moult.
28446	♂	Bhanapar, Gorakhpur Dist., Uttar Pradesh	23 Mar 1956	Z. S. I. party	118	78	60	46	
28600	♀	Ramgarh Lake, Gorakhpur Dist., Uttar Pradesh	23 Jan 1956	Z. S. I. party	126	84	65	49	
28598	♀	Tanda, Mirzapur Dist., Uttar Pradesh	14 Dec 1946	B. Biswas	123	86	64	50	

TABLE 25 : *Halcyon smyrnensis fusca* (contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30519	♂	Baihar, Balaghat Dist., Madhya Pradesh	22 Sep 1957	R. L. Fernandez	112	64	63	49	Subadult. Central tailfeathers moulting.
27772	♀	Roofjah, c. 38 km north of Balaghat Dist., Madhya Pradesh	6 Mar 1954	A. K. Mukherjee	121	82	63	51	
30520	♀	Bhainsaghat, Balaghat Dist., Madhya Pradesh	15 Nov 1961	B. S. Lamba	123	84	67	51	
27771	♀	Moti Nallah, Mandla Dist., Madhya Pradesh	13 Mar 1954	A. K. Mukherjee	122	85	63	47	Tip of the lower mandible broken.
28219	♂	Kalikaasthan, Kathmandu, Nepal Valley, Nepal	8 Apr 1947	P. N. Mitra	117	77	60	45	
28220	♀	Hitaura, Chisapani Garhi Dist., Dun, Nepal	3 Jun 1947	B. Biswas	120	82	58	44	
27228	♀	Beliaghata, Calcutta, West Bengal	27 Nov 1950	B. Biswas	123	82	63	49	

TABLE 25 : *Halcyon smyrnensis fusca* (contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
26731	♂	Palta Water-Works, Barrackpur, 24-Parganas Dist., West Bengal	6 Oct 1941	M. L. Roonwal	116	78	64	51	Outermost primaries moulting.
31035	♀	Duyapur, 24-Parganas Dist., West Bengal	23 Sep 1969	A. K. Mondal	115	75	60	49	Outermost primaries moulting.
26914	♂	Tezpur, Darrang Dist., Assam	6 Nov 1939	M. L. Roonwal	119	84	60	47	Tip of upper mandible broken. Outermost primaries moulting.
26916	♂	Mangaldoi, Darrang Dist., Assam	15 Nov 1939	M. L. Roonwal	125	84	66	52	
30199	♂	Palasbari, c. 24 km west of Gauhati, Kamrup Dist., Assam	1 Mar 1957	A. N. Fernandez	126	83	64	50	

TABLE 25 : *Halcyon smyrnensis fusca* (contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
28596	♂	Southeast of Nongpoh Dak-Bungalow, Khasi Hills Dist., Meghalaya	12 May 1949	Assam Survey Party (Z. S. I.)	119	73	64	49	
28597	♂	Barapani, c. 14 km north of Shillong, Khasi Hills Dist., Meghalaya	23 May 1949	H. L. Hiteshi	122	80	58	45.5	
30197	♂	Near Rangrengiri, Garo Hills Dist., Meghalaya	22 Jan 1957	A. N. Fernandez	124	79	66	49	
26976	♂	Imphal, Manipur Central Dist., Manipur	6 Feb 1936	Z. S. I. party	114	78	53	38	
27038	♂	Imphal valley, Manipur Central Dist., Manipur	26 Nov. 1945	M. L. Roonwal	120	79	65	50	
27039	♀	Kanglatongbi, Manipur Manipur North Dist.,	26 Nov 1945	M. L. Roonwal	125	87	65	50	
31036	♂	Tarasingi, Ganjam Dist., Orissa	25 Dec 1971	V. C. Agarawal	120	78	63	48	

TABLE 25 : *Halcyon smyrnensis fusca* (contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30781	♂	Cumbum, Prakasham Dist., Andhra Pradesh	21 Feb 1970	C. B. Srivastava	119	82	63	51	
28603	♂	Near Kavery River, Salem Dist., Tamil Nadu	20 Feb 1957	R. V. Sherard	117	79	64	49	
30198	♀	Vaithikuppam, Pondicherry	29 Dec 1956	—	117	75	65	48	
30200	♀	Pondicherry	31 Dec 1956	—	119	78	66	52	
31247	♀	Margao, Goa	17 Dec 1968	V. C. Agarawal	119	83	65	46	
31248	♀	Sarguen, Goa	4 Apr 1973	A. K. Mukherjee	115	82	65	47	
11451	♀	Ratnagiri Ratnagiri Dist., Maharashtra	31 Mar 1878	J. Armstrong	122	82	57	47	
30517	♀	Chhodwadi, c. 16 km north of Jamwala, Junagarh Dist., Gujarat	6 Dec 1962	B. Biswas	120	74	62	48	Subadult.

