

**CATALOGUE OF MAMMALIA IN THE COLLECTION  
OF THE ZOOLOGICAL SURVEY OF INDIA,  
WESTERN REGIONAL CENTRE, PUNE**

**S. S. TALMALE**



**ZOOLOGICAL SURVEY OF INDIA**



OCCASIONAL PAPER No. 357

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By

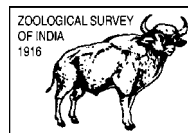
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## CITATION

Talmale, S. S. 2014. Studies on the Catalogue of Mammalia in the collection of the Zoological Survey of India, Western Regional Centre, Pune. *Rec. zool. Surv. India, Occ. Paper No.*, **357** : 1-187. (Published by the Director, *Zool. Surv. India*, Kolkata)

Published : September, 2014

**ISBN 978-81-8171-393-3**

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### **PRICE**

**India : ₹ 770/-**

**Foreign : \$ 40; £ 30**

Published at the Publication Division by the Director, Zoological Survey of India, M-Block, New Alipore, Kolkata-700 053 and printed at East India Photo Composing Centre, Kolkata-700 006.

**RECORDS OF THE ZOOLOGICAL SURVEY OF INDIA  
OCCASIONAL PAPER NO.**

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2014

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## I. INTRODUCTION

Western Regional Centre (WRC ) of Zoological Survey of India incepted in September, 1959 at Pune. In fifty years WRC completed various faunistic surveys of area covered viz. Maharashtra, Goa, Part of Karnataka, Part of Gujarat, and also conservation areas of the Maharashtra and other states (Nilgiri Biosphere Reserve (Karnataka and Kerala; Eravikulam National Park, Kerala). Collection area covered different Bio-geographic regions such as Western Ghats, Deccan Plateau (Central Highlands, Central and Southern Plateau) and West Coast. And also covered various ecosystems like Wetlands, Crater Lake sanctuary area, different forest types (Dry deciduous, Moist deciduous, Semi-evergreen). Collection also contains mammal specimens donated from different areas of the country.

Catalogues of mammalian specimens published by Anderson, 1881; Sclater, 1891(Collection of Indian Museum); Agrawal and Chakraborty, 1979 ( Order: Rodentia, Family: Sciuridae of ZSI, Kolkata collection) and Ghosh, 2005 and 2008 (Chiroptera : Megachiroptera and Microchiroptera of ZSI, Kolkata collection). Catalogue of the type specimens of mammals available in ZSI, Kolkata, has been compiled by Khajuria *et al.* (1977). The present study includes registered collection of nine mammalian orders viz., Scandentia, Primates, Rodentia, Lagomorpha, Soricomorpha, Chiroptera, Pholidota, Carnivora and Artiodactyla available in National Zoological Collection of Western Regional Centre of Zoological Survey of India with all the details (Collection data, External and Cranial measurements, Distribution of the present taxon and taxonomic remarks). So, the document signifies the importance to access the information on specimens of above mentioned groups. Arrangement of order, species follow as per Wilson and Reeder, 2005 and Pradhan and Talmale, 2012.

## II. MATERIAL AND METHODS

All the registered specimens available are physically verified. All the measurements (morphological and Cranial) were taken are given in millimeter (mm). Under systematic account species wise data given in tabular form which includes Registration No., sex, Nature of collection (Skin and skull), Nature of preservation (Wet or Dry), Collection locality, Name of collector and Date of collection. And also given detailed Morphometric and Cranial measurements given in tabular form for each specimen. Measurements given in range (minimum and maximum) for more than one specimens kept in a single jar (wet preserved) with same registration number of same species.

**ABBREVIATIONS USED IN EXTERNAL MEASUREMENTS**

HB	: Length of Head and Body	E	: Length of Ear
HF	: Length of Hind-foot	TIB	: Length of Tibia (For Chiroptera species)
FA	: Length of Forearm (For Chiroptera species)	3mt or 4mt or 5mt	: Length of metacarpal
TL	: Length of Tail		(For Chiroptera species)

**ABBREVIATIONS USED IN CRANIAL MEASUREMENTS**

on	: Occipitonasal length
cb	: Condylbasal length
zw	: Greatest zygomatic width
iw	: Interorbital width
fro	: frontal width
orb	: Length of the orbit
bl	: Length of tympanic bulla
nas	: Nasal length
apf	: Length of anterior palatal foramina
mtr	: Length of maxillary tooththrow (For Rodentia)
utr	: Upper tooththrow (For Soricomorpha, Carnivora and Artiodactyla)
dia	: Length of diastema (For Rodentia, Lagomorpha species)
pal	: Length of palate
ml	: Mandibular length

Following cranial measurements have been used for Chiroptera species :

GTL	: Greatest length of skull (also in Soricomorpha, Artiodactyla)
CBL	: Condylbasal length
CCL	: Condyllo-canine length
BB	: Breadth of braincase

IC	:	Interorbital constriction
PC	:	Postorbital constriction
CM <sup>1,2,3</sup>	:	Maxillary toothrow
CM <sub>2 or 3</sub>	:	Mandibular toothrow
M <sup>1</sup> -M <sup>1</sup>	:	Posterior palatal width
C <sup>1</sup> -C <sup>1</sup>	:	Anterior palatal width
ZB	:	Greatest zygomatic width
ML	:	Mandibular length

### III. SYSTEMATIC ACCOUNT

Order SCANDENTIA

Family TUPAIIDAE Gray, 1825

Genus *Anathana* Lyon, 1913

1. *Anathana ellioti ellioti* (Waterhouse, 1850)

1850. *Tupaia ellioti* Waterhouse, *Proc. Zool. Soc. London.* page 107.

2006. *Anathana ellioti ellioti* : Alfred, Ramakrishna & Pradhan (Eds.) In *Validation of Threatened Mammals of India : 97-99*, Publ : ZSI, Kolkata.

*Common Names* : English : Madras Treeshrew, Treeshrew; Marathi : Zadchichundri.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/612	1 F	Skin & Skull	Wet	Tadoba National Park, Dist. Chandrapur, Maharashtra	Yogesh Dubey	June 1996	Specimen & skull damaged; Donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E
M/612	170	160	41.6	14.1

*Distribution* : South of Ganges river in India. Species endemic to Peninsular India (Alfred *et al.*, 2006).

## Order PRIMATES

## Suborder STREPSIRRHINI

## Infraorder LORISIFORMES

## Family LORISIDAE Gray, 1821

Genus *Loris* E. Geoffroy, 17962. *Loris lydekkerianus* Cabrera, 1908

1908. *Loris lydekkerianus* Cabrera, *Bol.Soc. Esp. H. N., Madrid* : 139.

2008. *Loris lydekkerianus* : Nameer, *ZOOS' PRINT* : **XXIII** (8) : 2.

*Common Names* : English : Gray Slender Loris, Kannad : Mala manushya, Chinge-Kuli, Telugu : Devanga pilli, Tamil : Thevanga, Tevdngu.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/643	1 unsexed	Mounted	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe Park, Pune	Date not mentioned	Exhibit in Museum

*Distribution* : Hilly parts of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu in India (Alfred *et al.*, 2006).

*Elsewhere* : Sri Lanka (Wilson and Reeder, 2005).



*Remarks* : Specimen registered as *Loris tardigradus* Linnaeus. Indian species recognized as *Loris lydekkerianus* Cabrera following Wilson and Reeder (2005).

## Order RODENTIA

## Suborder SCIUROMORPHA

## Family SCIURIDAE Fischer de Waldheim, 1817

## Subfamily RATUFINAE Moore, 1959

Genus *Ratufa* Gray, 18673. *Ratufa indica indica* (Erxleben, 1777)

1777. *Sciurus indicus* Erxleben, *Syst. Regn. Anim.* **1** : 420.

2002. *Ratufa indica indica*: Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No.* **199** : 179.

*Common Names* : English: Indian Giant Squirrel, Malabar Squirrel; Hindi : Karrat, Rasu; Gujarathi : Motikhishholi; Dangi : Shekut; Marathi : Shekaru; Kannad : Keshalilu; Telugu : Pedia udata; Tamil : Peria-anathan.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/58	1 M	Skin & Skull	Dry	Danoli, Ratnagiri, Maharashtra	B. K. Tikader	March, 1965	Skin dry unable to take proper Ear measurement
M/59	1 F	Skin	Dry	Bhimashankar, Poona, Maharashtra	B. S. Lamba	02 May, 1965	—, —
M/60	1 M	Skin	Dry	Bhimashankar, Poona, Maharashtra	B. S. Lamba	05 May, 1965	—, —

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/61	1 M	Skin & Skull	Dry	Danoli, Ratnagiri, Maharashtra	B. K Tikader	March, 1965	Tail cut
M/271	1 unsexed	Skin & Skull	Dry	Molem, Goa	B. S. Lamba	17 Dec., 1973	
M/272	1 M	Skin	Dry	Molem, Goa	B. S. Lamba	14 Dec., 1973	Skin only
M/273	1 M	Skin & Skull	Dry	Molem, Goa	B. S. Lamba	14 Dec., 1973	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	fro	orb	ml
M/58	410	430	63.5	15+	72.7	67.1	23.7	31.3	15	16.8	14.9	5.6	46.6	29.8	23.05	44.7
M/59	370	350	65													
M/60	370	360	56.7													
M/61	390	260+	51.9													
M/271	345	300+	63		73.7	67.1	23.8	32	14.3	16.4	13.1	4.7	46.8	32.9	24.6	42.7
M/272	460	370	64													
M/273	530	400	48.7		74.2	66.7	24.4	30.9	14.5	15.8	14.4	5.7	45.1	29.8	24	44.1

*Distribution* : Widely distributed in Peninsular India in Andhra Pradesh, Bihar, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa and Tamil Nadu states within Indian limits. Species endemic to India.

*Remarks* : Specimens earlier identified and registered as *Ratufa indica bengalensis* (Blanford) (M/58); *Ratufa indica elphinstoni* (Sykes) (M/59 & 60). Both the subspecies are synonymised under *Ratufa indica indica* by Thorington & Hoffmann, in Wilson and Reeder (2005) and recognized four subspecies from Indian region viz., *Ratufa indica indica* (Erxleben) (Western Ghats from

about 18°N30' to 10°N; Dorsum reddish brown; tail brown proximally, white distally in north but all-brown in south), *Ratufa indica delbata* Blanford (Surat & Dangs Dists., NW India; Uniform pale creamy buff to almost white), *Ratufa indica centralis* Ryley and *Ratufa indica maxima* Schreber (South of 10°N; Dorsum with black on nape, shoulders and rump; tail black but brown distally in north). **Plate 1** showing colour variations in dorsum (More brownish towards south India) and tail (more white distally in the specimens from Bhimashankar, Pune area).

#### 4. *Ratufa indica centralis* Ryley, 1913

1913. *Ratufa indica centralis* Ryley, *J. Bombay nat. Hist. Soc.*, **22** (3) : 436.

2002. *Ratufa indica centralis* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 179.

*Common Names* : English : Indian Giant Squirrel; Hindi: Karrat, Rasu; Marathi : Shekaru.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/644	1 unsexed	Mounted	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe Park, Pune	Date not mentioned	Exhibit in Museum; donated specimen

*Distribution* : Central and Eastern India.

*Elsewhere* : Indian endemic subspecies.

*Remarks* : As above discussed under *Ratufa indica indica*.

#### Subfamily CALLOSCIURINAE Pocock, 1923

Genus *FUNAMBULUS* Lesson, 1835

#### 5. *Funambulus palmarum palmarum* (Linnaeus, 1766)

1766. *Sciurus palmarum* Linnaeus, *Syst. Nat.*, 12th ed., **1** : 86.

2002. *Funambulus palmarum palmarum* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 175-176.

*Common Names* : English : Indian Palm Squirrel; Hindi : Gilhari; Marathi : Pateri Khar; Kannad : Alilu; Malayalam : Paraan; Tamil : Anna Pilli.



*Distribution* : Karnataka, Maharashtra (Parts of Western Ghats).

*Remarks* : This subspecies is sharply separated from subspecies *palmarum* by the much greater width of the white median line, 6 mm. compared to 3mm. (Moore & Tate, 1965).

### 7. *Funambulus palmarum robertsoni* Wroughton, 1916

1916. *Funambulus robertsoni* Wroughton, *J. Bombay nat. Hist. Soc.*, **24** : 647.

2005. *Funambulus palmarum robertsoni* : Thorington, R. W. & Hoffmann, R. S. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. **II** : 782.

*Common Names* : English : Indian Palm Squirrel; Hindi : Gilhari; Marathi : Pateri Khar; Kannad : Alilu; Malayalam : Paraan; Tamil : Anna Pilli.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/713	1F	Skin & Skull	Wet	Around rest house, Lonar Wildlife Sanctuary, Buldana Dist., Maharashtra	P. M. Sureshan	21 Nov., 2003	2 pairs of mammae; one abdominal & one inguinal

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	fro	orb	ml
M/713	150	140	35	16	39.4	36.5	11.6	19.6	6.5	9.1	7.4	1.5	22.4	14.2	11.4	22.5

*Distribution* : Andhra Pradesh, Chhattishgarh, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan, Orissa.

*Remarks* : This subspecies differs from other in having no brown on the head; the gray of the sides and nape continues forward onto the crown and face. The width of the median line is nearly five millimeters (Moore & Tate, 1965).

### 8. *Funambulus pennantii pennantii* Wroughton, 1905

1905. *Funambulus pennantii* Wroughton, *J. Bombay Nat. Hist. Soc.*, **16** : 411.

2009. *Funambulus pennantii pennantii* : Pradhan, M. S. & Talmale, S. S., *Rec. zool. Surv. India, Occ. Paper No.* **297** : 58.

*Common Names* : English : Northern Palm Squirrel; Hindi : Gilhari; Gujarathi : Khiskoli; Punjabi : Galhiri; Marathi : Pateri Khar; Kannad : Alilu; Telugu : Udata; Malayalam : Paraan; Tamil : Anna Pilli.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/85	1M	Skin & Skull	Dry	Mukundnagar, Pune, Pune Dist., Maharashtra	B. K. Tikader	6 Nov., 1975	
M/86	1F	Skin & Skull	Dry	Mukundnagar, Pune, Pune Dist., Maharashtra	B. K. Tikader	6 Nov., 1975	
M/87	1M	Skin & Skull	Dry	Mukundnagar, Pune, Pune Dist., Maharashtra	B. K. Tikader	8 Nov., 1975	
M/444	2F	Skin & Skull	Wet	ESIS Aundh Camp. Pune, Pune dist., Maharashtra	M. S. Pradhan	18 Nov., 1980	
M/445	1M	Skin & Skull	Wet	Sangamner, Ahmednagar Dist., Maharashtra	S. N. Ghare	13 Nov., 1982	Donated specimen
M/454	2M	Skin & Skull	Wet	Sangamner, Ahmednagar Dist., Maharashtra	S. N. Ghare	12 Nov., 1982	Donated specimens; one young one
M/494	2M1F	Skin & Skull	Wet	Peepal trees near houses , Ambad, Dist. Jalna	P. S. Sardeshpade	21 Oct., 1989	
M/509	1M	Skin & Skull	Dry	Undual river on Aswali-Darna Road, Nasik Dist., Maharashtra	M. S. Pradhan	15 Feb., 1991	Skull not traciabile
M/516	1F	Skin & Skull	Dry	East of Nasrapur on Satara Road, Pune Dist., Maharashtra	M. S. Pradhan	8 April 1983	
M/517	1M	Skin & Skull	Dry	Wada Bolai, Dehu Road, Pune Dist., Maharashtra	M. S. Pradhan	9 May 1983	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/518	1M	Skin & Skull	Dry	Jhanoliwadi, just after Dive Ghat, Pune dist., Maharashtra	M. S. Pradhan	16 May 1983	
M/519	1F	Skin & Skull	Dry	Dehugaon, Indrayani River, Pune Dist., Maharashtra	M. S Pradhan	19 May. 1983	
M/539	1M	Skin & Skull	Wet	T.C. College campus, Baramati, Pune Dist., Maharashtra	A. N. Shengade	23 Jan., 1990	
M/604	1M	Skin	Wet	Mundhava village, Pune Dist., Maharashtra	R. S. Bhosale	23 Aug., 1996	Skull damaged; not dissected
M/676	1M	Skin & Skull	Wet	Ranjangaon, on Pune-Ahmednagar Road, Pune Dist., Maharashtra	Mahesh Gaikawad	Dec., 2003	Skull damaged
M/723	1M	Skin & Skull	Wet	Theur village, Pune Dist., Maharashtra	S. V. Mulaey	2 Nov., 1995	
M/756	1M	Skin & Skull	Wet	Samewada village, Tal., Lakhani, Bhandara Dist., Maharashtra	S. S. Talmale	19 Nov., 2004	
M/757	1M	Skin & Skull	Wet	Samewada village, Tal., Lakhani, Bhandara Dist., Maharashtra	Pawan Bawankule	31 Dec., 2005	Donated Specimen
M/758	1ex	Skin & Skull	Wet	Rest house, Nalganga, Buldana Dist., Maharashtra	S. G. Patil	15 Nov., 2005	Young one

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	fro	orb	ml
M/85	158	141	37	16	38	36	12.1	19	7.4	8.4	7.4	1.5	21.4	12.2	11.4	21.1
M/86	185	175	38	16	40	36	14	19	7.3	9.5	7.1		21.5	12.2		22

ZSI,WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	fro	orb	ml
M/87	180	160	39	17	38.2	34.2	12.1	19.1	7.2	8.2	6.3	1	21.1	13.1	12	21.7
M/444	95+- 100+	70+- 120	35.7- 37.2		38.3- 38.4	36.2- 36.5	11.7- 11.7	20.1- 20.3	7.5- 7.6	8.3- 9.1	8.1- 8.2	1-2	22.2- 22.2	12.2- 12.3	11.3	21.7
M/445	95+	120	37	37	34.3	11.2	18.6	7.5	7.6	6.2	1.5	21.2	11.3	11.6	17.7	
M/454	100+	140	36.1		37.4	35.4	11.2	19	7.1	8.7	7.6	1.5	20.4	11.4	11	20.5
M/454	64+	120	34		31.6	29.5	9.1	15.1	6.2	7	6.6	1.1	17.7	9.2	10.4	17.4
M/494	112- 140	112- 120	36.1- 40.2	13.3- 15.4	31.1- 38	30.5- 35.1	8.3- 10.7	16.1- 18.6	7.1- 7.3	7.1- 8.3	7.2-9	1.5- 3.1	18.3- 21.1	10- 11.4	10.5- 11.2	17.7- 21
M/509	175	150	37.3	13.4												
M/516	145	115+	40		37.5	34.8	12.1	19.3	7.1	8	7.4	1	21.2	12.3	11.1	21.1
M/517	160	117+	40.5	12.4	38.7+		12.2	19	7.5	8.2			20.4	12.3	11.3	21.2
M/518	170	110+	35	10.5	39.4	36.2	13.6	19.4	7.4	8.6	8.1	1	22.3	13.7	12	22.1
M/519	150	143	31	11												
M/539	122	145	36.7	13.3	36	33.4	21.1	18	7.3	7.8	6.7	1	20.1	10.6	11.2	20.3
M/604	155	135	36.7	13.4												
M/676	152	155	42	18												
M/723	135	140	33.4	13	36	33	10.5	18.3	6.7	9.1	6.5	2	20.1	11.1	11.2	19.7
M/756	130	115	39	17	34.4	31.7	10	17.1	7.1	8.4	8.2	2	18.2	10.6	11.1	19.1
M/757	135	115	38.6	16.7	38.3	36.3	11.1	19.5	7.4	8.6	8.3	2.1	21.2	12.7	11.4	22
M/758	112	112	33.5	13.7	31.1	28.3	9.1	14.4	5.4+	7	6.7	1.1	17.1	9	10.1	17.1

*Distribution* : Maharashtra, Gujarat, Madhya Pradesh for the subspecies (Ghose *et al.*, 2004) and possibly in southern India (Srinivasulu *et al.*, 2004).