TABLE 25 : *Halcyon smyrnensis fusca* (contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
28602	♀	Palanpur, Banaskantha Dist., Gujarat	16 Mar 1948	A. N. Fernandez	123	80	60	46	
28601	♂	Jogmandi, c. 18 km east of Phulad Station, Jodhpur Dist., Rajasthan	3 Mar 1948	A. N. Fernandez	123	80	60	45	
30512	♂	Umed Sagar, Jodhpur Dist., Rajasthan	10 Oct 1962	P. D. Gupta	110	71	62	48	Subadult, Central tailfeathers moulting.
30513	♂	Banas River Bed, Nathdwara, Sirohi Dist., Rajasthan	24 Sep 1964	P. D. Gupta	122	73	61	48	
30514	♂	Chaparwara, Jaipur Dist., Rajasthan	9 Dec 1956	A. K Mukherjee	120	77	62	49	
30515	♂	Suratgarh, (alt c. 183 m) Bikaner Dist., Rajasthan	9 Dec 1956	B. Biswas	119	81	63	49	

TABLE 25 : *Halcyon smyrnensis fusca* (contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30516	♂	Gudha, Sambhar Lake, Nagaur Dist., Rajasthan	14 Nov 1957	A. K. Mukherjee	118	77	62	50	
26803	♂	Parsad, Udaipur Dist., Rajasthan	20 Oct 1941	B. N. Chopra & M. L. Roonwal	124	—	63	49	Subadult. Both outermost prima- ries moulting. Tail missing.
26802	♀	Parsad, Udaipur Dist., Rajasthan	21 Oct 1941	B. N. Chopra & M. L. Roonwal	123	81	67	53	Subadult. Both outermost prima- ries moulting.
28640	♂	Hemawas tank, c. 8 km south of Pali, Pali Dist., Rajasthan	5 Dec 1956	B. Biswas	125	83	66	52.5	Both outer- most primaries moulting.
28641	♀	Pali, Pali Dist., Rajasthan	3 Dec 1956	B. Biswas	122	82	61	47	

Systematic notes :

The Indian Whitebreasted Kingfisher, *H. s. fusca* is distributed practically all over India from the sub-Himalayan tracts up to c 1800 m (including Nepal) south throughout the pænisula. Madarász (1904 : 85) however, separated the eastern population as *H. s. perpulchra* which ranges from eastern Madhya Pradesh northern Andhra Pradesh through West Bengal, Bhutan foothills to Assam, Nagaland and Manipur. Baker (1927 : 269) later synonymized *H. s. perpulchra* with *H. s. fusca*. Subsequently, Peters (1945 : 196), Biswas (1961 : 113) and Vaurie (1965 : 665) upheld Baker in this regard. Incidentally, Ali and Ripley (1970 : 92) again treated *H. s. perpulchra* as a distinct subspecies. The subspecific difference, according to Ali and Ripley of the above mentioned two forms is based mainly on the size and colour shade differences, underparts of *perpulchra* being slightly paler than the *fusca* and the latter somewhat larger than the former. After a critical examination of a large series of the two supposed forms from different parts of India including eastern Madhya Pradesh, the intergrading zone of *fusca* and *perpulchra*, we are unable to treat the eastern population *H. s. perpulchra* as a distinct subspecies due to lack of clear diagnostic characters. As such *H. s. perpulchra* should be treated as synonym of *H. s. fusca*.

Halcyon smyrnensis saturator Hume

(Andaman Whitebreasted Kingfisher)

Halcyon saturator Hume, 1874, *Str. Fea'h.* 2 : 168, in text : 531
(Andaman Islands).