*Remarks* : Ghose *et al.* (2004) records the distribution of *Funambulus pennantii chhattisgarhi* from Eastern part of Maharashtra (including Chandrapur and Nagpur districts), Madhya Pradesh, Orissa, West Bengal and Bihar). However, Talmale (2007) treated the Maharashtra populations as *Funambulus pennantii pennantii* only due to the overlapping of measurements and colour variations observed in the specimens from Maharashtra populations. Pradhan and Talmale (2009) also recommended conduct more surveys and collect fresh specimens to resolve the taxonomic validity upto subspecies level.



9. *Funambulus tristriatus tristriatus* (Waterhouse, 1837)1837. *Sciurus tristriatus* Waterhouse, *Mag. Nat. Hist. [Charlesworth's]*, 1 : 499.2002. *Funambulus tristriatus tristriatus* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 177.

*Common Names* : English : Jungle Palm Squirrel; Hindi : Gilhari; Marathi : Pateri Khar; Kannad : Alilu; Malayalam : Paraan; Tamil : Anna Pili.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/146	1F	Skin & Skull	Dry	Hanuman Temple, Bhimashankar, Pune Dist., Maharashtra	A.S. Mahabal	30 May., 1979	
M/391	1F	Skin & Skull	Dry	Dehari, Murbad, Thane Dist., Maharashtra	M. S. Pradhan	17 Mar., 1984	
M/453	1F	Skin & Skull	Dry	Kondaibari Ghat, near Visarwadi, Dhule dist. (Now in Nandurbar Dist.), Maharashtra	M. S. Pradhan	19 Nov., 1985	
M/462	1F	Skin & Skull	Dry	Amlibari, Tal. Akkalkua, Dhule Dist (Now in Nandurbar Dist.), Maharashtra	M. S. Pradhan	24 Nov., 1985	
M/463	1M	Skin & Skull	Dry	Rest house, Jawhar, Tal. Jawhar, Thane Dist., Maharashtra	M. S. Pradhan	19 Oct., 1986	
M/510	1F	Skin & Skull	Dry	Karla, Pune-Bombay Road, Pune Dist., Maharashtra	M. S. Pradhan	11 May, 1988	
M/520	1M	Skin & Skull	Dry	Karla village & around, Pune Dist., Maharashtra	M. S. Pradhan	8 June, 1984	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/521	1F	Skin & Skull	Dry	Karla village & around, Pune Dist., Maharashtra	M. S. Pradhan	8 June, 1984	
M/840	1M	Skin & Skull	Wet	Sengartheri Kalkkad Mundanthurai Reserve Forest, Tamil Nadu	Divya Mudappa	19 July 1997	Donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	fro	orb	ml
M/146	160	120+	37.4	12.1	39.5	38		21.4	7.7	10.6	7.5	2.1	22.6	14	11.6	24
M/391	165	150	40.4	11	40.7	36.8	12.7	20.7	7.7	9.5	7.1	1.2	23	13.7	11.1	22.7
M/453	165	100+	36.7	13.3	40.6	37.3	12.1	20.5	7.7	9.6	6.7	1.2	22.7	14	12	22.4
M/462	110+	60+	33.4		40.3	38.1	12.1	21.4	7.5	10.3	7.6	2.1	24.1	13.5	12.1	23.1
M/463	127	122	35	15	39.1	36	12.1	20.1	7.4	9.3	7.3	1.5	22	13	11.5	22.2
M/510	155	145	38	13.5	40.1	37	11.3	20	7.3	9.4	7.6	1.4	23.1	14.5	12.1	23.4
M/520	170	140	39	11.2	42.2	38.4	13.2	21.1	7.2	10.1	6.7	1		15	12.2	
M/521	145	132	37.7	8.7	41.1	37.4	13.7	21	7.6	9.7	7.5	1	24.1	15	12.3	23.1
M/840	190	120	41.1	17	44.1	41.4	13.1	23.6	9.5	10.7	7.9	2.4	25	14.5	13.2	22.3

*Distribution* : Goa, Karnataka, Keala, Maharashtra and Tamil Nadu states within Indian limits.

*Elsewhere* : Indian Endemic species.

*Remarks* : Three striped jungle palm squirrel having occipitonasal length usually exceeding 40 mm; length of palate (front of incisors to back of palate) usually exceeding half of the occipitonasal length. Talmale (2013) reports considerable amount of overlapping in the morphological and osteological measurements in the specimens from northern part of Western Ghats (Range of *Funambulus tristriatus numarius* Wroughton) and suggested synonymy of *numarius* under the nominate subspecies *F. t. tristriatus* (Waterhouse) and also recorded collection of specimens from Nandurbar district showing range of extension of the species beyond Mumbai (Earlier range).

Suborder MYOMORPHA  
 Superfamily MUROIDEA Illiger, 1811  
 Family PLATACANTHOMYIDAE Alston, 1876  
 Genus *Platacanthomys* Blyth, 1859  
 10. *Platacanthomys lasiurus* Blyth, 1859

1859. *Platacanthomys lasiurus* Blyth, *J. Asiat. Soc. Bengal*, 28 : 289.

2000. *Platacanthomys lasiurus* : Agrawal, V.C., *Rec. Zool. Surv. India, Occ. Paper. No. 180* : 14-15.

*Common Names* : English : Malabar Spiny Dormouse; Hindi : Malabar katedar nidralu chuha.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/761	1F	Skin & Skull	Wet	Thai Shola (Forest), Nilgiris, Alt. 6600 ft. Tamil Nadu	Kartik Shankar	1994	Donated specimen
M/762	1unsexed	Skin & Skull	Wet	Thai Shola (Forest), Nilgiris, Alt. 6600 ft. Tamil Nadu	Kartik Shankar	Feb. 1994	Donated specimen
M/841	1F	Skin & Skull	Wet	Sengaltheri, Kalkkad Mundanthurai, Tamil Nadu	Divya Mudappa	24 June, 1996	Donated specimen
M/842	1M	Skin & Skull	Wet	Sengaltheri, Kalkkad Mundanthurai, Tamil Nadu	Divya Mudappa	24 June, 1996	Donated specimen

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/761	115	95	21.3	23.1	31.1	29.1	12.9	11.1	5.3	9.4	3.8	1.9	18.7	6.7	17
M/762	95	80	20.8	21.5	30.3	27.9	11.7	10.1	5.1	8.1	4.6	1.5	17.1	6.9	15.8
M/841	105	80	22.4	21.5	31.6	28.1	12.1	11	5.2	8.3	3	1.6	18.7	6.9	16.2
M/842	85	83	21.1	20.8	27.7	25.9	8.8	9.2	5.1	7.3	2.8	2	16.4	6.4	15

*Distribution* : Karnataka, Kerala and Tamil Nadu ( Forests below 3000 ft (914 m) in SW Peninsular India to 14° North latitude, Indian endemic species (Pradhan and Kurup, 2001 and Pradhan, 2002).

*Remarks* : A medium-sized arboreal dormouse, having the tail shorter than head and body. Body covered with short spines, tail becoming thick and bushy at its tip. Skull with a small bulla, less perfectly ossified palate and the molars 3/3 in number and flat-crowned. Mandible slack of perforation in the angular process (Agrawal, 2000).

Family MURIDAE Illiger, 1811

Subfamily GERBILLINAE Gray, 1825

Genus *Tatera* Lataste, 1882

11. *Tatera indica indica* (Hardwicke, 1807)

1807. *Dipus indicus* Hardwicke, *Trans. Linn. Soc. Lond.*, **8** : 279.

2002. *Tatera indica indica* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No.* **199** : 196.

*Common Names* : English : Antelope Rat/Indian Gerbil; Hindi : Bharatiya Mrug Chuha, Harna Musa; Marathi : Gondedar sheputwala undir.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/124	1M	Skin & Skull	Dry	Bhimashankar, Pune Dist., Maharashtra	A.S. Mahabal	29 May 1979	Skull damaged
M/393	1F	Skin & Skull	Dry	Forest south of Suryamal, Mokhada, Dist. Thane, Maharashtra	M.S. Pradhan	12 Mar., 1984	Tail cut
M/394	1F	Skin & Skull	Dry	Forest south of Suryamal, Mokhada, Dist. Thane, Maharashtra	M.S. Pradhan	12 Mar., 1984	Fore & Hind limb cut



*Distribution* : Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Gujarat, Madhya Pradesh, Maharashtra, Uttar Pradesh, Bihar and West Bengal (Agrawal, 2000).

*Elsewhere* : An extensive range from SE Anatolia in Turkey, Syria, Iraq, and Kuwait through Iran, Afghanistan, and Pakistan north to the Terai region of S Nepal; also Sri Lanka.

*Remarks* : On the basis of length of hindfoot Agrawal (2000) recognized two subspecies *Tatera indica indica* (length less than 41 mm; Southern limit Maharashtra and Madhya Pradesh) and *T. indica cuvieri* (length more than 41 mm; South India and Sri Lanka). Talmale (2007) reported possibilities of intermixing of both the populations in West Maharashtra (see measurements of Hindfoot given above (M/396). Musser and Carleton in Wilson and Reeder (2005) synonymised all the subspecies under species *Tatera indica*.

#### 12. *Tatera indica cuvieri* (Waterhouse, 1838)

1838. *Gerbillus cuvieri* Waterhouse, *Proc. zool. Soc. Lond.*, 1838 : 56.

2002. *Tatera indica cuvieri* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 196.

*Common Names* : English : Antelope Rat/Indian Gerbil; Hindi : Bharatiya Mrug Chuha, Harna Musa; Marathi : Gondedar sheputwala undir.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/763	1F	Skin & Skull	Wet	Madumalai, Tamil Nadu	Meena V	April-June, 1997	

#### *External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/763	150	195	45.3	23.2	43.7	39.5	18.8	23.6	6.3	12	10.3	7.3	21.3	7.8	21.6

*Distribution* : Maharashtra (Satara, Raigad & Ratnagiri); Goa, Karnataka, Tamil Nadu, Andhra Pradesh and Kerala.

*Elsewhere* : Sri Lanka.

*Remarks* : As above in *Tatera indica indica*.

## Subfamily MURINAE Illiger, 1811

Genus *Bandicota* Gray, 187313. *Bandicota bengalensis bengalensis* (Gray, 1835)

1835. *Arvicola bengalensis* Gray., in 1830-1835. *Illustr. Indian Zool*, pl. 21.

2002. *Bandicota bengalensis bengalensis* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 198-199.

*Common Names* : English : Lesser Bandicoot Rat, Indian Mole Rat; Hindi : Ghoons, Mota Chuha; Bengali : Tenkrai; Gujarathi : Moto Undar, Ghus; Marathi : Ghus; Kannad : Kok, Heggana; Telugu : Glatta, Koku; Malayalam : Valliya eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/123	1M1F	Skin & Skull	Wet	Godown Raviwarpeth, Pune, Dist Pune, Maharashtra	Pune Municipal Corporation	8 May 1979	Donated. specimen, one skin damaged
M/177	1F	Skull only	Wet	Colaba Urban Bombay, Mumbai, Maharashtra	M. S. Pradhan	20 Nov., 1979	
M/181	1F	Skull only	Wet	Nanapeth, Pune, Dist. Pune, Maharashtra	M. S. Pradhan	6 Dec., 1979	
M/182	1M1F	Skull only	Wet	Ghatkopar, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	22 Nov., 1979	
M/183	1M1F	Skull only	Wet	Fort, City Proper, Bombay, Mumbai, Maharashtra	M. S. Pradhan	26 Oct., 1980	
M/186	1M2F	Skull only	Wet	Crowford Market, Bombay, Mumbai, Maharashtra	M. S. Pradhan	30 Oct., 1980	
M/189	2M1F	Skull only	Wet	Ballard Pier, Bombay City, Mumbai, Maharashtra	M. S. Pradhan	29 Oct., 1980	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/194	1F	Skin & Skull	Wet	Bombay Port Trust, Bombay, Mumbai, Maharashtra	M. S. Pradhan	27 Oct., 1980	
*M/198	1F	Skull only	Dry	Residential areas Narayannagar, Ghatkopar, Bombay, Mumbai, Maharashtra	M. S. Pradhan	31 July, 1982	
*M/203	1F	Skull only	Dry	Residential complex Parel, Bombay, Mumbai, Maharashtra	M. S. Pradhan	29 July., 1982	
*M/204	1F	Skull only	Dry	Residential complex Parel, Bombay, Mumbai, Maharashtra	M. S. Pradhan	29 July, 1982	
*M/205	1M	Skull only	Dry	Residential areas Narayannagar, Ghatkopar, Bombay, Mumbai, Maharashtra	M. S. Pradhan	31 July, 1982	
M/206	1M	Skull only	Dry	Residential areas Narayannagar, Ghatkopar, Bombay, Mumbai, Maharashtra	M. S. Pradhan	31 July, 1982	
*M/222	1F	Skull only	Dry	Kurla, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	23 Nov., 1982	
*M/223	1F	Skull only	Dry	Chembur, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	21 Nov., 1982	
*M/224	1F	Skull only	Dry	Andheri West, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	24 Nov., 1982	
*M/225	1M	Skull only	Dry	Andheri, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	24 Nov., 1982	
*M/226	1M	Skull only	Dry	Andheri, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	24 Nov., 1982	



ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
*M/227	1F	Skull only	Dry	Andheri, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	24 Nov., 1982	
*M/228	1M	Skull only	Dry	Parel, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	24 Nov., 1982	
*M/229	1F	Skull only	Dry	Parel, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	24 Nov., 1982	
*M/230	1M	Skull only	Dry	Goregaon West, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	27 Nov., 1982	
*M/231	1F	Skull only	Dry	Ghatkopar, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	30 Nov., 1982	
*M/232	1F	Skull only	Dry	Ghatkopar, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	30 Nov., 1982	
*M/233	1M	Skull only	Dry	Ghatkopar, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	30 Nov., 1982	
*M/292	1M	Skull only	Dry	Ghatkopar, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	27 Sept., 1983	
*M/293	1F	Skull only	Dry	Ghatkopar, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	27 Sept., 1983	
*M/361	1M	Skull only	Dry	Parel, Bombay City, Mumbai, Maharashtra	M. S. Pradhan	23 Nov., 1984	
*M/368	1M	Skull only	Dry	Andheri, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	17 Nov., 1984	Skull damaged
*M/369	1F	Skull only	Dry	Andheri, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	17 Nov., 1984	
*M/370	1M	Skull only	Dry	Borivali, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	19 Nov., 1984	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
*M/371	1M	Skull only	Dry	Borivali, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	19 Nov., 1984	
*M/372	1M	Skull only	Dry	Ghatkopar, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	20 Nov., 1984	
*M/373	1M	Skull only	Dry	Parel, Bombay city, Mumbai, Maharashtra	M. S. Pradhan	19 Nov., 1984	
*M/374	1F	Skull only	Dry	Ghatkopar, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	20 Nov., 1984	
*M/375	1F	Skull only	Dry	Ghatkopar, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	20 Nov., 1984	
*M/376	1F	Skull only	Dry	Ghatkopar, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	20 Nov., 1984	
*M/386	1F	Skin & Skull	Dry	Chiche's Mal vill. 8 kms. From Khodala on Khodala-Mokhada Road, Thane Dist., Maharashtra	M. S. Pradhan	14 March, 1984	Specimen displayed in museum
M/403	1F	Skin & Skull	Dry	Javalarjuna, Jejuri, Pune Dist., Maharashtra	M. S. Pradhan	24 June, 1984	Head cut
*M/416	1M	Skin & Skull	Dry	Fields near new Boradi, Shirpur Tal., Dhulia Dist., Maharashtra	M. S. Pradhan	30 Nov., 1985	
*M/417	1M	Skin only	Dry	Fields near new Boradi, Shirpur Tal., Dhulia Dist., Maharashtra	M. S. Pradhan	30 Nov., 1985	
*M/455	1M1F	Skin & Skull	Wet	Borivali East, Bombay, Mumbai, Maharashtra	M. S. Pradhan	27 Oct., 1986	
M/486	1F	Skin & Skull	Dry	Rest house Pundre, Kolhapur Dist., Maharashtra	M. S. Pradhan	20 Feb., 1989	Head cut

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/487	1M	Skin & Skull	Dry	Ghatprabha river, Kurtanali vill., Chandgad Tal., , Kolhapur Dist., Maharashtra	M. S. Pradhan	20 Feb., 1989	Head cut
M/492	1M	Skin & Skull	Wet	Near Residential areas, Post & Tal., Ambad, Jalna Dist., Maharashtra	P. S. Sardeshpande	21 Oct., 1989	Donated specimen
M/493	1M1F	Skin & Skull	Wet	Foodgrains godowns, Parbhani, Maharashtra	P. S. Sardeshpande	21 Nov., 1989	Juvenile specimen; Donated
M/504	1M	Skin & Skull	Wet	Agricultural University Campus, Rahuri, Ahmednagar Dist., Maharashtra	Dr. Chandele	5 May, 1989	Donated specimen
M/512	1F	Skin only	Dry	Kashiganga river near Devre vill. On Harsul-Girhagne road, Nasik Dist., Maharashtra	M. S. Pradhan	13 Nov., 1987	Tail cut, Skull damaged
M/573	1M2F	Skin & Skull	Wet	Pilli village, near Kolkaz, Melghat Tiger Reserve, Amaravati Dist., Maharashtra	P. P. Kulkarni	17 Dec., 1992	
M/575	1M	Skin & Skull	Wet	Agricultural fields near village Raipur in Melghat Tiger Reserve, Amaravati Dist., Maharashtra	P. P. Kulkarni	20 Dec., 1992	
M/592	1M	Skin & Skull	Wet	Agricultural fields 3 Kms. South of Semadoh, Melghat Tiger Reserve, Amaravati Dist., Maharashtra	P. P. Kulkarni	14 Dec., 1992	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/667	1M	Skin & Skull	Wet	Ganganagar, Akurdi, Pune District, Maharashtra	Tushar Borolikor & Satej Shegar	2 Sept. 2004	Donated specimen
M/716	1F	Skin & Skull	Wet	Paddy field house Lakhani, Tal. Lakhani, Bhandara Dist., Maharashtra	S. S. Talmale	18 Nov., 2004	
M/717	1F	Skin & Skull	Wet	Paddy field house Lakhani, Tal. Lakhani, Bhandara Dist., Maharashtra	S. S. Talmale	18 Nov., 2004	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/123	205	153	32.5	15	37.5-39	40.8-41.4	12.4-12.7	24.3-24.4	6.7-7.3	13-13.4	8-8.3	8-8	23.7-24.1	6.2-6.6	24-24.3
M/177					45.2	47	14.2	26.6	8.2	15.2	9.7	9.5	27	7.1	28.2
M/181					38.5	41	14.1	24.2	7.2	12.5	8.1	7.5	23.7	6.7	24.3
M/182					45.3-47.4	48-48.7	15-16.2	28-29.3	8.1-8.2	15.7-16.2	9.1-10	8.4-10.1	26.7-27.7	7.2-7.3	27.8-28.4
M/183					42.3-45.3	45.1-48.6	15.5-16.7	26.2-28.1	8.3-8.8	14.2-16.5		9.2-10.1	25.1-27.1	6.2-7.2	27-28.5
M/186					43.1-45.7	46.2-49.1	14.3-16.2	27.2-29	7.5-8	15.4-16.4	9.5-10.4	8.4-10.1	26.1-27	6.3-8	26-28.3
M/189					42.7-46	46.7-49.2	13.4-17.1	27.1-28.7	7.7-8.2	15.5-16.3	9.5-10.2	9.3-10.5	26.3-26.7	7.2-7.3	27.8-28.4
M/194	150+	179	36.1		41.2	45	13.7	26.2	7.4	15.1	9.1	8.7	25.1	7	25.4
*M/198					41	43.2	14	25.4	7	14.4	8.7	8.2	23.3	6.6	25

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
*M/203					41.4	43	12.7	26	6.7	14.4	8.6	8.6	24.6	6.2	25.2
*M/204					41.1	44.4	13.4	26.2	7.6	14.2	9	8.3	25.2	7	26.3
*M/205					42.4	43.7	15.1	26.1	7.3	13.2	8.4	8.5	24	6.2	25.2
M/206					37.3	39.5	12.7	23.3	7.5	12.1	9.2	7.5	21.1	6.1	22.6
*M/222					44.5	48	15.1	28.6	9	16.4	9.1	9.4	24+	6.8	28.8
*M/223					43.6	46.2	15.5	27.1	8.3	15.4	9.2	9.1	20+	7.1	
*M/224											10		25.7	7.1	27
*M/225					40.5	44	14.3	25.1	9	13.2	9.2	8.6	23.7	6.5	25.3
*M/226					43.5	47.1	15.1	27.1	8.2	15.1	9.4	9.1	25.4	7	26.7
*M/227					46.4	50.3	17	29.6	7.4	17.7	9.3	10.5	26.1	7.4	29.1
*M/228					41.5	44.6	13.6	27.3	8.2	14.2	8.3	9.1	24.3	6.5	25.5
*M/229					41	43.2	14.8	25.7	8	15	8.2	9.1	24.3	6.1	25.8
*M/230					41.7	44.3	13.2	26	8.5	13.5	8.6	9.4	24	6.5	25.1
*M/231					40.3	43.4	13.2	26.1	7.4	14.2	8.4	8	25.4	7.2	25.8
*M/232					41.1	44.2	14.4	26.1	7.5	15	8.3	8.1	25.2	6.2	25.4
*M/233					44.3	46.8	13.7	27.4	7.5	15.6	9.3	10	24.5	7	26.2
*M/292					43.7	45.5	16	25.6	7.5	12.7	8.2	7.4	25.4	7.2	25.5
*M/293					44.3	48.3	16	28.3	8.2	16.5	10	8.4	27.1	7.3	29.2
*M/361					43.1	47	15.1	27.5	7.6	15.7	8.7	10	26.1	6.4	28.6
*M/368					49.5		18.4	32	8.5	17.2		10.2	24+	7.5	30.5
*M/369					46	46.7	16.4	28.2	8.3	15.2	9.3	8.5	27.5	7.3	28.7
*M/370					44.6	46.5	16.4	27.5	8.4	15.6	9	10.1	24.6	6.7	26.3
*M/371					42.8	46.2	14.2	27.2	7.4	15.7	9.4	8.4	25.7	7.2	27.2
*M/372					38.3	43.4	14	26.1	7.4	14	8.4	8.3	23.4	6.2	25
*M/373					46.1	50	18.2	29	8.2	16	10	10	26.5	7.1	27.5
*M/374					46.7	49.2	16.8	28.7	8.2	16.5	9.4	9.5	27.8	7.1	28.7

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
*M/375					43.2	46.3	15.4	26.7	8.1	15.4	9.2	8.6	26.3	7.1	28.3
*M/376					43.5	45.2	16.1	26.4	8	14.5	9.4	8.2	25.2	6.7	26.3
*M/386					36.3	38.4	12.2	22.7	8	12	8.1	7.7	22.2	6.4	22.6
M/403	105+	128	31.7		37.5	39.3	11.4	22.4	7.6	11.7	8.6	7.2	22.3	6	23.2
*M/416	185	140	35.7	16	37	38.5	12.6	22.2	7.5	12	8.4	8	21.4	5.4	22.4
*M/417	180	145	35.6	18											
*M/455	142+- 145+	185- 190	38- 39.5		44.3- 45.5	47.1- 48.2	16.1- 18.3	28.1- 29.1	8.2- 8.3	15.6- 16.3	9.7- 10.2	9.4- 9.5	27- 27.1	6.7- 7	28- 29.6
M/486	143+	146	32.3	20	39	41.4	11.5	24.4	7.3	14.1	9.4	6.5	23.1	7	25.4
M/487	140+	152	34.3	20	40	43	12.1	25.1	7.6	13.6	9.7	7.6	26	6.8	27.1
M/492	180- 200	130- 140	37- 37	19.5- 20.3	37- 37.8	38.2- 39.7	12.1- 12.5	22- 23.1	7.7- 8	11.3- 11.5	8.2- 8.3	7.2- 8.5	21.2- 21.3	6.1- 6.3	22- 22.4
M/493	75- 90	63- 79	22.6- 25.1	13.5- 15	25.1- 27.3	25.1- 27.2	8- 10	15- 16.4	6.6- 6.9	6.4- 8.2	6.7- 7.2	5- 5.5	15.6- 16.4	5.5- 5.5	15.1- 16.7
M/504	187	148	35	20	36.3	38.5	11.1	23	7.3	12.5	8.7	7.7	22.3	6	25.6
M/512	225	50+	36.7	17.7											
M/573	120- 155	104- 140	29- 35.5	19- 20.3	33.1 -37.1	34.5	12- 13.3	20.6- 24.1	7.5- 7.6	10.3- 13	7.7- 8.6	7.1- 8.5	20.3- 23+	5.7- 6.1	21.3- 24.7
M/575	142	137	34.8	19	38.7	40.5	14	23.7	8.2	12.7	8.6	8.2	23.7+	6.1	25.1
M/592	110- 142	87- 137	28.6- 34.8	15.7- 19	30.7- 38.7	32- 40.5	9- 14	18.5- 23.7	8- 8.2	9.4- 12.7	7.6- 8.6	6- 8.2	18.6- 23.7+	6- 6.1	20.7- 25.1
M/667	175	168	37	25	40.6	42.5	13	25	7.6	13.6	9.5	7.5	24.1	6.3	24.5
M/716	105	92	27.1	18	31.6	31.7	9	18.4	7.1	10	8	6	17.5	5.2	19.5
M/717	165	157	32.1	18.2	42.4	43.7	12.3	24.3	8.5	13.3	10.1	8.5	24.5	5.6	25.1

*Distribution* : Throughout the country.

*Elsewhere* : Indo-China, Bangladesh, Indonesia, Myanmar, Nepal, Pakistan, Sri Lanka.

*Remarks* : Pradhan (1979) and Pradhan *et al.* (2005) opined that *Bandicota bengalensis lordi* (Wroughton) and *Bandicota bengalensis bengalensis* (Gray, 1835) are two distinct populations atleast in Maharashtra state on the basis of morphological and osteological characters along with the observations based on the studies on modern parameters such biochemical, karyological and hair impression pattern studies. The specimen under study (Aterick \* marked) were mostly from Mumbai area i.e. near to the type locality of *B. bengalensis lordi* and showing measurements greater than the range of those in *B. b. bengalensis* given by Agrawal (2000). It is also shows its subspecific validity status. However, due to unavailability of sufficient specimens for morphological measurements, accommodate all the specimens under *B. b. bengalensis*.

#### 14. *Bandicota indica indica* (Bechstein, 1800)

1800. *Mus indicus* Bechstein, In Pennant, *Allgemeine Ueber Vierfuss. Thiere*, 2 : 497.

2009. *Bandicota indica indica* : Pradhan and Talmale, *Rec. zool. Surv. India, Occ. Paper No. 297* : 141.

*Common Names* : English : Greater Bandicoot Rat, Large Bandicota; Hindi : Badi/Moti Ghoons, Mota Chuha; Marathi : Mothi Ghus; Bengali : Tenkrai; Gujarathi : Moto Undar, Ghus; Kannad : Kok, Heggana; Telugu : Glatta, Koku; Malayalam : Valliya eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/724	1F	Skin & Skull	Wet	Residential area Lakhani, Tal. Lakhani, Bhnadara District, Maharashtra	Pavan Bawankule	25 June 2006	Donated specimen

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/724	205	260	58.2	29.2	56.5	58.4	23.8	34.8	10.2	18.8	10.6	10.1	30.4	8.6	33.5

*Distribution* : Almost throughout the country (Pradhan, *et al.*, 1993; Pradhan and Talmale, 2009).

*Elsewhere* : Bangladesh, China, Indonesia, Laos, Malaysia, Myanmar, Nepal, Sri Lanka, Taiwan, Thailand, Vietnam. Corbet and Hill (1992) included Pakistan within the range but as Roberts (1997) could not locate any specimen from that country he did not report this species from Pakistan. Musser and Carleton in Wilson and Reeder (2005) upheld the same view.

*Remarks* : Some colour variant forms with white patch on thoracic and/or inguinal regions and part of the tail wholly white at the terminal end have been reported from Indian localities. Fur with some broad, long and flat spines mixed with some short and harsh hairs in the dorsal pelage. Many long hairs may be present on the back. Tail unicoloured and dark. Hindfoot dark in colour. 6 pairs of mammary glands present. Sculpture pattern of dorsal guard hairs at base mozaic at lower magnification. Nasals and diastema less than 40% and 33% of occipitonasal length respectively. Pradhan and Talmale (2009) recognized three subspecies from India (1) *Bandicota indica indica* (Bechstein, 1800) (India excluding Western Ghats and Eastern India); (2) *Bandicota indica malabarica* (Shaw, 1801) (Western Ghats in India) and (3) *Bandicota indica nemorivaga* (Hodgson, 1836) (Eatern India).

#### 15. *Bandicota indica malabarica* (Shaw, 1801)

1801. *Mus malabarica* Shaw, *Genl. Zool.*, 2 : 54.

2009. *Bandicota indica malabarica* : Pradhan, M. S. & Talmale, S. S., *Rec. zool. Surv. India, Occ. Paper No. 297* : 139.

*Common Names* : English : Greater Bandicoot Rat, Large Bandicota; Hindi : Badi/Moti Ghoons, Mota Chuha; Marathi : Mothi Ghus; Bengali : Tenkrai; Gujarathi : Moto Undar, Ghus; Kannad : Kok, Heggana; Telugu : Glatta, Koku; Malayalam : Valliya eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/62	1F	Skin & Skull	Wet	Bhawanipeth, Pune, Maharashtra	M. S. Pradhan	28 Jan. 1977	
M/76	2M	Skin & Skull	Wet	Food grain godowns, Nanapeth, Pune, Maharashtra	M. S. Pradhan	15 April. 1977	
M/95	1F	Skin & Skull	Dry	Food godown, Ganjpeth, Pune, Maharashtra	M. S. Pradhan	21 July 1977	



ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/96	1F	Skin & Skull	Dry	Food godown, Ganjpath, Pune, Maharashtra	M. S. Pradhan	26 July 1977	
M/99	1F	Skin & Skull	Dry	Budhwarpath, Pune, Maharashtra	M. S. Pradhan	20 July 1977	
M/100	1F	Skin & Skull	Wet	Mandai, Pune, Maharashtra	M. S. Pradhan	21 Feb. 1978	
M/151	2M	Skin & Skull	Wet	Chembur, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	21 Nov. 1979	
M/152	1M	Skin & Skull	Wet	Nanachowk, Urban Bombay, Mumbai, Maharashtra	M. S. Pradhan	22 Nov. 1979	Tail cut
M/166	1F	Skin & Skull	Wet	Pashan, Pune, Maharashtra	P. R. Salunke	16 Dec. 1979	
M/167	1M	Skin & Skull	Wet	Model colony, Pune, Maharashtra	S. S. Pawar	21 June. 1980	
M/178	1F	Skin & Skull	Wet	Ghatkopar, Bombay, Mumbai, Maharashtra	M. S. Pradhan	22 Nov. 1979	Specimen damaged
M/180	3 unsexed	Skull only	Wet	Ghatkopar, Bombay, Mumbai, Maharashtra	M. S. Pradhan	23 Nov. 1979	
M/192	1F	Skin & Skull	Wet	Chembur, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	30 Oct. 1980	
M/193	1M1F	Skin & Skull	Wet	Andheri, Bombay, Mumbai, Maharashtra	M. S. Pradhan	31 Oct. 1980	
M/234	1M	Skull only	Dry	Bhandup, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	29 Nov. 1982	
M/235	1F	Skull only	Dry	Bhandup, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	29 Nov. 1982	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/236	1F	Skull only	Dry	Andheri, Bombay, Mumbai, Maharashtra	M. S. Pradhan	29 Nov. 1982	
M/248	1M	Skull only	Dry	Bandra East, Bombay, Mumbai, Maharashtra	M. S. Pradhan	27 May 1983	
M/249	1F	Skull only	Dry	Pune City, Pune, Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/250	1F	Skull only	Dry	Pune City, Pune, Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/263	1M	Skin & Skull	Dry	Andheri, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	24 May 1983	
M/265	1F	Skull only	Dry	Andheri, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	25 May 1983	
M/277	1F	Skull only	Dry	Bandra, Greater Bombay, Mumbai, Maharashtra	M. S. Pradhan	27 May 1983	
M/322	1F	Skull only	Dry	Panwel town, Raigad District, Maharashtra	M. S. Pradhan	27 Sept. 1981	
M/350	1F	Skin & Skull	Dry	Mulund, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	16 Nov. 1984	
M/358	1M	Skull only	Dry	Malad, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	17 Nov. 1984	
M/359	1F	Skull only	Dry	Borivali, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	19 Nov. 1984	
M/360	1M	Skull only	Dry	Ghatkopar, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	23 Nov. 1984	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/362	1F	Skull only	Dry	Ghatkopar, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	23 Nov. 1984	
M/363	1F	Skull only	Dry	Goregaon, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	21 Nov. 1984	
M/364	1M	Skull only	Dry	Goregaon, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	21 Nov. 1984	
M/365	1F	Skull only	Dry	Ghatkopar, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	23 Nov. 1984	
M/366	1F	Skull only	Dry	Ghatkopar, Suburban Bombay, Mumbai, Maharashtra	M. S. Pradhan	23 Nov. 1984	
M/415	1F	Skin & Skull	Dry	Khandabara Town, Dhulia Dist. (Now in Nandurbar Dist.), Maharashtra	M. S. Pradhan	20 Nov. 1985	
M/443	1F	Skin & Skull	Wet	Rest House Jawhar, Thane District, Maharashtra	M. S. Pradhan	20 Oct. 1986	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/62	240	265	55.2	28	52.2	56.7	20.1	33.5	10.3	19.1	9.5	10.5	28.7	8.7	33
M/76	200- 210	213- 216	51.2- 53.7	23.6- 25	47.4- 49.1	50- 51.4	18- 18.4	30- 30.2	10.3- 10.4	16.2- 16.7	8.2- 9.1	9.2- 9.6	26.2- 27.1	7.5- 7.5	29.2- 29.8
M/95	320	280	59	30	59.1	62.3	26	37.4	10.4	20.3	9.3	11	33.4	9.3	36.7
M/96	240	200	46.5	22.7	49.7	50.1	19.3	30.1	9.2	17.1	8.5	9.3	26.1	8.1	29.3
M/99	280	265	54.1	22.2	60	60.4	23.4	36.2	9.6	20.2	9.4	11.2	30.5	8.2	34.3
M/100	220	278	55.4	28.5	57.8	60.7	23.2	36.4	10.5	20.2	9.3	10.2	32.3	9	36

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/151	156- 175	186- 187	42.5 -49	24- 26.1	44.1- 47.3	44.5- 49.6	17.3- 18.3	26.2- 29.3	9.1- 9.2	14.1- 15.6	8.2- 8.5	8- 9.2	23.5- 26.1	8- 8.5	26- 28
M/152	240	205+	51	28.1	55	57.4	23.2	24.3	9.5	19.3	9	11.4	30.4	8.4	31.6
M/166	180	172	47	18.1	45.3	45.4	17.1	27.6	10	14.7	8	8.3	23.3	7.5	26.1
M/167	135+	297	59.1		62.2	64.3	26.2	38.1	10.2	23	10.5	12.3	34.5	9.5	37.4
M/178					48	49.1	17.3	29	9.2	16	8.3	8.7	25.4	8	28.7
M/180					47.5- 49.2	49- 51	18.7- 20	29.2- 30.1	9.4- 10.1	15.1- 16.7	8.5- 9.2	8.7- 9.1	26.2- 28.1	8- 8.4	28.3- 29.3
M/192	160+	230	54		57.3	60	23.3	36	10.6	20.2	9.1	11.1	32.3	8.3	35.1
M/193	170+ -170+	230- 259	50.7- 54.2		55.2	56.2	22.6	23.3	10	19	8.5	11.5	29.1	8.5	32.2- 33
M/234					54.3	55.2	21.3	32.1	10.4	17.4	9	10	28.6	8.4	31.7
M/235					52.4	56.1	22	32.3	10.1	18.2	9.6	11.1	29.7	7.6	32.7
M/236					58.3	60.3	24.2	36	10.2	20.2	9.2	11.1	32.4	8.2	33.7
M/248					60	63	24.6	36.4	10.5	20.7	8.7	11.5	32.5	9.1	35.5
M/249					59.8	63	25	36.7	10.7	21.7	10.2	9.3	32.2	9.3	37.2
M/250					61.2	63.7	27	37.3	11.3	20.4	9.4	11.1	33.3	8.7	38.6
M/263	160	163	37.3	19.7	42.2	42.7	15	25.4	9.5	13.2	8.1	8.4	18	7.3	24.7
M/265					41	40.5	14.4	23.8	9.7	12.4	7.4	7.2	22.1	7.1	23.5
M/277					52.4	52.5	20.5	31.4	10.3	17	8.3	9.6	28	7.5	30.7
M/322					55.6	57.7	22.6	34.3	9.4	20	9.6	10.7	29.2	8	33.7
M/350	175+	265	52		57.4	60.1	23	35.3	10.1	21.1	9.1	11.1	30.3	8.7	35.2
M/358					55.1	56.7	22	34	10.4	18.4	9.3	10.7	29	8.2	32.1
M/359					55.5	57.9	22.6	34.5	10.2	19.5	9	10.2	29.5	8.3	33.2
M/360					41	42.7	15	25.1	9.5	13.2	7.5	8.2	23	7.3	25.3
M/362					55.1	57.5	21.1	34.4	10.1	19.6	9.7	11.3	30.7	9	33.7

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/363					49.3	50.7	19.7	30.4	10.1	16.4	9.1	10.5	26	7.3	29.5
M/364					47.6	48	21		10	15.5	8.1	10	23.5+	7.6	
M/365					49.6	50.2	19.7	29.8	9.2	16.7	9.1	9.1	26.2	8	29.3
M/366					43	43.1	15.5	25.7	9.4	14.1	8	8.1	22.7	8	26.2
M/415	355	308	53.7	27.1	57	59.9	24.1	36	10.3	19.1	9.1	11.4	32.1	8.6	34.8
M/443	220	220	48		50.4	51.6	20.1	30.5	10	17.3	9.2	9.6	25.9	8	30.7

*Distribution* : Western Ghats. Subspecies endemic to Western Ghats of India.