Halcyon smyrnensis saturator is represented by the following specimens : (Table 26).

Systematic notes :

According to Baker (1927 : 27) *H. smyrnensis saturator* is a resident bird of the Andaman and Nicobar Islands, but Peters (1945 : 196), Ali and Ripley (1970 : 93) confined its distribution to the Andaman Islands only. So far, it has not been recorded from the Nicobar Islands.

The distribution, therefore, should be confined to the Andaman Islands only.

TABLE 26 : *Halcyon smyrnensis saturator*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N	
29805	♀	Port Cornwallis, North Andaman	22 Feb 1959	K. K. Tiwari	129	82	69	55	
31039	♀	Belly ground, Middle Andaman	5 Feb 1972	A. K. Mukherjee	130	86.5	70	56	
31040	♀	Rangat, Middle Andaman	31 Jan 1972	A. K. Mukherjee	131	85	72	55	
28604	♂	Port Blair, South Andaman	15 Mar 1952	A. K. Mukherjee	129	80	67	53	
28605	♂	Port Blair, South Andaman	15 Mar 1952	A. K. Mukherjee	131	82	69	55	
28606	♂	Port Blair, South Andaman	15 Mar 1952	A. K. Mukherjee	125	79	67	54	
28607	♂	Port Blair, South Andaman	24 Mar 1952	A. K. Mukherjee	125	82	63	48	
29806	♀	Dhanikhari, c 17 km south of Port Blair, South Andaman	7 Mar 1961	P. Routh	128	82	72	54	

TABLE 26 : *Halcyon smyrnensis saturator* (contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30518	♀	Port Blair, South Andaman	7 Mar 1880	G. H. Booley	129	79	62	45	Flood damaged. Tip of upper mandible damaged.
29808	♀	Jarwa Creek, Baratang, South Andaman	13 Mar 1964	B. S. Lamba	131	80	71	54	
31037	♀	Wright Mao, South Andaman	27 Feb 1970	B. K. Tikader	132	86.5	69	50	
31038	♂	Chiriatapu, South Andaman	22 Jan 1952	A. K. Mukherjee	130	85.5	70	53	
29807	♂	Wimberleyganj, South Andaman	4 Mar 1964	B. S. Lamba	129	83	72	55	

Halcyon pileata (Boddaert)

The range of the species as given by Ripley (1961 : 220) is "India east through the Indochinese and Malaysian subregions to southern China and Korea, Hainan Island, Philippines, migrating south from northern parts of its range as far as Sulawesi (Celebes)."

Halcyon pileata (Boddaert)

(Blackcapped Kingfisher)

Alcedo pileata Boddaert, 1783, *Table Pl. enlum* : 41 (China, ex Daubenton, pl. enlum. No. 673).

Halcyon pileata is represented by the following specimens : (Table 27).

Genus **Sauropatis** Cabanis & Heine

Sauropatis sancta (Vigors & Horsfield)

The species is distributed over the greater part of Australasia. There are eight subspecies admitted by Peters (1945), of which the nominate subspecies is represented in our collection.

Sauropatis sancta sancta (Vigors & Horsfield)

(The Australian Sacred Kingfisher)

Halcyon sanctus Vigors & Horsfield, 1827, *Trans. Linn. Soc. Lond.*, 15 (1) : 206 (New Holland = New South Wales).

Sauropatis sancta sancta is represented by the following specimens : (Table 28).

TABLE 27 : *Halcyon pileata*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
28558	♂	Sajnakhali, Sundarban, 24-Parganas, Dist., West Bengal	12 Mar 1956	A. K. Mukherjee	133	84	69	54	
28559	♀	Sajnakhali, Sundarban, 24-Parganas, Dist., West Bengal	12 Mar 1956	A. K. Mukherjee	131	83	70	59	
30562	♂	Dhanikhari, Port Blair, South Andaman	10 Jan 1890	G. H. Booley	130	83	56	41	Tip of bill broken.
18655	♀	Dhanikhari, Port Blair, South Andaman	27 Dec 1889	G. H. Booley	131	82	54	41	Young, Tip of bill broken.
8355	♂	Elephant Point, Rangoon, Burma	4 Dec 1875	J. Armstrong	130	85	56	39	Flood damaged.
21195	♂	Foochow, Fukein Dist., Southeast, China	Dec 1889	C. B. Rickett	132	80	—	—	Young, upper mandible broken.