*Remarks* : Sculpture pattern of dorsal guard hairs at base mozaic at lower magnification. Nasals and diastema exceeds 40% and 33% of occipitonasal length respectively.

16. *Bandicota maxima* Pradhan, Mondal, Bhagwat and Agrawal, 1993

1993. *Bandicota maxima* Pradhan, Mondal, Bhagwat and Agrawal, *Rec. zool. Sur. India*, **93** (1-2) : 175-200.

2009. *Bandicota maxima* : Pradhan and Talmale, *Rec. zool. Surv. India, Occ. Paper No. 297* : 141.

*Common Names* : English : Greater Bandicoot Rat; Hindi : Badi/Moti Ghoons, Mota Chuha; Marathi : Mothi Ghus; Bengali : Tenkrai; Gujarathi : Moto Undar, Ghus; Kannad : Kok, Heggana; Telugu : Glatta, Koku; Malayalam : Valliya eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/98	1F	Skin & Skull	Dry	Nanapeth, Pune, Maharashtra	M. S. Pradhan	03 Aug. 1977	HOLOTYPE
M/125	1F	Skin & Skull	Dry	Raviwarpeth, Pune, Maharashtra	M. S. Pradhan	08 May 1979	PARATYPE
M/668	1M	Skin & Skull	Dry	Barisha 24 Parganas, West Bengal	A.K. Mondal	14 Jan. 1980	ALLOTYPE, PARATYPE

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/669	1M	Skin & Skull	Wet	Molem Rest house & around, Tal. Sangeum, Goa	M. S. Pradhan	13 Sept. 1993	
M/670	1F	Skin & Skull	Wet	Molem Rest house & around, Tal. Sangeum, Goa	M. S. Pradhan	13 Sept. 1993	
M/674	1M	Skin & Skull	Wet	Rest house compound Khandala PWD Rest house, Pune District, Maharashtra	M. S. Pradhan	14 Jan. 1994	
M/675	1M	Skin & Skull	Wet	Dead specimen, on road side, New Sangvi, Pune, Maharashtra	S. S. Talmale	26 July 2004	Skull damaged

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/98	370	290+	63	33	67.2	68	27	40.3	11.2	23.7	10.2	12	36.3	9.7	38
M/125	340	280	55	23	59.7	58.8	24.1	35.3	10.2	19	8.9	10.8	31.7	9	34.4
M/668	340	225+	60.4	23.7	61.3	61.1	23	38	10.4	19.6	9.7	11.3	31.5	9	36.3
M/669	230	220	51.7	28.4	50.2	51.4	19.5	30.5	9.6	17.3	10	9.9	26	7.8	29.6
M/670	225	215	49	26.7	48.1	49.4	20.5	30	9.8	15.7	9.6	9.9	25.7	7.9	27.7
M/674	225	282	57.1	28.3	58.8	59.4	24.2	35.1	10.5	20	10.1	11.3	30.1	8.8	35.3
M/675	270	309	60.3	33	63.8	58.2+	26.7	38.2	10.7	21.6		12	33.1	19.2	31.1

*Distribution* : Maharashtra, Goa (Pradhan, 2008), Gujarat, Rajasthan, Karnataka, Kerala, Andhra Pradesh, Tamil Nadu (Molur *et al.*, 2005) and West Bengal (Pradhan *et al.*, 1993) states within Indian limits.

*Elsewhere* : Bangladesh and Nepal (Doubtful) (Molur *et al.*, 2005).

*Remarks* : A very large sized bandicoot rat, with triangular head, rounded snout, tail shorter than head and body, body covered with coarse fur, dorsum varies from dark slaty grey to light brown in colour, skull more or less similar to that of *B. indica* except that *B. maxima* possess swollen occiput, occipitonasal length equal to or more than condylobasal length. Basal hair impression

pattern of *Bandicota maxima* exhibits distinct chevron patterns as against irregularly woven mosaic hair sculpture pattern of *B. indica* under lower magnification (Pradhan and Talmale, 2012).

Genus *Golunda* Gray, 1837

17. *Golunda ellioti ellioti* Gray, 1837

1837. *Golunda ellioti* Gray, *Mag. Nat. Hist. [Charlesworth's]*, **1** : 586.

2009. *Golunda ellioti ellioti* : Pradhan and Talmale, *Rec. zool. Surv. India, Occ. Paper No. 297* : 127.

*Common Names* : English : Indian Bush Rat; Hindi : Chuha; Bengali : Indur; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/344	1M	Skin & Skull	Wet	FDCM Nursary, Kasa, Thane District, Maharashtra	M. S. Pradhan	09 Mar. 1984	Tail cut
M/345	1F	Skin & Skull	Wet	FDCM Nursary, Kasa, Thane District, Maharashtra	M. S. Pradhan	09 Mar. 1984	Tail cut
M/421	1M	Skin & Skull	Dry	Laling Hill range, Arvi, Dhulia District, Maharashtra	M. S. Pradhan	03 Dec. 1985	
M/422	1M	Skin & Skull	Dry	Devtalipada near Jawhar, Thane District, Maharashtra	M. S. Pradhan	19 Oct. 1986	
M/459	1F	Skin & Skull	Wet	Kadvaipada vill. & around, Harsul, Nasik District, Maharashtra	M. S. Pradhan	14 Nov. 1987	Skull fully damaged
M/511	1F	Skin & Skull	Wet	Nirgude Mal near Musalpada vill. On Bargaon-Surgana road, Nasik District, Maharashtra	M. S. Pradhan	18 Nov. 1987	Skull fully damaged

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/789	1M	Skin & Skull	Wet	Uppar Bhavani, Grassland, Nilgiris, Tamil Nadu	Kartik Shankar	30 April 1995	Donated specimen
M/839	1M	Skin & Skull	Wet	Puthuthotam coffee Eastate near Valporai Anamalai Range, Tamil Nadu	D. Mudappa	30 Mar 1997	Donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/344	90+	40+	24		31.9	29.7	10.4	16.2	6.2	7.5		6	15.9	4.5	17.7
M/345	155	90+	26.1	14.5	34	28.4	11.5	15.1	6.4	7.3	6.3	4.4	15.1	4.4	17.3
M/421	115	92	23.1	16	28.1	26.3	9.5	14.2	6.4	6.3	5.3	4.4	14.1	4.4	15.7
M/422	77	74	21	11.7	26.2	24.1	9.3	13.5			6	3.2		5.6	
M/459	61	65	14.3	9.7											
M/511	145		25.2	15											
M/789	80	95	23		28	26.6	10.5	14.2	6.3	6.7	5.1	5.5	14.7	4.3	15.6
M/839	130	115	29.3	20	30.2	29.2	11.5	16.3	6.7	8.1	3	5.7	15.5	5.8	17.6

*Distribution* : Almost throughout the country.

*Elsewhere* : SE Iran, Pakistan, Nepal, Sri Lanka.

*Remarks* : Pradhan (1988) reported yellowish white colouration of ventral side of the specimens from Thane Dist., Maharashtra (M/344, 345) and placed under *Golunda ellioti gujerati* Thomas. However, Agrawal (2000) reviewed the Indian population and could find no significant geographic variation in fur coloration or other morphological features and synonymised all the Indian subspecies under nominate subspecies.



Genus *Madromys* Sody, 194118. *Madromys blanfordi* (Thomas, 1881)1881. *Mus blanfordi* Thomas, *Ann. Mag. Nat. Hist., ser. 5, 7* : 24.2005. *Madromys blanfordi* : Musser and Carleton In Wilson and Reeder, *Mammal Species of the World*, 3rd ed. Vol. II: 1353-1354.

*Common Names* : English : Blanford's Madromys, Blanford's Rat; Hindi : Chuha, Bengali : Indur; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/460	1 unsexed	Skin & Skull	Wet	Pune City, Pune District, Maharashtra	M. S Pradhan	11 Mar. 1980	Mandible not traciabile
M/556	2 unsexed	Skin & Skull	Wet	Khandepar river near Dudhsagar falls, Molem, Goa	M. S. Pradhan	17 Sept. 1993	One specimen with skull, another only skull (mandible not traciabile)
M/611	1M	Skin & Skull	Wet	Jamunwadi, Tadoba National Park, Chandrapur District, Maharashtra	S. G. Patil	16 Aug. 1995	
M/615	1M	Skin & Skull	Wet	Kolitmara R.H., Pench National Park, Nagpur District, Maharashtra	R. M. Sharma	9 Dec. 1998	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/788	1M	Skin & Skull	Wet	Uppar Bhavani Forest, Tamil Nadu	Kartik Shankar	28 April 1995	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/460	85	117	25.1	15.8	28.1	25.9	10.1	14.6	5	6.9	5.5	5.7		4.6	
M/556	140	170	33.9	18.8	36.2- 45.6	35.6- 41.9	13.5- 20.8	19.4- 23.2	6.5- 6.5	9.8- 13.2	7.9- 8.1	7.1- 9.3	18.7- 20.5	6.3- 7.2	20.8
M/611	130	192	32.3	21.7	40.3	36.5	16	20.4	6.3	10.2	8.1	7.7	18.2	6.1	20
M/615	125	162	30.1	22.1	35.2	33.2	12.7	18.1	6.4	9.1	7.3	6.5	17.1	6.1	18.7
M/788	145	165	31.3	25.3	41.7	38.5	17.2	21.6	6.1	11.3	7.9	8.5	18.5	6.4	22.5

*Distribution* : Andhra Pradesh, Bihar, Goa, Karnataka, Kerala, Madhya Pradesh, Maharashtra. Orissa, Tamil Nadu and West Bengal states within Indian limits.

*Elsewhere* : Sri Lanka (Agrawal, 2000).

*Remarks* : A large sized rat with bicoloured tail (wholly dark proximally and wholly white distally) longer than Head and Body length. Fur always soft and smooth. Dorsum in various shades of brown with reddish tinge, while underparts white in colour. Hindfeet whitish or paler. All the specimens in the collection registered and labeled as *Cremnomys blanfordi* (Thomas). Musser and Carleton in Wilson and Reeder (2005) placed *Cremnomys blanfordi* (Thomas) under the genus *Madromys*.

Genus *Millardia* Thomas, 1911

19. *Millardia kondana* Mishra and Dhanda, 1975

1975. *Millardia kondana* Mishra and Dhanda, *J. Mammal.*, **56** : 76.

2005. *Millardia kondana* : Musser and Carleton In Wilson and Reeder, *Mammal Species of the World*, 3rd ed., Vol. II : 1386.

*Common Names* : English : Large Metad, Sinhagad Rat; Hindi : Chuha; Marathi : Undir.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/156	1 M	Skin & Skull	Wet	Sinhagad Fort, Pune District, Maharashtra	D. B. Bastawade	7 Aug. 1978	Subadult specimen, Skull damaged

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E
M/156	80	75	18.5	12.9

*Distribution :* Known only from the Sinhagad Plateau in the Maharashtra region. Endemic to India.

*Remarks :* This species is distinctly distinguishable from the other three species of the genus *Millardia* (*M. gleadowi*, *M. kathleenae* and *M. meltada*) by its large cranial and external measurements and also by its possession of six plantar pads. Tail shorter than Head and Body length. Ears shorter than hindfeet. Dorsum dark brown above, grayish white below. Tail poorly haired, slightly bicolour, dark above and grayish below. Mammae 4 pairs.

#### 20. *Millardia meltada meltada* (Gray, 1837)

1837. *Golunda meltada* Gray, *Ann. Mag. Nat. Hist.*, [ser. 1], **1** : 586.

2009. *Millardia meltada meltada* : Pradhan and Talmale, *Rec. zool. Surv. India, Occ. Paper No. 297* : 203.

*Common Names :* English : Common Metad, Metad, Soft-furred Field Rat; Hindi : Chuha; Bengali : Indur; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/461	1 F	Skin & Skull	Wet	Kashiganga river on Devre vill., Harsul, Nasik District, Maharashtra	M. S. Pradhan	12 Nov. 1987	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/464	1 young one	Skin & Skull	Wet	Nirgundmal Musalpada vill & around, Vani, Nasik District, Maharashtra	M. S. Pradhan	18 Nov. 1987	Measurements not taken
M/465	3 young ones	Skin & Skull	Wet	2 km. N. of Nivane vill. on Kalvan-Devalara, Vani, Nasik District, Maharashtra	M. S. Pradhan	20 Nov. 1987	Measurements not taken
M/770	1F & 1 unsexed	Skin & Skull	Wet	Grassland Upper Bhavani, Nilgiris 6900-7200 ft., Tamil Nadu	Kartik Shankar	30 Mar 1994	Donated specimens
M/771	1M	Skin & Skull	Wet	Grassland Upper Bhavani, Nilgiris 6900-7200 ft., Tamil Nadu	Kartik Shankar	1994	Donated specimen
M/815	1 unsexed	Skin & Skull	Wet	Grassland Upper Bhavani, Nilgiris 6900-7200 ft., Tamil Nadu	Kartik Shankar	12 Mar. 1994	Donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/461	105	95	24.1	18.1	30	29.1	12.2	15.7	6	8.2	5.5	6.6	14.1	4.7	17.2
M/770	90-110	95-115	22.7-23	16.3-17.3	27.9-30	27.5-29	12-13.1	15.5-16.1	5.1-5.7	7.9-8.1	4.9-5.6	6.6-6.8	14.1-14.8	4.3-4.4	15.8-16
M/771	110	115	24.8	19.7	30	29.8	12.5	16.5	5.7	9.1		7.2	15.3	4.5	17.6
M/815	90	101	24.5	20	28.5	26.9	11.4	15.8	5.5	8.5	5	5.8	14.9	4.5	16.6

*Distribution* : Andhra Pradesh, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal states within Indian limits.

*Elswhere* : Sri Lanka; E Pakistan; and Terai region of Nepal.

*Remarks* : Indian soft furred-metad, small sized than *Millardia kondana* and possessing five planter pads on each foot. Pradhan *et al.* (2005) and Pradhan and Talmale (2009) recognized three subspecies *Millardia meltada meltada* (Gray, 1837), *Millardia meltada pallidior* Ryley, 1914 and *Millardia meltada singuri* Mandal and Ghosh, 1981 from India.

Genus *Mus* Linnaeus, 175821. *Mus booduga* (Gray, 1837)1837. *Leggada booduga* Gray, *Mag. Nat. Hist. [Charlesworth's]*, 1 : 586.2009. *Mus booduga* : Pradhan and Talmale, *Rec. zool. Surv. India, Occ. Paper No. 297* : 148.

*Common Names* : English : Little Indian Field Mouse; Hindi : Chuha; Bengali : Indur; Gujarathi : Undar; Marathi : Shetatil Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/101	1 M	Skin only	Wet	Model colony, Pune, Pune District, Maharashtra	M. S. Malhotra	15 Feb. 1978	Skull damaged
M/116	1 F	Skin & Skull	Wet	Madhali Saral Talab, Kurundwad, Kolhapur District, Maharashtra	M.S. Pradhan	06 June 1978	
M/117	1 F	Skin & Skull	Wet	Nimbakarwadi, Pune, Pune District, Maharashtra	B.K. Tikader	08 Nov. 1978	Skull not dissected
M/133	1 F	Skin & Skull	Wet	Medtedi, near Mahabaleshwar, Satara District, Maharashtra	B.K. Tikader	29 May 1976	Skull damaged
M/134	1 M	Skin & Skull	Wet	Pal, Sukhi river, Jalgaon District, Maharashtra	R. H. Kamble	31 Jan. 1979	Skull damaged
M/149	1 M	Skin & Skull	Wet	Theur, Pune District, Maharashtra	D. N. Tiwari	10 Aug. 1967	
M/405	1 M	Skin & Skull	Wet	Sinhagad, Pune District, Maharashtra	M. S. Pradhan	08 Feb 1985	Skull damaged
M/406	1 M	Skin only	Wet	Sinhagad, Pune District, Maharashtra	M. S. Pradhan	25 Feb. 1981	Skull not traciabile

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/424	1 M, 1 F	Skin & Skull	Wet	25 kms. NW of Visarwadi, Kamod-Kokshya & around, Tal. Navapur, Dhulia District (Now Nandurbar Dist.), Maharashtra	R.M. Sharma & D. B. Bastawade	19 Jan. 1986	Male skull damaged
M/425	1 M	Skin & Skull	Wet	Karwand Dam, 22 kms NW of Shirpur on Bombay Agra Road, Tal. Shirpur, Dhulia District, Maharashtra.	R.M. Sharma & D. B. Bastawade	01 Feb. 1986	
*M/426	1M	Skin & Skull	Wet	Kothar vill. on Talode-Dhadgaon Road, Akkalkua, Dhulia District, Maharashtra	A. S. Mahabal	31 July 1986	Specimen & Skull damaged
*M/442	1F	Skin & Skull	Wet	30 kms NW of Shirol near Kumbhoj & around, Tal. Kumbhoj Kolhapur District, Maharashtra	D.B. Bastawade	01 Oct. 1986	Specimen damaged
M/457	1M	Skin & Skull	Wet	Kashiganga river near Devre, Harsul, Nashik District, Maharashtra	M.S. Pradhan	12 Nov. 1987	
*M/458	1F	Skin & Skull	Wet	Kadvai Pada vill. & around, Harsul, Nashik District, Maharashtra	M.S. Pradhan	14 Nov. 1987	Hindfeet cut
M/470	1F	Skin & Skull	Wet	Chinchkundi Nallah near Boripada vill. 13 kms. West of Harsul, Nashik District, Maharashtra	M.S. Pradhan	11 Nov. 1987	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
*M/471	1M	Skin & Skull	Wet	Chirai Ghat 3 kms. from Chirai vill. On Borgaon-Surgana Road, Nasik District, Maharashtra	M.S. Pradhan	18 Nov. 1987	Skull damaged
M/478	1M	Skin & Skull	Wet	Khamgaon Tank, Shelarwadi on Poona-Satara Road, Maharashtra	D.B. Bastawade	04 July 1983	
M/479	1M	Skin & Skull	Wet	Pimparkhed Maruti, Parola, Jalgaon District, Maharashtra	R.H. Kamble	02 Dec. 1984	
M/480	1M	Skin & Skull	Wet	Tank near Don village, Chalisgaon, Jalgaon District, Maharashtra	R.H. Kamble	11 Dec. 1984	
M/488	1M	Skin & Skull	Wet	Palanighat, Mhaswad, Satara District, Maharashtra	P. P. Kulkarni	20 June 1988	
*M/497	1M, 3F	Skin & Skull	Wet	On the way to Hatlondi, 15kms. NW of Harsul, Nasik District, Maharashtra	D. B. Bastawade	06 Feb. 1984	Head cut of all specimens
M/498	1M	Skin & Skull	Wet	Near Sina river, Parendia, Osmanabad District, Maharashtra	D. B. Bastawade	29 July 1988	
*M/535	1 unsexed	Skin only	Wet	Dolar river and around, core zone, Dhakna, Melghat Tiger Project, Amravati District, Maharashtra	M. S. Pradhan	18 Feb. 1992	Skull not traciabile
M/576	1M	Skin only	Wet	Agricultural fields in vill. Raipur in Melghat Tiger Reserve, Amravati District, Maharashtra	P. P. Kulkarni	20 Dec 1992	Skull. damaged
M/583	4M	Skin & Skull	Wet	Village Chunkhadi, Melghat Tiger Reserve, Amravati District, Maharashtra	P. P. Kulkarni	21 Dec. 1992	One skull damaged