TABLE 28 : *Sauropatis sancta sancta*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30802	♂	Ysabel Solomon Island	5 Aug 1927	R. H. Beck	95	54	47	36	Young. Central tail- feathers moulting.
30803	♀	Rekate Bay, Ysabel, Solomon Island	8 Sep 1927	R. H. Beck	93	56	47	35	Young. (presented by Smithsonian Institution, Washington in 1972).
13711	—	Victoria, South Australia	—	Bengal Economic Museum	91	53	38	25	Young. Flood damaged. Tip of upper mandible broken.

Sauropatis chloris (Boddaert)

The range of the species as given by Ripley (1961 : 220) is "From the Red Sea east to the coasts of Indochinese and Malayas'an subregions, Lesser Sunda Islands, Philippines, Sulawesi (Celebes) and Australasia, Micronesia and western Polynesia"

Our collection represents four subspecies as recognized by Peters (1945).

Sauropatis chloris davisoni (Sharpe)

(Andaman Whitecollared Kingfisher)

Halcyon davisoni Sharpe, 1892, *Cat. Bds. Br. Mus.*, 17 : 217
(in key), : 282 (Aberdeen, South Andaman).

Sauropatis chloris davisoni is represented by the following specimens : (Table 29).

Systematic notes :

There is much individual variation in coloration. In some specimens greenish blue is pronounced whereas in other bluish green is more prominent. This character is therefore, not constant and is of no taxonomic significance. The only diagnostic character is the absence of the supercilium in *H. c. davisoni*, the population of which is restricted to the Andaman group of islands. The other population, *H. c. occipitalis* is confined to the Nicobar Islands. It bears a broad buffy-white supercilium extending to the nape.

Sauropatis chloris occipitalis (Blyth)

(Nicobar Whitecollared Kingfisher)

Todiramphus occipitalis Blyth, 1846, *J. Asiat. Soc. Beng.* 15 : 23,
note, 51 (Nicobar Islands).

Sauropatis chloris occipitalis is represented by the following specimens : (Table 30).

TABLE 29 : *Sauropatis chloris davisoni*

Reg. No.	Sex	Locality	Date of collector	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
18337	♂	Andamans	—	G. H. Booley	98	60	50	36	
30560	—	Andamans	26 Jan 1896	—	—	99	50	37	Damaged. Tail missing. Hindneck feathers worn.
21722	♂	Aberdeen, South Andaman	23 Apr 1896	Andaman Expedition party	101	—	52	36	Tail missing
21723	♂	Aberdeen, South Andaman	23 Apr 1896	Andaman Expedition party	105	66.5	54	37	
21724	♂	Aberdeen, South Andaman	24 Apr 1896	Andaman Expedition party	104	67	45	28.5	Tip of upper mandible broken.
30558	♂	Port Blair, South Andaman	19 Jan 1890	G. H. Booley	102	64	37	27	Tip of the upper mandible broken.
30559	♂	Shore Point. Port Blair, South Andaman	20 Dec 1889	G. H. Booley	105	70	37	26.5	Tip of the upper mandible broken.

TABLE 29 : *Sauropatis chloris davisoni* (Contd.)

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
30561	♂	Port Blair, South Andaman	15 Mar 1952	R. V. Sherard	100	70	53	38	Tips of primaries broken.
29795	♀	Port Blair, South Andaman	18 Mar 1952	A. K. Mukherjee	105	66	51	38	
29797	♂	Wimberleygung, South Andaman	6 Mar 1964	B. S. Lamba	105	67.5	57	42.5	
29798	♀	Wimberleygung, South Andaman	6 Mar 1964	B. S. Lamba	103	64.5	51	36.5	
29800	♂	Chiriatapu, South Andaman	9 Apr 1964	B. S. Lamba	105	71	57	38	
31246	♀	Chiriatapu, South Andaman	22 Jan 1972	A. K. Mukherjee	100	64	—	—	Bill broken.
31047	♀	Neil Island, South Andaman	8 Apr 1970	B. K. Tikader	105	66	57	40	
29799	♀	Beniaboi, Little Andaman	23 Feb 1961	P. Raut	101	64	56	40	Young.