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/591	1 unsexed	Skin & Skull	Wet	Village Paturnda, Dhakna range, Melghat Tiger Reserve, Amravati District, Maharashtra	P. P. Kulkarni	5 Dec 1992	Skull not dissected
M/610	1 unsexed	Skin & Skull	Wet	Jamanbodi, Tadoba National Park, Chandrapur District, Maharashtra	R. H. Kamble	02 Mar. 1995	Head cut
M/620	1M	Skin & Skull	Wet	Saddle Dam, Pench National Park, Nagpur District, Maharashtra	M.S Pradhan	22 Feb. 1999	
M/621	1M	Skin & Skull	Wet	Compartment No. 547, Ranidoh, Pench National Park, Nagpur District, Maharashtra	M.S. Pradhan	01 Oct. 1994	Skull damaged
M/627	1M, 1F	Skin & Skull	Wet	Belkund (Melghat), Gugamal National Park, Amravati District, Maharashtra	Sanjay Thakur	28 Aug. 2002	Donated specimen
M/628	1M	Skin & Skull	Wet	Chatusringi Hill, Pune, Pune District, Maharashtra	B. K. Tikader	03 Sept. 1961	
M/699	1 F	Skin & Skull	Wet	Residential area, Dehu road, Pune District, Maharashtra	N.P.I. Das	03 Jan. 2006	
M/715	1M	Skin & Skull	Wet	Lonar Crater proper N of Lonar RH, Lonar, Buldana District, Maharashtra	D.B. Bastawade	19 Feb. 2003	
M/728	1 F	Skin & Skull	Wet	Paldhag dam on Vishwaganga river and around, under stone, Buldana District, Maharashtra	S. G. Patil	19 Nov. 2005	



ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/729	2 M	Skin & Skull	Wet	Periphery of Dnyanganga Wildlife Sanctuary on 6 km away from Varvand, Buldana District, Maharashtra	S. G. Patil	21 Nov. 2005	
M/834	1M	Skin & Skull	Wet	Akkamalai Tea Estate, Kerala State	D. Mudappa	12 Dec. 1996	Skull damaged, donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/101	30.1	49	13.1	7.5											
M/116	56	54	13.5	8.6	18.4	18.2	6.4	10	3.3	5.2	3.9	3.3	8.2	3.3	10.2
M/117	28	46.2	13.3	6											
M/133	44	55	14	8	16+		6.6	9.4	3.2	4.2				3.7	
M/134	37	34	12.2	5.7		13.2	5.1	7.4	3	3.7					7.3
M/149	65	56	14.3	9.7	19.6	19.1	8	10.7	3.3	5.1	3.3	3	10.1	3.6	
M/405	37+	99	16		17		6.5	9.7	3.2	4.7		3.2		4	
M/406	24+	47	14												
M/424	40-50	36-46	12.3-13.7	6.7-9	18.4	18	7.5	10.2	3.4	5	3.3	3.4	8.7	3.3	10.1
M/425	46	50	13.2	9.3	17.5	16.7	7.3	10	3.2	4.4	3	3	9	3.5	9.5
*M/426	32+	50	12.3		13.1+		6.1	9.7	3.1	4.3		3.2		3.3	9
*M/442	21.6+	36	13.1		17.3	16.2	5.1	8.5	3.3	3.2	3.3	2.5	6.7	3.1	8.1

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/457	63	50	13.7	9.6	20.1	20	7.5	11.4	3.3	6	3.6	4	10.1	3.7	10.7
*M/458	61	60		8.7	19.1	18.2	7.2	10.1	3.3	4.7	3.1	3.5	9.5	3.4	10.1
M/470	53	51	14	9.1	19.6	19.4	7.7	11.2	3.5	5.1	3.5	3.1	10.1	3.5	11
*M/471	38	53	14.3	8.7	12+		6.5	9.2	3.3	4.6		3.3		3.4	8.6
M/478	32+	48	14		16.7	16	5.5	9.3	3	4.2	3.4	3.2	8.7	3.4	9.2
M/479	31+	53	14.1		18.3	17.3	7.2	10.6	3.3	4.6	4	4.2	10	4.1	9.8
M/480	28+	50	14		17	15.2	7	9.5	3	4.2	4	3.1	9.1	3.4	9.2
M/488	46	46	12.5	7.2	17.3	17.6	6.5	10.2	3.5	4.7	3.6	3.4	9	3.6	9.6
*M/497	29+- 32+	52-60	13.7- 14.2		17.2- 17.6	15.5- 16.4	6-6.8	9.1- 10.1	3.2- 3.3	4.1- 4.4	3.1- 3.8	3.3- 3.6	8.3-9	3.4- 4.1	8.7- 9.5
M/498	42	52	13.1	10	18.2	16.7	6.4	9.5	3.3	5.1	4	4	9.1	3.7	10
*M/535	30.7	46	13.7	8.4											
M/576	36	38	12.2												
M/583	39-45	47-52	12.1- 14.2	8.3- 10.1	16.2- 17.5	15- 16.4	6.4-7.3	8.6-9.5	3.1-3.7	3.3- 4.3	3-3.3	3.3-4.2	8-8.5	3.4-3.5	9.1-9.8
M/591	42	44	13.6	7.6											
M/610	30	46	13.6		19.6	19.4	7.2	10.2	3.3	4.8	3	3.4	7.6	3.4	
M/620	44	87	15.1	11.7	20	18	6.6	10.3	3.5	4.5	3.3	3	10.1	3.5	10.1
M/621	43	47	13.4	9.1											
M/627	63-84	73-80	17-19	12-14	16.1- 18.3	15.6- 18	6.5-7.3	9.2- 10.3	3.3-3.3	4.4-5.1	4-4.2	4.1-4.1	8-9	3.3-3.5	9.5- 10.7
M/628	46	55	11	10	16.4	15.7	6.4	9.4	3.3	4.2	4	3.8	8.2	3.2	9.1
M/699	45	57.5	14.2	10	16+		6.3	9.1	3.2			3		3.4	8.7
M/715	43.5	40.3	13.2	9.3	16.1	15.3	5.1	8.4	3.1	3.7	3.3	2.2	8.2	3.4	8

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/728	47.4	45.5	12.7	7.7	15.3	15	6.4	8.7	3.2	3.7	3.1	3.4	8.3	3.4	9
M/729	47-50	48- 51.5	13.4- 13.5	8.5-9	17.5- 18.3	16.5- 17.6	6.6-7.4	9.1-10	3.2-3.3	4.3-4.8	2.7-3.5	3.1-3.7	8.7-9.3	3.2-3.6	9.2-9.3
M/834	60	87	18.7	12.7			7.6	11.7	3.4	5.9		3.6	10.8	3.7	11

*Distribution* : Throughout India.

*Elsewhere* : Sri Lanka, Bangladesh, Southern Nepal and Central Myanmar and Pakistan.

*Remarks* : Small field mouse with dorsum varies from light to dark reddish or rusty brown and underparts perfectly white, whitish, grey or, sometimes even dull grey in colour. But apparently both, white and grey bellied forms, occur together in many localities and it is very difficult to divide this species into subspecies on the basis of the colour of the underparts (Agrawal, 2000). Asteric \* marked specimens registered and labled as *Mus dunni* Wroughton, 1912, which is synonymised under *Mus booduga* by Agrawal (2000). Specimens M/155,427,438 not traciabile.

## 22. *Mus cookii nagarum* (Thomas, 1921)

1921. *Leggada nagarum* Thomas, *J. Bombay Nat. Hist. Soc.*, **27** : 597.

2002. *Mus cookii nagarum*: Alfred, Sinha and Chakraborty, *Rec. zool. Surv.India, Occ. Paper No. 199* : 209.

*Common Names* : English : Cook's Mouse; Hindi : Chuha; Bengali : Indur; Gujarathi : Undar; Marathi : Shetatil Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/568	1 unsexed	Skin & Skull	Wet	Eravikulam National Park Hut, Idduki Dist., Kerala	M. S. Pradhan	28 Feb. 1993	

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/568	70	77	17.5	11.5	21.2	20.1	7.8	10.8	3.6	5.7	3.1	4.1	10.8	3.6	11.3

*Distribution* : Arunachal Pradesh, Assam, Karnataka, Kerala, Maharashtra, Manipur, Meghalaya, Nagaland, Tamil Nadu and West Bengal states within Indian limits.

*Remarks* : Bristly fured body light brown above, grey on the undersurface; tail bicoloured, dark above, paler below. Mammae 5 pairs. Specimen registered as *Mus cookii palnica* (Thomas). Agrawal (2000) synonymised *Mus cookii palnica* (Thomas) under *Mus cookii nagrum* (Thomas), same view has been followed here.

### 23. *Mus famulus* Bonhote, 1898

1898. *Mus famulus* Bonhote, *J. Bombay Nat. Hist. Soc.*, **12** : 99.

2006. *Mus famulus* : Alfred, Ramakrishna & Pradhan, *Validation of Threatened Mammals of India* : 561-563, Publ. Director, ZSI, Kolkata.

*Common Names* : English : Servant Mouse, Bonhote's Mouse; Hindi : Chuha; Kannad : Kok; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/555	1 M	Skin & Skull	Wet	Eravikulam National Park Hut, (collection at 8000 ft.) Idduki District, Kerala	M. S. Pradhan	26 Feb 1993	Skull. damaged
M/596	1 M	Skin & Skull	Wet	Eravikulam National Park, Idduki District, Kerala	K. C. Gopi & R. M. Sharma	12 April 1994	
M/773	1 unsexed	Skin & Skull	Wet	Upper Bhavani (Forest) 6900 to 7200, Tamil Nadu	K. Shankar	June 1994	Specimen damaged; donated
M/774	1 F	Skin & Skull	Wet	Upper Bhavani (Forest) 6900 to 7200, Tamil Nadu	K. Shankar	05 June 1994	Skull damaged; donated

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/775	1 F	Skin & Skull	Wet	Upper Bhavani (Forest) 6900 to 7200, Tamil Nadu	K. Shankar	24 Feb. 1994	Skull damaged; donated
M/776	1 unsexed	Skin only	Wet	Thai shoal, 6000 ft, Nilgiris, Tamil Nadu	K. Shankar	1994	Donated specimen
M/777	1 M	Skin & Skull	Wet	Upper Bhavani forests, Nilgiris, Tamil Nadu, 6900-7200ft.	K. Shankar	1994	Skull damaged; donated specimen
M/797	1 unsexed	Skin & Skull	Wet	Upper Bhavani forests, Nilgiris, Tamil Nadu, 6900-7200ft.	K. Shankar	Feb-Nov. 1993	Skull damaged; donated specimen
M/814	1 unsexed	Skin & Skull	Wet	Upper Bhavani forests, Nilgiris, Tamil Nadu, 6900-7200ft.	K. Shankar	28 June 1994	Donated specimen
M/833	1 Male	Skin & Skull	Wet	Kakachi Reserve Forest, 1260 mtr., Kalakkad Mundanthurai Tiger Reserve, Tamil Nadu	D. Mudappa	15 June 1997	Donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/555	90	80	22.6	15.7	26.1	25+	11.1	14.3	3.9	8.1	5	5	13.1	4.4	13.6
M/596	85	80	20	15.3	25.1	24.9	8.3	13.5	3.8	7.2	4.1	5	12.6	4.2	12.3
M/773					24.1	23.9	10.6	13.1	3.9	6.6	4.8	5.2	11.7	4.5	12.6
M/774	65	75	20.5	15	23.4+	23.5	10.1	12.6	3.5	6.8	4.7	5.3		4.3	12.5

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/775	80	80	19.7	15				12.9	3.6	7.5		4.2	12.7	4.2	13.8
M/776	65	75	20.2	13.7											
M/777	70	80	20	14.4				12.5	8.8	6.9		4.2		4.1	12.6
M/797	80	72	19	14											
M/814	87	96.5	23.6	15.7	28.5	26.6	10.5	14.8	5.2	8.1		6.5	13.8	4.5	15.3
M/833	82.7	92.2	24.2	14.9	28	27.6	10.6	15.3	4.4	8.7		6.1	13.1	4.8	14.9

*Distribution* : Kerala and Tamil Nadu (An Indian endemic recorded only from the Western Ghats in tropical evergreen rain forest covering the Nilgiri Hills in SW peninsular India, about 1500 m (Agrawal, 2000; Alfred *et al.*, 2006; Corbet and Hill, 1992).

*Remarks* : A medium sized soft furred field mouse possessing the tail smaller than head and body length and very small eyes. Body reddish to chocolate brown above, chestnut with grey bases below sharply demarcated along the flanks. Tail wholly dark, while hindfoot dark brown. Mammae three pairs.

#### 24. *Mus musculus castaneus* Waterhouse, 1843

1843. *Mus castaneus* Waterhouse, *Ann. Mag. Nat. Hist.*, [1], 12 : 134.

2000. *Mus musculus castaneus* : Agrawal, *Rec. Zool. Surv. India, Occ. Paper No. 180* : 122.

*Common Names* : English : House Mouse; Hindi : Chuha, Mushi; Bengali : Indur; Gujarathi : Undar; Marathi : Gharatil Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/63	2 M 3F	Skin & Skull	Dry	Commercial centre, Bhavani Peth, Pune, Maharashtra	M. S. Pradhan	2 March 1977	Skull not dissected
*M/94	1 F	Skin & Skull	Dry	Sadashiv Peth, Pune, Maharashtra	M. S. Pradhan	10 July 1977	Albino variety; Lab mouse

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/118	1 F	Skin & Skull	Dry	Residence, Model colony, Pune, Maharashtra	R. H. Kamble	26 Sept. 1978	
M/119	1 M	Skin & Skull	Dry	Residence, Model colony, Pune, Maharashtra	R. H. Kamble	26 Sept. 1978	
*M/141	1 F	Skin & Skull	Dry	Nana Peth, Pune, Maharashtra	Pune Municipal Corporation	07 July 1976	Albino variety; Lab mouse
M/157	1 M	Skin & Skull	Wet	Residence in Pashan, Pune	A. R. Kelaskar	15 Jan. 1980	
M/158	1 M	Skin & Skull	Wet	Model colony, Pune, Maharashtra	R. H. Kamble	14 Dec. 1979	
M/160	1 F	Skin & Skull	Wet	Nalla near Vita, Sangli Dist., Maharashtra	A. S. Mahabal	15 Sept. 1979	
M/196	1 unsexed	Skin & Skull	Wet	Bombay Port Trust, Bombay, Maharashtra	M. S. Pradhan	27 Oct. 1980	Head cut
M/247	1 M	Skull only	Dry	Andheri, Greater Bombay, Maharashtra	M. S. Pradhan	26 Nov. 1982	
M/264	1 M	Skin & Skull	Dry	Andheri, Greater Bombay, Maharashtra	M. S. Pradhan	24 May 1983	
M/267	1 M	Skull only	Dry	Andheri West, Greater Bombay, Maharashtra	M. S. Pradhan	25 May 1983	
M/274	1 F	Skull only	Dry	Andheri West, Greater Bombay, Maharashtra	M. S. Pradhan	25 May 1983	
M/278	1 M	Skull only	Dry	Bandra, Greater Bombay, Maharashtra	M. S. Pradhan	27 May 1983	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/280	1 M	Skin & Skull	Dry	City Ward, Bombay, Maharashtra	M. S. Pradhan	22 Sept. 1983	
M/298	1 M	Skull only	Dry	Goregaon, Greater Bombay, Maharashtra	M. S. Pradhan	26 Sept. 1983	
M/299	1 F	Skin & Skull	Dry	Nana chowk, Kamathipura, Bombay, Maharashtra	M. S. Pradhan	26 Sept. 1983	Specimen damaged
M/300	1 M	Skin & Skull	Dry	Nana chowk, Kamathipura, Bombay, Maharashtra	M. S. Pradhan	26 Sept. 1983	Specimen damaged
M/302	1 F	Skin & Skull	Dry	Kamathipura ward, Bombay, Maharashtra	M. S. Pradhan	26 Sept. 1983	Specimen damaged
M/303	1 F	Skin & Skull	Dry	Kamathipura ward, Bombay, Maharashtra	M. S. Pradhan	26 Sept. 1983	Specimen damaged
M/304	1 F	Skin & Skull	Dry	Kamathipura ward, Bombay, Maharashtra	M. S. Pradhan	26 Sept. 1983	Specimen damaged
M/305	1 F	Skin & Skull	Dry	Kamathipura ward, Bombay, Maharashtra	M. S. Pradhan	27 Sept. 1983	Specimen damaged
M/306	1 M	Skin & Skull	Dry	Kamathipura ward, Bombay, Maharashtra	M. S. Pradhan	27 Sept. 1983	Specimen damaged
M/307	1 F	Skin & Skull	Dry	Kamathipura ward, Bombay, Maharashtra	M. S. Pradhan	27 Sept. 1983	Specimen damaged
M/308	1 F	Skin & Skull	Dry	Kamathipura ward, Bombay, Maharashtra	M. S. Pradhan	27 Sept. 1983	Specimen damaged
M/309	1 F	Skin & Skull	Dry	Kamathipura ward, Bombay, Maharashtra	M. S. Pradhan	27 Sept. 1983	Specimen damaged



ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/310	1 F	Skin & Skull	Dry	Kamathipura ward, Bombay, Maharashtra	M. S. Pradhan	27 Sept. 1983	Specimen damaged
M/388	1 F	Skin & Skull	Wet	Rest house, Kasa, Thane Dist., Maharashtra	M. S. Pradhan	06 Mar. 1984	Head cut
M/392	2 M	Skin & Skull	Wet	Forest 22 kms.south of Kasa, Kasa-Manor Road, Thane Dist., Maharashtra	M. S. Pradhan	09 Mar. 1984	
M/401	1 F	Skin & Skull	Wet	Jawahar Nagar, Pune, Pune dist., Maharashtra	T. K. Roy-chaudhary	9 Aug. 1985	
M/489	1 F	Skin & Skull	Wet	F.D.C.M. Nursery, Kasa, Thane Dist., Maharashtra	M. S. Pradhan	15 Oct. 1986	
M/499	1 M 2 F	Skin & Skull	Wet	Parel, Bombay, Maharashtra	M. S. Pradhan	27 Oct. 1980	Head cut
M/500	1 F	Skin & Skull	Wet	Devtalipada, Jawhar, Thane Dist., Maharashtra	M. S. Pradhan	19 Oct. 1986	
M/523	1 F	Skin & Skull	Wet	ZSI, WRS, Shilavihar colony, Paud road, Pune, Maharashtra	M. S. Pradhan	11 June 1991	
M/545	2 M 1 F	Skin & Skull	Wet	Residence in Anandnagar, Hingane Khurd, Sinhagad road, Pune, Maharashtra	P. P. Kulkarni	01 Jan. 1993	
M/549	2 F	Skin & Skull	Wet	Residence in Anandnagar, Hingane Khurd, Sinhagad road, Pune, Maharashtra	P. P. Kulkarni	30 Mar. 1993	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/597	1 F	Skin & Skull	Wet	Agriculture fields 3 kms. south of Semadoh, Melghat Tiger Reserve, Amravati Dist., Maharashtra	P. P. Kulkarni	14 Dec. 1992	
M/602	1 M	Skin & Skull	Wet	Agriculture fields 3 kms. south of Semadoh, Melghat Tiger Reserve, Amravati Dist., Maharashtra	P. P. Kulkarni	14 Dec. 1992	
M/700	1 M	Skin & Skull	Wet	Residential area, Dehu road, Pune, Maharashtra	N.P.I. Das	13 Jan. 2006	
M/701	1 M	Skin & Skull	Wet	Grossary shop near Bhrushund ansh Temple, Mendha, Bhandara, Bhandara dist., Maharashtra	S. S. Talmale	12 Nov. 2004	
M/702	1 F	Skin & Skull	Wet	Grossary shop near Bhrushund ansh Temple, Mendha, Bhandara, Bhandara dist., Maharashtra	S. S. Talmale	12 Nov. 2004	
M/703	1 M	Skin & Skull	Wet	Residential area, Lakhani, Bhandara Dist., Maharashtra	S. S. Talmale	17 Nov. 2004	
M/704	1 M	Skin & Skull	Wet	Residential area, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	23 Nov. 2004	
M/727	1 F	Skin & Skull	Wet	Around forest rest house, Warvand, Buldana Dist., Maharashtra	S. G. Patil	12 Nov. 2005	
M/783	2 unsexed	Skin only	Wet	Mudumalai, Tamil Nadu	V. Meena & K. Shankar	April-June 1997	Donated specimen
M/832	1 M	Skin & Skull	Wet	Sengaltheri Base camp, Kalakad-Mundanthurai Tiger Reserve, Tamil Nadu	D. Mudappa	14 Aug. 1996	Donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/63	47-80	63-78	13.2-16	7.4-9.6											
*M/94	185	155	30	22	39.6	36.4	14.1	21.3	6.3	10.7	7.1	7.3	17.7	6.7	20.5
M/118	76	56+	15	10	19	17.7	7.6	9.7	3.2	4.3	4.2	3.3	10.1	4.1	9.1
M/119	84	75	16.1	10.7	20.3	19.3	7.1	10.8	3.1	5.1	2.4	3.2	10.4	3.6	10.7
*M/141	135	140	28.5	13.5	33.3	30.5	10.2	17.3	6	8.4	6.2	5.6	16	5.4	17.2
M/157	44+	74	15.1	10.5	20.6	19.6	8.1	10.8	3.5	5.2	3.5	4.2	11	4	10.2
M/158	45+	71	14.2	11.5											
M/160	59	71	15	11	19.4	19.1	7.4	9.5	3.2	4.9	4	4	9.7	3.8	10
M/196	42+	82	15.3		21.3	20	8.2	10.7	3.2	5.5	3.2	4.4	11	4.1	10.5
M/247					21.1	20.3	8.6	11	3.1	5.7	3.7	4.3	11.2	4	11
M/264	102	122+	25.2	13.8	28.7	26.2	9.3	14.1	5.2	6.2	5.3	4.5	13.8	5.2	14.1
M/267					21.4	20.4	8.2	11.1	3.3	5.3	3.7	4.3	10.7	4.2	10.6
M/274					20.5	19.3	7.1	10.2	3.2	4.7	3.4	4.1	10.2	4	10.4
M/278					19.5	18.3	7.2	10	3.2	4.8	3.4	4.1	10.4	4.2	10.1
M/280	49+	86	17.1		20.7	19.3	7.2	10.5	3.3	5	3.4	3.7	10.3	4	10.4
M/298					19	18.1	6.4	9.7	3.2	4.7	4	3.7	9.5	3.6	10.1
M/299	49+	88	16.1		21.1	19.5	7.4	10.8	3.4	4.7	3.5	4.1	10.4	4.1	10.3
M/300	54+	81	16.4		21	19.6	8.2	10.5	3.5	5.2	4	4.3	10.5	4.1	10.3
M/302	49+	76	16.1		20.1	18.2	7.1	10.4	3.1	5.1	3.4	3.6	10	4.1	10.3
M/303	45+	76.5	16.5		19	18.1	8.3	10	3.2	5	3.4	4.1	10	4.1	10

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/304	54+	84	16.3		19	18.4	6	10	3.2	5	3.7	3.6	9.4	4.1	10.1
M/305	60+	95.3	16.4		21.7	20.3	7.5	11	3.5	5.2	3.7	4.1	10.6	4	10.5
M/306	55+	81	17		20.6	19.5	7.4	10.5	3.4	4.5	3.4	4.1	10.3	3.7	10.7
M/307	55+	83.5	16.1		19.5		6.2	10.2	3	5.1	3.6	4.2	10	4.1	10
M/308	51+	84	16		20.2	19.1	7.2	10.3	3.2	4.5	4	3.6	10	3.6	10
M/309	44+	82	17.1		20.1	19.1	8.4	10.2	3.3	5	3.5	4.2	10.2	4	10
M/310	40+	75	16.2		20.1	19.2	7.3	11	3.5	5	3.2	4.2	9.7	4	9.7
M/388	44+	80	15.1		21.1	19.1	7	11	3.3	6.1	5.2	4.3		4.2	10.6
M/392	33+- 56	53- 73	12.7- 15.4	10	17.7- 18.8	16.2	6-6	8.4- 10.2	3.2- 3.6	4.1- 4.7	3.3-3.4	2.8-4	9.1- 10.2	3.7- 3.7	9.2- 10.5
M/401	65	70	14.5	10	20.1	19	7.5	10.2	3.2	5	4.2	4.1	10.4	4	10.4
M/489	38	42	12.3	7	15	14.4	5	8.1	3.1	4	3.1	3.4	9.1	3.2	7+
M/499	44+- 45+	69+- 80	15.5- 16.6		19.5- 20.8	18.2- 20	7.5- 7.6	10.1- 11.1	3.1- 3.5	4.8- 5.3	2.2- 3.4	3.6-4	10.1- 11.2	3.7- 4.1	10.1- 11.1
M/500	48	64	16	10	16.4	15.9	5.4	7.3	3	3.4	2.2	3.2	8.9	3.4	7.2
M/523	83.3	65.5	12.2	10.7	19.2	18.3	7.4	10.2	3.1	4.7		4.2	10.2	3.7	9.6
M/545	58-66	67-82	15.3- 15.5	10.3- 11.1	19.4- 22.1	18.7- 20.3	6.6- 9.1	10.2- 11.1	3.1- 3.2	4.1-5.4	3-4.1	4-4.2	10.5- 11.2	3.6-4	10.1- 11.1
M/549	63-73	66-75	14.6- 15.1	10- 10.1	19.3	17.3	8.1	9.8	3.1	4	4	4	9.3	3.7	9.1
M/597	71	70	15.1	8.5	20.3	19.1	7.6	10.4	3.1	4	4.1	11.1	3.7	10.3	9.3
M/602	56	52	13.6	9.5	17.1	16.6	6.7	10.1	3.3	4	3.5	3.6	8.7+	3.5	9.2
M/700	52	61	15.5	11	19.5	17.7	7	9.5	3.1	4.4	3	4	10.1	3.7	9.4

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/701	70	83	16.4	13	20.1	18.7	7.3	10.1	3.2	4.5	3.5	3.6	10.3	4.2	10.4
M/702	65	74	16.2	12	19.3	18	6.6	10.2	3.3	4.5	3.5	3.5	10.2	4.1	10.2
M/703	75	79	16.6	13	21	18	7.4	10.3	3.3	4.7	3	4.1	10.6	4.1	9.5
M/704	66	72	16.1	11	20.4	19.5	7	10.5	3.1	4.8	3.5	3.2	10.2	4.1	9.4
M/727	66	76	16.2	12.1	20.8	20	8	11.4	3.4	5.2	3.7	4.2	11	3.7	10.7
M/783	60-72	60-67	16.8- 17.3	13.7- 14.2											
M/832	65	88.4	18.2	7.1	20.5	19.5	7.2	11	3.3	6.4	2.1	4.2	10.4+	3.8	11.5

*Distribution* : Throughout India.

*Elsewhere* : Spread over the world's continents and islands (except Antarctica) through its close association with humans (Ellerman and Morrison-Scott, 1951).

*Remarks* : M/157 and M/158 specimens are labeled as *Mus musculus tyleri* Blyth. M/247 and M/264 are labeled as *Mus musculus urbanus* (Hodgson). M/392, M/489, M/523, M/545, M/549, M/597 and M/602 specimens labeled as *Mus musculus homourus* Hodgson. Musser and Carleton in Wilson and Reeder (2005) Synonymised all the above mentioned subspecies under *Mus musculus castaneus* (Waterhouse). M/94, 141 (Marked \*) specimens are albino variety (Lab. mouse) with abnormal size and labeled *Mus musculus* Lin. (albino variety).

## 25. *Mus phillipsi* Wroughton, 1912

1912. *Mus phillipsi* Wroughton, *J. Bombay Nat. Hist. Soc.*, **21** : 772.

2005. *Mus phillipsi* : Musser and Carleton In : Wilson and Reeder, *Mammal Species of the World*, 3rd ed., Vol. II : 1406.

*Common Names* : English : Phillips's Mouse, Wroughton's Small Spiny Mouse; Hindi : Chuha, Mushi; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/601	1 M	Skin & Skull	Wet	Chikalpati, Dakna Range, Melghat Tiger Reserve, Amaravati District, Maharashtra	P. P. Kulkarni	23 Aug. 1993	
M/625	1 M	Skin & Skull	Wet	Rest House, Tadoba, Tadoba National Park, Chandrapur Dist., Maharashtra	Shantanu Goyal	23 Mar. 1999	Donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/601	68	64	16	9.1	20.1	19.6	7.5	11.1	3.3	5.3	3	4	10	3.7	11.7
M/625	65	54	15	14	20.1	18.6	9	12	3.3	5.6	3	4.3	9	4.4	12.6

*Distribution :* Andra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, and Tamil Nadu states within Indian limits. Indian Endemic species (Pradhan and Talmale, 2012).

#### 26. *Mus platythrix* Bennett, 1832

1832. *Mus platythrix* Bennett, *Proc. Zool. Soc. Lond.*, **1832** : 121.

2005. *Mus platythrix* : Musser and Carleton In : Wilson and Reeder, *Mammal Species of the World*, 3rd ed., Vol. **II** : 1406.

*Common Names :* English : Flat-haired Mouse; Hindi : Chuha; Mushi; Bengali : Indur; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/334	1 M	Skin & Skull	Wet	Agriculture Research Centre, Karjat, Raigad District, Maharashtra	M. S. Pradhan	04 Oct. 1981	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/387	2 M	Skin & Skull	Wet	Forest south of Suryamal, Thane Dist., Maharashtra	M. S. Pradhan	12 March 1984	Head & Tail cut
M/428	1 M	Skin & Skull	Wet	30 kms. SE of Dhadgaon on Shahada Road, in Tapti & Narmada valleys, Dhulia Dist., Maharashtra	R. M. Sharma & D. B. Bastawade	26 Jan. 1986	Head & Ear pinna cut
M/778	4 unsexed	Skin & Skull	Wet	Upper Bhavani (forest surrounded by grassland), Tamil Nadu	K. Shankar	1994	Skuls damaged; Donated
M/779	1 unsexed	Skin & Skull	Wet	Nilgiri, Tamil Nadu	K. Shankar	28 April 1995	Specimen & Skull damaged, Donated
M/780	1 unsexed	Skin & Skull	Wet	Nilgiri, Tamil Nadu	K. Shankar	30 April 1995	Donated
M/781	1 unsexed	Skin & Skull	Wet	Nilgiri, Tamil Nadu	K. Shankar	3 April 1995	Abnormal sized skull; Donated specimen
M/782	2 unsexed	Skins only	Wet	Mudumalai, Tamil nadu	V. Meena & K. Shankar	April 1997	Donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/334	105	78	18.3	11	27.5	27	11.5	15.2	4.5	7.6	4.7	6.4	13.1	5	14.2
M/387	39+ -42+		17- 18.2		22.5+ -24.6	23.4	10- 10.2	13- 13.6	4.8-5	5.5- 6.2	4.1- 4.7	5.1- 5.7	10.4- 12	4.2- 4.2	12.2- 13.3

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/428	34+	60	15.5		22.1	21	8.2	12.2	4.3	5.6	4.2	5.1	9.7	3.1	12.1
M/778	60-85	85- 125	20.5- 26.1	16.2- 18.1	31.4	27.9	12.1- 13	18.4- 18.6	5.2- 5.8	7.6- 7.7	5.8- 6.1	3.3- 5.3		4.8- 5.4	15.8- 17
M/779									4.3	6.7		5.4		4.1	13.5
M/780	85	70	18.6	14.3	29.4	27.5	12.4	18	5	8.7	4.3	3.5		4.2	15
M/781	85		22.6		35.8	34.4		19.2	5.8	5.9	6.4	6.3		6	19.5
M/782	75-82	55+- 70	18.5- 19.5	12- 13.2											

*Distribution* : Andhra Pradesh, Bihar, Gujarat, Kerala, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh states within Indian limits.

#### 27. *Mus saxicola saxicola* Elliot, 1839

1839. *Mus saxicola* Elliot, *Madras J. Litt. Sci.*, **10** : 215.

2002. *Mus saxicola saxicola* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No.* **199** : 212.

*Common Names* : English : Saxicolous Mouse, Elliot's Spiny Mouse; Hindi : Chuha, Mushi; Bengali : Indur; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/429	1 M	Skin & Skull	Wet	Bhimashankar, Pune District, Maharashtra	M. S. Pradhan	04 June 1986	Skull damaged
M/430	1 F	Skin & Skull	Wet	Bhimashankar, Pune District, Maharashtra	M. S. Pradhan	03 June 1986	Skull damaged
M/466	1 M 1 F	Skin & Skull	Wet	Kashiganga river near Devre (Deur) vill., Harsul, Nasik Dist., Maharashtra	M. S. Pradhan	13 Nov. 1987	



ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/467	1 M	Skin & Skull	Wet	Hivraypada, 42 kms west of Vani on Nasik-Vaghai road, Nasik Dist., Maharashtra	D. B Bastawade	21 Feb. 1985	Head cut
M/468	1 M 1 F	Skin & Skull	Wet	Hirochapada 15 kms. North of Ozar, Nasik Dist., Maharashtra	D. B. Bastawade	12 Feb. 1984	
M/469	1 M	Skin & Skull	Wet	40 kms. East of Vani on Vani-Nasik road, Nasik Dist., Maharashtra	D. B. Bastawade	18 Feb. 1985	Damaged skin & skull
M/514	1 M	Skin & Skull	Dry	Bhimashankar, Pune Dist., Maharashtra	M. S. Pradhan	03 June 1990	
M/515	1 F	Skin & Skull	Dry	Bhimashankar, Pune Dist., Maharashtra	M. S. Pradhan	03 June 1990	
M/536	1 M	Skin & Skull	Wet	Bhavar stream Chowrakund, Melghat Tiger Reserve, Amaravati Dist., Maharashtra	M. S. Pradhan	12 Feb. 1992	
M/558	1 M	Skin & Skull	Wet	Damanganga river, Peth-Naka, Nasik Dist., Maharashtra	P. P. Kulkarni	14 Feb. 1989	Subadult
M/574	1 F	Skin & Skull	Wet	Rest House at Wavarle Morbe Dam, Karjat, Raigad Dist., Maharashtra	M. S. Pradhan	01 Feb. 1994	
M/577	2 F	Skin & Skull	Wet	Crop in Mangia vill. Near Kolkaz Semadoh camp, Melghat Tiger Reserve, Amaravati Dist., Maharashtra	P. P. Kulkarni	16 Dec. 1992	
M/813	1 F	Skin & Skull	Wet	Saswad, Pune dist., Maharashtra	Satish Pande	2006	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/429	38+	59	17.1		17.7+		8.6	12.7	4.6	6.1		4.7	11.1	4.4	
M/430	50+	52+	17.7		25.3	23.1	11.5	14.4	4.6	6.6	4.3	6.1	12.1	4.2	
M/466	37.4- 57	39	14- 17.1	7-11	18-23	17.1- 22.2	7.1- 8.5	10.2- 12.3	4-5	4-5.5	3.7- 4.2	4-5	9.2- 10.5	4-4.1	12.5
M/467	43+	62	18		24.1	23.3	9.2	13.2	4.7	6.3	4.6	5	12	4.2	12.6
M/468	45+	61-62	18- 18.1		22.5- 24.1	22- 22.7	8-9	8.1- 13.1	4.8	6	4.1-5	4.7-5	11- 11.3	4-4.1 1	2.4- 13.2
M/469	58+	73	18.1		26+		10.4	14.6	5	7	4.5	5.5	12.4	4.6	
M/514	110	61	17.1	12.5	24.3	23.5	10.2	14.1	4.4	6.5	4.6	5.7	12	4.2	13
M/515	66	68+	17.6	11.2	25.3	25	9.6	14.2	4.7	6.6	5	6	12	4.3	13.3
M/536	56	69	18.4	12.3	24.1	23.7	9.1	13.3	4.4	6.4	4.2	5.7	11.5	4.3	13.3
M/558	61	69	19.1	12.1	23.7	23.1	9.4	13.1	4.8	6.1	4.1	4.7	12.1	4.1	12.3
M/574	65	67	19.1	13.1	24.2	23.7	9.1	13.6	5	6.3	4.4	5.3	11.6	4.3	8.2
M/577	58.1- 58.5	58.1- 58.5	20.7- 21.1	12-14	22.4- 23.1	21.4- 21.7	8.2- 8.4	12.2- 13	4.4- 4.5	5.1- 5.3	4.3- 4.5	4.7- 5.1	10.5- 10.8	4.1- 4.2	12.3- 13.1
M/813	70	65	19	12.8	23.1	22.9	9	12.1	4.5	6.2	4.4	5	10.5	4.1	13

*Distribution* : Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh (Agrawal, 2000). Subspecies endemic to India (Agrawal, 2000).

Genus *Niviventer* J. T. Marshall, Jr., 1976

28. *Niviventer fulvescens* (Gray, 1847)

1847. *Mus fulvescens* Gray, *Cat. Hodgson Coll. Br. Mus.* : 18.

2000. *Niviventer fulvescens* : Agrawal, *Rec. zool. Surv. India, Occ. Paper. No. 180* : 98-100.

*Common Names* : English : Brahman Niviventer, Thomas' Chestnut Rat; Hindi : Chuha, Mushi; Bengali : Indur.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/704A	1 M	Skin & Skull	Wet	Sagalee (Bamboo flowering area), Arunachal Pradesh	B. C. Dutta	19 Nov. 2005	Donated specimen

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/704A	145	194	30.7	20	37.3	33.7	14.2	18.3	6.3	9.2	4.5	6.1	16.5	6.2	18.6

*Distribution* : Arunachal Pradesh, Assam, Himachal Pradesh, Manipur, Meghalaya, Sikkim, Uttaranchal and West Bengal states within Indian limits.