TABLE 30 : *Sauropatis chloris occipitalis*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B	N.	
29801	♂	Car Nicobar, Nicobar Islands	23 Mar 1959	B. Roy	108	68	57	44	
29804	♂	Car Nicobar, Nicobar Islands	5 Apr 1959	B. Roy	109	69	56	40	
29802	♀	Car Nicobar	23 Mar 1959	B. Roy	110	70	61	46	
29803	♀	Car Nicobar	25 Mar 1959	B. Roy	106	71	53	43	
31042	♂	Malakka, Car Nicobar	19 Feb 1972	A. K. Mukherjee	110	72	55	40	
31043	♂	Malakka, Car Nicobar	17 Feb 1972	A. K. Mukherjee	105	69	59	41	
31041	♀	Malakka, Car Nicobar	6 Nov 1970	B. K. Tikader	106	74	55	39	
31044	♂	Teetop, Car Nicobar	26 Feb 1972	A. K. Mukherjee	103	63	54	40	
31045	♂	Teetop, Car Nicobar	27 Feb 1972	A. K. Mukherjee	110	70	56	43.5	
31046	♀	Sawai, Car Nicobar	22 Feb 1972	A. K. Mukherjee	109	71.5	58	41.5	

Sauropatis chloris humii (Sharpe)

(Eastern Whitecollared Kingfisher)

Halcyon humii Sharpe, 1892, *Cat. Bds. Br. Mus.* 17 : 217 (in key), 281, pl. 8 (Siam to the Malay Peninsula and Sumatra; type from Jaram, Selangor, Malaysia, Oberholser, 1919, *Proc. U. S. nat. Mus.* 55 : 373).

Sauropatis chloris humii is represented by the following specimens : (Table 31).

Sauropatis chloris collaris (Scopoli)

(Philippine Whitecollared Kingfisher)

Alcedo collaris Scopoli, 1786, *Del. Flor. et Faun. Insubr., fasc.* 2 : 90 (No locality = Philippine Islands, ex Sonnerat, *Voy Nouv. Guinee* : 67, pl. 33 restricted to Manila, Island of Luzon, by Oberholser, 1919, *Proc. U. S. nat. Mus.* 55 : 361).

Sauropatis chloris collaris is represented by the following specimens : (Table 32).

Systematic notes :

The genus *Sauropatis* Cabanis & Heine (1860), which was synonymized with *Halcyon* by Sharpe (1868), was revived by Baker (1927), then synonymized again by Peters (1945), but has been resuscitated by the authors (Mukherjee and Dasgupta 1973). This genus includes the species *Halcyon chloris* (Boddaert) of the Indian region.

Genus Tanysiptera Vigors**Tanysiptera galatea** G. R. Gray

The species is found in to New Guinea and Moluccas, also extends to the islands of Australasia.

Peters (1945) admitted thirteen subspecies of which only three are represented in our collection.

TABLE 31 : *Sauropatis chloris humii*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
31048	♀	Kakdwip, 24-Parganas Dist., West Bengal	13 Aug 1966	S. S. Saha	108	67	56	39	Central tail-feathers moulting.
12555	♂	Palaw, Lower Burma	17 Feb 1882	J. Anderson	105	64	60	—	Flood damaged. Upper mandible broken.
12850	♀	Pilai, Lower Burma	9 Mar	J. Anderson	105	61	56	41	
12851	♀	Pilai, Lower Burma	1 Mar 1882	J. Anderson	105	59	48	31	Tip of upper mandible damaged.
12853	♀	Tin Islet, Lower Burma	27 Feb 1882	J. Anderson	109	61	59	44	Flood damaged.
12854	♀	Tin Islet, Lower Burma	27 Feb 1882	J. Anderson	107	66	60	43	Flood damaged
12856	♀	Tin Islet, Lower Burma	27 Feb 1882	J. Anderson	109	68	57	44	

TABLE 32 : *Sauropatis chloris collaris*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
28009	♂	Lamo, Batan Island, Philippines	2 Dec 1947	Philippines Natural History Museum & American Museum of Natural History Expedition party	107	61	53	38	Young.
28008	♀	Lamo, Batan Island, Philippines	2 Dec 1947	Philippines Natural History Museum & American Museum of Natural History Expedition party	107	62	51	38	Young.