*Elsewhere* : Nepal, N Pakistan (Corbet and Hill, 1992), through Bangladesh, S China, Indochina, Thailand, Malay Peninsula, Sumatra, Java, and Bali (Musser and Carleton in Wilson and Reeder, 2005).

#### 29. *Niviventer niviventer lepcha* (Wroughton, 1916)

1916. *Epimys lepcha* Wroughton, *J. Bombay nat.Hist. Soc.*, **24** : 429.

2000. *Niviventer niviventer lepcha* : Agrawal, V.C., *Rec. zool. Surv. India, Occ. Paper. No. 180* : 96-98.

*Common Names* : English : Himalayan Niviventer, Himalayan White-bellied Rat, White-bellied Rat; Hindi : Chuha; Bengali : Indur.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/707	1 F	Skin & Skull	Wet	Sagalee (Bamboo flowering area), Arunachal Pradesh	B. C. Dutta	19 Nov. 2005	Skull damaged; Donated specimen

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/707	100	159	28.6	19.6	19+				5.5		4.5				16.7

**Distribution** : Sikkim and high altitude areas of Darjiling Dist., West Bengal (Agrawal, 2000).

Genus *Rattus* Fischer, 1803

30. *Rattus nitidus* (Hodgson, 1845)

1845. *Mus nitidus* Hodgson, *Ann. Mag. Nat. Hist.*, [ser. 1], 15 : 267.

2000. *Rattus nitidus* : Agrawal, *Rec. zool. Surv. India, Occ. Paper No. 180* : 76-80.

**Common Names** : English : White-footed Indochinese Rat, Himalayan Rat; Hindi : Chuha; Bengali : Indur.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/705	1 M 1 F	Skin & Skull	Wet	Sagalee (Bamboo flowering area), Arunachal Pradesh	B. C. Dutta	19 Nov. 2005	Female Skull damaged; Donated specimens

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/705	95-142	77-130	26.1-35.1	15.1-20.1	23.5+-28.1	26.2	11.1	15.5	6.5-7	6.8	5.1-5.6	4.3	13.4	4.4	15.4-19.7

**Distribution** : Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Sikkim, Tripura, Uttaranchal and West Bengal states within Indian limits.

**Elsewhere** : Mainland Southeast Asia from S China, Vietnam, Laos, N Thailand, Myanmar, Bangladesh, Nepal, Bhutan (Wilson and Reeder, 2005).

31. *Rattus norvegicus* (Berkenhout, 1769)1769. *Mus norvegicus* Berkenhout, *Outlines of the Natural History of Great Britain and Ireland*, 1 : 5.2000. *Rattus norvegicus* : Agrawal, V. C., *Rec. zool. Surv. India, Occ. Paper. No. 180* : 81.

*Common Names* : English : Common Rat, Brown Rat, Norway Rat; Hindi : Chuha; Bengali : Desma Indur; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/175	2 F	Skin & Skull	Wet	Near Sea Port, Colaba Ward, Bombay, Maharashtra	M. S. Pradhan	20 Nov. 1974	
M/176	1 M	Skin & Skull	Wet	Colaba, Urban Bombay, Maharashtra	M. S. Pradhan	20 Nov. 1974	
M/184	2 M 2 F	Skull only	Wet	Navynagar, Colaba, Bombay, Maharashtra	M. S. Pradhan	20 Oct. 1980	
M/185	2 M	Skull only	Wet	Crowford Market, Bombay, Maharashtra	M. S. Pradhan	30 Oct. 1980	
M/190	1 M 2 F	Skull only	Wet	Carnac Bunder, Bombay, Maharashtra	M. S. Pradhan	29 Oct. 1980	
M/191	1 M 2 F	Skin & Skull	Wet	Andheri, Suburban, Bombay	M. S. Pradhan	30 Oct. 1980	Head cut
M/195	1 F	Skull only	Wet	Bombay Port Trust, Bombay, Maharashtra	M. S. Pradhan	27 Oct. 1980	
M/199	1 F	Skull only	Wet	Residential areas near Shivdi Railway station, Bombay, Maharashtra	M. S. Pradhan	29 July 1982	
M/200	1 F	Skull only	Wet	Residential areas Lalbag, Bombay, Maharashtra	M. S. Pradhan	29 July 1982	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/201	1 F	Skull only	Dry	Residential areas Elphinstone Road, Bombay, Maharashtra	M. S. Pradhan	29 July 1982	
M/202	1 M	Skull only	Wet	Lalbag, Bombay, Maharashtra	M. S. Pradhan	29 July 1982	
M/220	1 M	Skin only	Dry	Colaba, Bombay, Maharashtra	M. S. Pradhan	25 Nov. 1982	
M/221	1 M	Skin & Skull	Dry	Colaba, Bombay, Maharashtra	M. S. Pradhan	25 Nov. 1982	
M/237	1 M	Skull only	Dry	Kurla, Greater Bombay, Maharashtra	M. S. Pradhan	23 Nov. 1982	
M/238	1 M	Skull only	Dry	Chembur, Greater Bombay, Maharashtra	M. S. Pradhan	23 Nov. 1982	
M/276	1 F	Skull only	Dry	Bandra, Greater Bombay, Maharashtra	M. S. Pradhan	27 May 1983	
M/283	1 F	Skull only	Dry	City ward, Bombay, Maharashtra	M. S. Pradhan	23 Sept. 1983	
M/284	1 M	Skin & Skull	Dry	City ward, Bombay, Maharashtra	M. S. Pradhan	23 Sept. 1983	Specimen displayed in museum
M/285	1 F	Skin & Skull	Dry	City ward, Bombay, Maharashtra	M. S. Pradhan	23 Sept. 1983	
M/296	1 M	Skull only	Dry	Kurla, Greater Bombay, Maharashtra	M. S. Pradhan	26 Sept. 1983	
M/297	1 F	Skull only	Dry	Kurla, Greater Bombay, Maharashtra	M. S. Pradhan	26 Sept. 1983	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/311	1 F	Skull only	Dry	Goregaon ('P' ward), Bombay, Maharashtra	M. S. Pradhan	27 Sept. 1983	
M/312	1 F	Skull only	Dry	Goregaon ('P' ward), Bombay, Maharashtra	M. S. Pradhan	27 Sept. 1983	
M/313	1 M	Skull only	Dry	Goregaon ('P' ward), Bombay, Maharashtra	M. S. Pradhan	27 Sept. 1983	
M/380	1 F	Skull only	Dry	Boriwali, Suburban Bombay, Maharashtra	M. S. Pradhan	19 Nov. 1984	
M/381	1 M	Skull only	Dry	Boriwali, Suburban Bombay, Maharashtra	M. S. Pradhan	19 Nov. 1984	
M/382	1 F	Skull only	Dry	Parel, Bombay City, Maharashtra	M. S. Pradhan	19 Nov. 1984	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/175	220-242	200-204	41	19-20	48.5-49.5	48-48.6	18.1-18.4	27.2-28.1	7.3-7.4	13.7-14.7	8	8.1-8.2	24.1-24.7	7.1-7.2	26-27
M/176	210	200	39	19	47.3	45.3	18.3	26.1	7.2	13.5	8	8.2	23.6	7	24.3
M/184					40.7-48.6	41.6-46.5	16.4-19.5	23.7-29.9	7-7.3	12.4-14.4	7.4-8.4	7.1-8.4	20.2-24	6.4-6.7	23-25.3
M/185					46.5-47.1	45.6-46.3	17.1-17.3	26.4-26.7	7-7.1	14.2-14.6	7.6-8.6	7.7-8.1	23.2-23.3	6.5-7	25.2-26.1
M/190					40.7-46.3	39.6-44.8	15.4-18.5	22.5-25.5	7.1-7.3	11.2-13.6	7.1-7.5	7.4-8.1	20-21.7	6.2-6.4	21.6-24.2

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/191	120+- 150+	166- 200	40.3- 43.5		44- 51.5	42.4- 50.1	18-21	24.4- 28.4	7.2- 7.3	12.2- 15.5	7.4- 7.7	7.3- 8.5	21.4- 24.2	7- 7.2	23.2- 26.2
M/195					43.1	41	17	23.7	7	12	7.2	7.4	20.3	6.3	22.4
M/199					43	42.1	17	23.4	6.3	12.7	7.1	7.4	20.3	6.2	22.7
M/200					31.4	30.2	10.2	17.3	6.2	8.4	6	5.1	16	5.7	16.5
M/201					40.2	39	14.7	22.1	6.4	11.3	8.5	7.6	19	6.5	21.1
M/202					44.2	43.1	16.5	24.4	6.7	13.3	7.3	7.1	21	6.3	22.6
M/220	300	225	41.1	18											
M/221	300	190	43.1	15.5+	49.5	48	19	27.4	7.6	14.1	8.5	7.3	20.4+	7.2	27.1
M/237					44.3	43.1	17	23	7.2	13	7.4			6.4	24.2
M/238					44.6	42.6	16.4	24.4	7.3	12.7	7.2	7.5	20.5	6.5	24.1
M/276					50.4	49.8	19.5	29	8.7	7.6	9.2	26.1	7.3	29	
M/283					41.7	39.2	15.7	23.1	6.7	11.6	7.6	7.1	19.8	6.3	23
M/284					46.8	45.1	17.1	27.1	7.2	14.2	8	7.4	18.5+	6.5	24.2
M/285	120+	156	36.1		40.1	39.1	15.6		6.5	12	7.2	7	19.2+	6	21.5
M/296					43.2	41.6	16.7	23.6	7.1	12.2	7.3	7.5	19.1	6.3	23
M/297					47.4	47.4	18.1	26.2	7.5	13.3	8.1	8.1	21+	7	25
M/311					45.2	43.7	15.3	25.1	7	13.1	7.7	7.6	22.1	7	23.2
M/312					47.7	46.2	16.7	26.4	7.8	14.1	8.1	7.4	23	7.1	25.4
M/313					50	48.6	20.6	27.7	7.5	15.2	8.1	9	23.7	7.3	27
M/380									7.5			6.6			25.5
M/381					46.6	45.3	18.1	26.2	6.5	14	6	7.5	20.5+	7	25
M/382					45.7	45.4	17	25.1	7.3	13.2	8.1	8	22.5	6.3	25



*Distribution* : Andhra Pradesh, Maharashtra, Tamil Nadu, West Bengal states within Indian limits (Port cities in India (Agrawal, 2000, Alfred *et al.* 2002).

*Elsewhere* : World wide (Alfred *et al.*, 2002).

*Remarks* : A bandicoot-like large rat with dorsum dark brown and venter grey. Tail obscurely bicoloured, shorter than head and body and relatively smaller ears. Fur coarse and spiny. Mammae 5 or 6 pairs. Basically *R. norvegicus* is an introduced species through transportation by human agencies and has initially established itself in the sea port cities of Asia. M/188 (1 specimen, 2 damaged skulls ), 216, 217, 218, 219 (1 skull each) not traceable.

### 32. *Rattus rattus narbadae* Hinton, 1918

1918. *Rattus rattus narbadae* Hinton, *J. Bombay nat. Hist. Soc.*, **26** (1) : 77.

2009. *Rattus rattus narbadae* : Pradhan, M. S. & Talmale, S. S., *Rec. zool. Surv. India, Occ. Paper. No.* **297** : 166.

*Common Names* : English : White bellied Rat, Roof Rat, Common House Rat; Hindi : Chuha; Bengali : Indur; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/606	1 M	Skin & Skull	Wet	Rest house No. 2, Tadoba, Tadoba National Park, Chandrapur Dist., Maharashtra	P. P. Kulkarni	30 March 1996	

#### *External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/606	155	195	29	21	37.5	35.4	9+	20	6.1	10.2	7.1	7.1	17.8	5.6	20

*Distribution* : Andhra Pradesh, Maharashtra, Madhya Pradesh, Gujarat states. Subspecies endemic to India.

*Remarks* : White bellied house rat having a long unicoloured and dark tail, always longer than Head and Body length, mostly exceeding 130% of the Head and Body. Dorsum dark and rufous brown while underparts white in colour, fur with some broad and flat spines in the dorsal pelage. 5 pairs of mammae present.

33. *Rattus rattus rattus* (Linnaeus, 1758)1758. *Mus rattus* Linnaeus, *Syst. Nat.*, 10th ed., 1 : 61.2009. *Rattus rattus rattus*: Pradhan, M. S. & Talmale, S. S., *Rec. zool. Surv. India, Occ. Paper No. 297* : 162.

*Common Names* : English : Roof Rat, Common House Rat, Ship Rat; Hindi : Chuha; Bengali : Indur; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/346	1 M	Skin & Skull	Dry	Parel, Bombay City, Maharashtra	M. S Pradhan	15 Nov. 1984	
M/347	1 F	Skin & Skull	Dry	Parel, Bombay City, Maharashtra	M. S Pradhan	15 Nov. 1984	Head cut
M/348	1 M	Skin & Skull	Dry	Parel, Bombay City, Maharashtra	M. S. Pradhan	15 Nov. 1984	Head cut
M/349	1 F	Skin & Skull	Dry	Parel, Bombay City, Maharashtra	M. S. Pradhan	16 Nov. 1984	Head cut
M/351	1 F	Skin & Skull	Dry	Parel, Bombay City, Maharashtra	M. S. Pradhan	17 Nov. 1984	
M/352	1 M	Skin & Skull	Dry	Parel, Bombay City, Maharashtra	M. S. Pradhan	21 Nov. 1984	
M/353	1 M	Skin & Skull	Dry	Andheri, Suburban Bombay, Maharashtra	M. S. Pradhan	21 Nov. 1984	
M/354	1 F	Skull only	Dry	Parel, Bombay City, Maharashtra	M. S. Pradhan	17 Nov. 1984	
M/355	1 M	Skull only	Dry	Parel, Bombay City, Maharashtra	M. S. Pradhan	17 Nov. 1984	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/356	1 M	Skull only	Dry	Parel, Bombay City, Maharashtra	M. S. Pradhan	23 Nov. 1984	
M/357	1 F	Skull only	Dry	Parel, Bombay City, Maharashtra	M. S. Pradhan	23 Nov. 1984	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/346	73.2	150	30.1		30.2	28.3	9.6	16.2	6.3	7.3	6.1	5	15.1	5.2	15.6
M/347	125+	212	33.1		40.3	38.6	15.1	22.2	6.2	11.2	7.1	7.3	18.7	6.3	22.1
M/348	54+	111	25.1		27.7	25.4	8.4	14.4	5.3+	6.6	5.6	4.2		5.4	
M/349	98+	182	31.1		35.4	33.2	13	18.4	6.4	9	7	5.2	16.2	6	18.7
M/351	140	145	24.1	13.6	31.1	28.7	9.2	17	6.2	7.4	6.1	5.2	15.3	6	17
M/352	145	155	29.3	13.4	32	30.2	11	17	6.3	7.7	6	5	15.5	5.4	16.5
M/353	145	172	30.1	16	32.1	30	11.1	17	6.2	8.2	6.2	5.2	15.2	5.3	17.2
M/354					36.5	33.6	13.2	19.1	6.6	9.3	6.9	6.3	17	5.5	18.4
M/355					36.4	33.7	13	19.1	6.5	9	7	6.3	17.3+	5.4	18.7
M/356					31.5	29.4	10.5	17.2	6.3	7.7	7	5.2		5.6	16.1
M/357					37.7	34.4	14	19.3	6.3	10.1	7	5.6	17.4	6	19.8

*Distribution* : Port cities in India.

*Elsewhere* : Worldwide.

*Remarks* : Jet black coloured, silky and soft furred rat with tail unicoloured and dark, longer than Head and Body length. Introduced species due to transportation by human agencies.

34. *Rattus rattus rufescens* (Gray, 1837)1837. *Mus rufescens* Gray, *Ann. Mag. Nat. Hist.*, **1** : 585.2009. *Rattus rattus rufescens* : Pradhan, M. S. & Talmale, S. S., *Rec. zool. Surv. India, Occ. Paper No.* **297** : 163.

*Common Names* : English : Roof Rat, Common House Rat, Ship Rat; Hindi : Chuha; Bengali : Indur; Gujarathi : Undar; Marathi : Undir; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/67	1 M 1 F	Skin & Skull	Wet	Bhawanipeth, Pune, Pune Dist., Maharashtra	M. S. Pradhan	02 March 1977	
M/68	3 M	Skin & Skull	Wet	Somwarpeth, Pune, Pune Dist., Maharashtra	M. S. Pradhan	08 Feb. 1977	
M/69	2 M 2 F	Skin & Skull	Wet	Sadashivpeth, Pune, Pune Dist. Maharashtra	M. S. Pradhan	07 Feb. 1977	
M/70	4 M 2 F	Skin & Skull	Wet	Market areas, Pune city, Pune Dist., Maharashtra	M. S. Pradhan	07 Feb. 1977	
M/71	1 M	Skin & Skull	Wet	Bhawanipeth, Pune, Pune Dist., Maharashtra	M. S. Pradhan	25 Feb. 1977	
M/72	1 F	Skull only	Dry	Bhawanipeth, Pune, Pune Dist., Maharashtra	M. S. Pradhan	11 March 1977	
M/73	2 M 4 F	Skin & Skull	Wet	Residential area, Nanapeth, Pune, Pune Dist., Maharashtra	M. S. Pradhan	28 Jan. 1977	
M/74	5 M 4 F	Skin & Skull	Wet	Residential area, Nanapeth, Pune, Pune Dist., Maharashtra	M. S. Pradhan	15 April 1977	
M/75	4 M 2 F	Skin & Skull	Wet	Hadapsar, Pune, Pune Dist., Maharashtra	M. S. Pradhan	15 April 1977	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/77	1 M	Skin & Skull	Dry	WRS office building, ZSI, Shivajinagar, Pune, Pune Dist., Maharashtra	B. K. Tikader	24 Nov. 1976	
M/78	1 M	Skin & Skull	Dry	WRS office building, ZSI, Shivajinagar Pune, Pune Dist., Maharashtra	B. K. Tikader	12 July 1976	
M/79	1 M	Skin & Skull	Dry	WRS office building, ZSI, Shivajinagar Pune, Pune Dist., Maharashtra	B. K. Tikader	03 Aug. 1976	
M/80	1 F	Skin & Skull	Dry	WRS office building, ZSI, Shivajinagar Pune, Pune Dist., Maharashtra	B. K. Tikader	03 July 1976	
M/81	1 M	Skin & Skull	Dry	WRS office building, ZSI, Shivajinagar Pune, Pune Dist., Maharashtra	B. K. Tikader	03 Aug. 1976	
M/82	1 F	Skin & Skull	Dry	WRS office building, ZSI, Shivajinagar Pune, Pune Dist., Maharashtra	B. K. Tikader	03 July 1976	
M/83	1 M	Skin & Skull	Dry	WRS office building, ZSI, Shivajinagar Pune, Pune Dist., Maharashtra	B. K. Tikader	03 Aug. 1976	
M/84	1 M	Skin & Skull	Dry	WRS office building, ZSI, Shivajinagar Pune, Pune Dist., Maharashtra	B. K. Tikader	03 July 1976	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/90	3 M 6 F	Skin & Skull	Wet	Nanapeth, Pune, Pune Dist., Maharashtra	M. S. Pradhan	10 June 1977	
M/91	1 F	Skin & Skull	Wet	Sadashivpeth, Pune, Pune Dist., Maharashtra	M. S. Pradhan	14 July 1977	Skull not dissected; Young one
M/102	1 M	Skin & Skull	Dry	Pune city, Maharashtra	Pune Corporation	15 Nov. 1977	Donated
M/103	1 F	Skin & Skull	Dry	Pune city, Maharashtra	Pune Corporation	15 Nov 1977	Donated.
M/104	1 F	Skin & Skull	Dry	Pune city, Maharashtra	Pune Corporation	15 Nov. 1977	Donated
M/105	1 F	Skin & Skull	Dry	Pune city, Maharashtra	Pune Corporation	15 Nov. 1977	Donated
M/106	1 F	Skin & Skull	Dry	Pune city, Maharashtra	Pune Corporation	15 Nov. 1977	Donated
M/107	1 M	Skin & Skull	Dry	Pune city, Maharashtra	Pune Corporation	15 Nov. 1977	Donated
M/108	1 M	Skin & Skull	Dry	Pune city, Maharashtra	Pune Corporation	15 Nov. 1977	Donated
M/109	5 M 3 F	Skin & Skull	Wet	Mandai, Pune city, Pune Dist., Maharashtra	M. S. Pradhan	21 Feb. 1978	
M/110	1 M	Skin & Skull	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	03 June 1978	Donated
M/111	1 M	Skin & Skull	Dry	Recidence in the city area, Pune, Pune Dist., Maharashtra	Pune Corporation	02 June 1978	Donated