Tanysiptera galatea doris Wallace

(Morty Island Kingfisher)

Tanysiptera doris Wallace, 1862, *Ibis* : 349 (Morotai).

Tanysiptera galatea doris is represented by the following specimen : (Table 33).

Tanysiptera galatea galatea G. R. Gray

(Galatea Kingfisher)

Tanysiptera galatea G. R. Gray, *Proc. zool. Soc. Lond.*, pt. 27. between July and October, 1859 : 154 (Dorey = now Manokwari, New Guinea).

Tanysiptera galatea galatea is represented by the following specimens : (Table 34).

Tanysiptera (galatea) riedelii J. Verreaux

(Riedel's Kingfisher)

Tanysiptera Riedelii J. Verreaux, 1866, *Nouv. Arch. Mus. Hist. Nat. [Paris]*, 2, *Bull.*, 21, pl. 3, f. 1. (No. locality = Biak Island) (Peters 1945).

Tanysiptera (galatea) riedelii is represented by the following specimen : (Table 35).

Tanysiptera carolinae Schlegel

The species is confined to the island of Numfor in the Bay of Geelvink, New Guinea.

TABLE 33 : *Tanyiptera galatea doris*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks	
					W.	Tl.	B.	N.		
8494	♂	Morotai Island	1861	A. R. Wallace	104	174	174	40	30	By exchange with British Museum (Natural History) in 1878.

TABLE 34 : *Tanyiptera galathea galatea*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
8379	—	Waigeu, western Papuan Island, New Guinea	Feb 1874	Beccari	108	262	40	27	By exchange with Genoa Museum in 1877.
10796	—	New Guinea	—	—	107	250	39	29	By exchange with Jardines Plantes in 1878.

TABLE 35 : *Tanysiptera (galatea) riedelii*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
8376	—	Bord (Misori), Biak Island, Geelvink Bay, New Guinea	8 May 1875	Beccari	106	176	41	31	By exchange with Genoa Museum in 1877

TABLE 36 : *Tanysiptera carolinæ*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
10797	♀	Numfor (formerly called Mafor) Island in Geelvink Bay, New Guinea	—	—	109	175	46	33	By exchange with Jardines plantes in 1878.
8377	—	Numfor (formerly called Mafor) Island in Geelvink Bay, New Guinea	26 May 1875	Beccari	110	173	45	32	By exchange with Genoa Museum in 1877.

Tanysiptera carolinae Schlegel

(Carolinae Kingfisher)

Tanysiptera Carolinae Schlegel, 1871, *Ned. Tijdschr. Dierk.*, 4 : 13
(Mafor) = Numfor.

Tanysiptera carolinae is represented by the following specimens :
(Table 36).

Tanysiptera ellioti Sharpe

The species is confined to the Island of Kofiau, near Misol, in the
Moluccas.

Tanysiptera ellioti Sharpe

(Elliot's Kingfisher)

Tanysiptera ellioti Sharpe, 1869, *Proc. zool. Soc. Lond.*, : 630
(No locality) (Peters 1945).

Tanysiptera ellioti is represented by the following specimen :
(Table 37).

Tanysiptera sylvia Gould

The range of the species is from New Guinea to northeast
Australia and adjoining islands.

Out of the four subspecies as recognized by Peters (1945) our
collection is represented by the nominate subspecies.

Tanysiptera sylvia sylvia Gould

(Cinnamonbreasted Kingfisher)

Tanysiptera sylvia Gould, 1850, in *Jardine's Contr. Orn.* : 105
(Cape York, Queensland).

Tanysiptera sylvia sylvia is represented by the following specimens :
(Table 38).

TABLE 37 : *Tanysiptera ellioti*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
8378	♀	Kofiau (formerly called Popa) Island, near Misol, New Guinea	31 July 1875	Beccari	103	156	41	30	By exchange with Genoa Museum in 1877.

TABLE 38 : *Tanysiptera sylvia sylvia*

Reg. No.	Sex	Locality	Date of collection	Collector or Donor	Measurements				Remarks
					W.	Tl.	B.	N.	
13668	♂	New South Wales, Australia	—	Bengal Economic Museum	95	83	35	26	

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