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/114	1 M	Skin & Skull	Dry	Kurundwad Inspection Benglow, Kolhapur Dist., Maharashtra	M. S. Pradhan	09 June 1978	
M/115	1 F	Skin & Skull	Dry	Kurundwad Inspection Benglow, Kolhapur Dist., Maharashtra	M. S. Pradhan	09 June 1978	Skull not found
M/122	1 M	Skin & Skull	Dry	Godown, Nanapeth, Pune, Maharashtra	Pune Corporation	27 June 1978	Donated
M/126	1 F	Skin & Skull	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	05 June 1978	Donated
M/127	1 M	Skin & Skull	Dry	Hadapsar, Sholapur road, Pune City, Maharashtra	M. S. Pradhan	27 April 1979	Skull not found
M/128	1 F	Skin & Skull	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	19 June 1978	Donated
M/129	1 M	Skin & Skull	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	29 June 1978	Donated
M/130	1 F	Skin & Skull	Dry	Hadapsar, Pune City, Maharashtra	M. S. Pradhan	27 April 1979	
M/131	1 M	Skin & Skull	Wet	Rest house compound, Ankaleshwar, Broach (=Bharuch) Dist., Gujarat	G. M. Yazdani	19 Nov. 1972	Skull damaged
M/132	5 F	Skin & Skull	Wet	Pune city, Pune Dist., Maharashtra	M. S. Pradhan	14 June 1979	All head cuts; skull not dissected
M/139	1 F	Skin & Skull	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	22 June 1978	Donated

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/140	1 F	Skin only	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	16 June 1978	Donated
M/142	1 F	Skin & Skull	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	07 June 1978	Donated
M/143	1 F	Skin & Skull	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	01 June 1978	Donated
M/144	1 F	Skin & Skull	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	01 July 1978	Donated
M/145	1 M	Skin & Skull	Dry	Nanapeth, Pune city, Maharashtra	Pune Corporation	23 June 1978	Donated
M/148	1 M 1 F	Skin & Skull	Wet	Ketkarwada, Shaniwarpeth, Pune, Maharashtra	S. M. Ketkar	04 Jan. 1961	Young ones; Measurements of one specimen are given
M/150	1 F	Skin & Skull	Wet	Edlabad, Jalgaon Dist., Maharashtra	R. H. Kamble	05 Feb. 1979	
M/168	2 F	Skin & Skull	Wet	Model colony, Pune, Maharashtra	S. S. Pawar	21 June 1980	Heads cut
M/197	1 F	Skull only	Wet	Residential areas Narayannagar, Ghatkopar West, Bombay, Maharashtra	M. S. Pradhan	31 July 1982	
M/207	1 M	Skull only	Wet	Pune City, Pune Dist., Maharashtra	Pune Corporation	13 July 1982	Donated



ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/208	1 F	Skull only	Wet	Hotel in Parel, Bombay, Maharashtra	M. S. Pradhan	29 July 1982	
M/209	1 F	Skull only	Wet	Pune City, Pune Dist., Maharashtra	Pune Corporation	13 July 1982	Donated
M/210	1 M	Skull only	Wet	Pune City, Pune Dist., Maharashtra	Pune Corporation	13 July 1982	Donated
M/211	1 M	Skull only	Wet	Pune City, Pune Dist., Maharashtra	Pune Corporation	13 July 1982	Donated
M/212	1 F	Skull only	Wet	Pune City, Pune Dist., Maharashtra	Pune Corporation	13 July 1982	Donated
M/213	1 M	Skull only	Wet	Residential complex, Parel, Bombay, Maharashtra	M. S. Pradhan	29 July 1982	
M/214	1 M	Skull only	Wet	Residential areas near Shiwree railay station, Bombay, Maharashtra	M. S. Pradhan	29 July 1982	
M/215	1 M	Skull only	Wet	Residential complex, Parel, Bombay, Maharashtra	M. S. Pradhan	29 July 1982	
M/239	1 F	Skull only	Dry	Andheri, Greater Bombay, Maharashtra	M. S. Pradhan	29 Nov. 1982	
M/240	1 M	Skull only	Dry	Andheri West, Greater Bombay, Maharashtra	M. S. Pradhan	26 Nov. 1982	
M/241	1 F	Skull only	Dry	Andheri West, Greater Bombay, Maharashtra	M. S. Pradhan	26 Nov. 1982	
M/242	1 M	Skull only	Dry	Andheri West, Greater Bombay, Maharashtra	M. S. Pradhan	26 Nov. 1982	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/243	1 M	Skull only	Dry	Andheri West, Greater Bombay, Maharashtra	M. S. Pradhan	26 Nov. 1982	
M/244	1 F	Skull only	Dry	Goregaon West, Greater Bombay, Maharashtra	M. S. Pradhan	27 Nov. 1982	
M/245	1 F	Skull only	Dry	Goregaon West, Greater Bombay, Maharashtra	M. S. Pradhan	27 Nov. 1982	
M/251	1 F	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/252	1 F	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/253	1 M	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/254	1 F	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/255	1 F	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/256	1 M	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/257	1 F	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/258	1 M	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/259	1 F	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/260	1 F	Skull only	Dry	Pune City, Pune Dist., Maharashtra	M. S. Pradhan	03 Oct. 1983	
M/266	1 unsexed	Skull only	Dry	Andheri West, Greater Bombay, Maharashtra	M. S. Pradhan	25 May 1983	
M/275	1 M	Skull only	Dry	Andheri East, Greater Bombay, Maharashtra	M. S. Pradhan	25 May 1983	
M/287	1 F	Skin & Skull	Dry	City Ward, Bombay, Maharashtra	M. S. Pradhan	23 Sept. 1983	
M/289	1 F	Skin & Skull	Dry	Ghatkopar, Bombay, Maharashtra	M. S. Pradhan	24 Sept. 1984	
M/290	1 F	Skull only	Dry	Ghatkopar, Bombay, Maharashtra	M. S. Pradhan	24 Sept. 1984	
M/291	1 M	Skull only	Dry	Goregaon East, Bombay, Maharashtra	M. S. Pradhan	24 Sept. 1984	
M/315	1 F	Skin & Skull	Dry	Mahad town, Mahad, Raigad Dist., Maharashtra	M. S. Pradhan	18 Sept. 1981	
M/316	1 F	Skin & Skull	Dry	Mahad town, Mahad, Raigad Dist., Maharashtra	M. S. Pradhan	18 Sept. 1981	
M/317	1 F	Skin & Skull	Dry	Mahad town, Mahad, Raigad Dist., Maharashtra	M. S. Pradhan	18 Sept. 1981	
M/318	1 M	Skin & Skull	Dry	Mahad town, Mahad, Raigad Dist., Maharashtra	M. S. Pradhan	19 Sept. 1984	
M/319	1 F	Skin & Skull	Dry	Mahad town, Mahad, Raigad Dist., Maharashtra	M. S. Pradhan	19 Sept. 1984	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/320	1 F	Skin & Skull	Dry	Mahad town, Mahad, Raigad Dist., Maharashtra	M. S. Pradhan	19 Sept. 1984	
M/321	1 M	Skin & Skull	Dry	Mahad town, Mahad, Raigad Dist., Maharashtra	M. S. Pradhan	19 Sept. 1984	
M/332	1 M	Skin & Skull	Dry	Agriculture Research Centre, Karjat, Raigad, Maharashtra	M. S. Pradhan	03 Oct. 1981	
M/333	1 M	Skin & Skull	Dry	Agriculture Research Centre, Karjat, Raigad, Maharashtra	M. S. Pradhan	03 Oct. 1981	
M/335	1 M	Skin & Skull	Wet	In and around rest house, Jat, Sangli Dist., Maharashtra	A. S. Mahabal	21 Sept. 1984	
M/383	3 M 4 F	Skin & Skull	Wet	Nanapeth, Pune, Maharashtra	M. S. Pradhan	09 June 1978	Subadult / young (one each), skull not dissected
M/384	1 F	Skin & Skull	Wet	Rest house Kasa, Thane Dist., Maharashtra	M. S. Pradhan	05 March 1984	Skull damaged
M/385	1 M 2 F	Skin & Skull	Wet	Rest house Kasa, Thane Dist., Maharashtra	M. S. Pradhan	06 March 1984	
M/399	1 M	Skin & Skull	Wet	Jawahar Nagar, Pune, Maharashtra	T. K. Roy-choudhary	09 Aug. 1985	
M/400	1 M	Skin & Skull	Wet	Jawahar Nagar, Pune, Maharashtra	T. K. Roy-choudhary	09 Aug. 1985	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/402	2 M 1 F	Skin & Skull	Wet	Pune City, Maharashtra	M. S. Pradhan	18 June 1985	
M/411	1 M 2 F	Skin & Skull	Wet	F.D.C.M. Godown Khandbara, Dhulia Dist., Maharashtra	M. S. Pradhan	17 Nov. 1985	
M/413	1 F	Skin & Skull	Dry	Panvel Rest house, Raigad Dist., Maharashtra	M. S. Pradhan	27 Sept. 1981	
M/414	1 M	Skin & Skull	Dry	Panvel Rest house, Raigad Dist., Maharashtra	M. S. Pradhan	27 Sept. 1981	
M/418	1 F	Skin & Skull	Dry	Laling Hill Range, Arvi, Dhulia dist., Maharashtra	M. S. Pradhan	03 Dec. 1985	
M/419	1 F	Skin & Skull	Dry	Laling Hill Range, Arvi, Dhulia dist., Maharashtra	M. S. Pradhan	03 Dec. 1985	
M/420	1 M	Skin & Skull	Dry	Laling Hill Range, Arvi, Dhulia dist., Maharashtra	M. S. Pradhan	03 Dec. 1985	
M/431	1 F	Skin & Skull	Wet	Dhadgaon Rest house, Tal. Akrani, Dhulia Dist., Maharashtra	R. M. Sharma & D. B. Bastawade	26 Jan. 1986	
M/432	1 M	Skin & Skull	Wet	Dhadgaon Rest house, Tal. Akrani, Dhulia Dist., Maharashtra	R. M. Sharma & D. B. Bastawade	26 Jan. 1986	
M/433	1 M 1 F	Skin & Skull	Wet	Prakasha Rest house, Dhulia Dist., Maharashtra	A. S. Mahabal	28 July 1986	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/434	1 F	Skin & Skull	Wet	Shirpur Rest house, Dhulia Dist., Maharashtra	A. S. Mahabal	25 July 1986	
M/435	1 M	Skin & Skull	Wet	Sanjay Gandhi Vasahat, Pashan, Pune, Maharashtra	P. R. Salunke	19 Sept. 1986	
M/436	1 M	Skin & Skull	Wet	Shivajinagar, Pune city, Pune Dist., Maharashtra	M. S. Pradhan	15 Feb. 1985	Specimen damaged
M/437	1 unsexed	Skin & Skull	Wet	Sanjay Gandhi Vasahat, Pashan, Pune, Maharashtra	P. R. Salunke	19 Sept. 1986	Young one; measurements not taken
M/440	1 M	Skin & Skull	Wet	Ambenally Guest house, Mahabaleshwar, Satara Dist., Maharashtra	R. H. Kamble	03 Jan. 1985	Head cut
M/441	1 F	Skin & Skull	Wet	Rest house Khardi, Thane Dist., Maharashtra	M. S. Pradhan	22 Oct. 1986	
M/456	1 M	Skin & Skull	Wet	Rest house Harsul, Nasik Dist., Maharashtra	M. S. Pradhan	14 Nov. 1987	
M/472	1 F	Skin & Skull	Wet	Darna Inspection Benglow, Nasik Dist., Maharashtra	D. B. Bastawade	16 Feb. 1985	Head cut
M/483	5 M 1 F	Skin & Skull	Wet	Khandbara town, Dhulia Dist., Maharashtra	M. S. Pradhan	18 Nov. 1985	
M/485	1 F	Skin & Skull	Wet	Rest house Pundre, Kolhapur Dist., Maharashtra	M. S. Pradhan	20 Feb. 1989	
M/490	1 M	Skin & Skull	Wet	Mohol (Camp campus) Rest house, Sholapur Dist., Maharashtra	A.S. Mahabal	31 Aug. 1983	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/491	2 M	Skin & Skull	Wet	Residential areas Ambad, Jalna Dist., Maharashtra	P. S. Sardeshpande	21 Oct. 1989	Donated
M/495	1 M 1 F	Skin & Skull	Wet	Near Residential areas, Parbhani, Parbhani Dist., Maharashtra	P. S. Sardeshpande	10 Dec. 1989	Donated
M/506	1 M	Skin & Skull	Wet	Aundhgaon, Pune city, Pune Dist., Maharashtra	M. S. Pradhan	06 Sept. 1990	
M/532	2 F	Skin & Skull	Dry	Kolkaz Rest house, Melghat Tiger Reserve, Amravati Dist., Maharashtra	M. S. Pradhan	13 Feb. 1992	
M/533	1 M	Skin & Skull	Wet	Around Rest house Kolkaz, Melghat Tiger Reserve, Amravati Dist., Maharashtra	M. S. Pradhan	13 Feb. 1992	
M/534	2 M	Skin & Skull	Wet	Around Rest house Kolkaz, Melghat Tiger Reserve, Amravati Dist., Maharashtra	M. S. Pradhan	13 Feb. 1992	
M/540	1 F	Skin & Skull	Wet	Sinhagad Fort, Pune Dist., Maharashtra	M. S. Pradhan	08 Oct. 1993	
M/541	4 unsexed	Skin & Skull	Wet	Wireless station, Sinhagad Fort, Pune Dist., Maharashtra	M. S. Pradhan	08 Oct. 1993	Young ones; measurements not taken
M/557	1 F	Skin & Skull	Wet	Molem rest house and around, Sanguem Tal., Goa State	M. S. Pradhan	13 Sept. 1993	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/584	1 M	Skin & Skull	Dry	Semadoh complex, Melghat Tiger Reserve, Amravati Dist., Maharashtra	M. S. Pradhan	07 April 1994	
M/587	4 M 4 F	Skin & Skull	Wet	Koktu Rest house, Melghat Tiger Reserve, Amravati Dist., Maharashtra	S. G. Patil	30 Mar. 1994	
M/605	1 M 1F	Skin & Skull	Wet	Rest house No. 2, Tadoba National Park, Chandrapur Dist., Maharashtra	P. P. Kulkarni	30 Mar. 1996	
M/622	1 M	Skin & Skull	Wet	Indraprastha complex near Pawna River, New Sangvi, Pune, Pune Dist., Maharashtra	S. S. Talmale	13 Oct. 2002	
M/623	1 M	Skin & Skull	Wet	Indraprastha complex near Pawna River, New Sangvi, Pune, Pune Dist., Maharashtra	S. S. Talmale	18 Oct. 2002	
M/624	1 F	Skin & Skull	Wet	Indraprastha complex near Pawna River, New Sangvi, Pune, Pune Dist., Maharashtra	S. S. Talmale	20 Oct. 2002	
M/666	1 M	Skin & Skull	Wet	Akurdi, Pune, Pune Dist., Maharashtra	T. Borolikar & S. Shegar	02 Sept., 2004	Donated
M/681	2 M	Skin & Skull	Wet	Gossary shop, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	22 Nov. 2004	
M/684	1 M	Skin & Skull	Wet	Paddy field Samewada vill., Lakhani Tal., Bhandara Dist., Maharashtra	S. S. Talmale	19 Nov. 2004	Skull damaged



ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/685	1 M	Skin & Skull	Wet	Residential area, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	12 Nov. 2004	
M/686	1 M	Skin & Skull	Wet	Residential area, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	22 Nov. 2004	
M/687	1 F	Skin & Skull	Wet	Residential area, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	22 Nov. 2004	
M/688	1 M	Skin & Skull	Wet	Residential area, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	12 Nov. 2004	
M/689	1 F	Skin & Skull	Wet	Residential area, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	12 Nov. 2004	
M/690	1 F	Skin & Skull	Wet	Residential area, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	24 Nov. 2004	
M/691	1 M	Skin & Skull	Wet	Residential area, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	25 Nov. 2004	
M/714	2 M	Skin & Skull	Wet	Forest Rest house, Lonar Wildlife Sanctuary, Buldana Dist., Maharashtra	S. G. Patil	24 Sept. 2003	
M/765	1 M	Skin & Skull	Wet	Upper Bhavani (Pines) Alt. 2300mtr., Nilguries, Tamil Nadu	K. Shankar	May 1996	Donated
M/766	1 F	Skin & Skull	Wet	Upper Bhavani (Wattle) Alt. 2300mtr., Nilguries, Tamil Nadu	K. Shankar	Sept. 1996	Donated
M/767	1 F	Skin & Skull	Wet	Upper Bhavani, Alt. 2300mtr., Nilguries, Tamil Nadu	K. Shankar	Sept. 1996	Donated
M/768	1 F	Skin & Skull	Wet	Upper Bhavani (Wattle), Alt. 2300mtr., Nilguries, Tamil Nadu	K. Shankar	Sept. 1996	Donated; specimen damaged

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/819	1 unsexed	Skin & Skull	Wet	Malewadi dam site & around, Radhanagari Wildlife Sancctuary, Kolhapur Dist., Maharashtra	S. S. Talmale	23 Feb 2010	Skull. damaged
M/830	1 M	Skin & Skull	Wet	Sengaltheri, Kalakad Mundanthurai Tiger Reserve, Kerala	D. Muduppa	29 June 1996	Donated
M/831	1 M	Skin & Skull	Wet	Sengaltheri, Kalakad Mundanthurai Tiger Reserve, Kerala	D. Muduppa	28 June 1996	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/67	150	192-202	32.6-35.2	19.2-21.4	40.2-43.2	37.3-41.2	15.5-16.5	21.2-23.2	6.3-7	10.3-12.2	7.1-7.2	7.2-7.4	18.7-20.4	6.3-6.4	20.4-22
M/68	130-165	152-189	29.3-36.1	18.2-22	35.1-42.7	33.3-39.7	13.7-16.1	15.7-23.1	6.1-6.7	9.3-11.2	5.7-7.4	6.2-7.5	16.8-18.7	5.7-6.2	17.4-22
M/69	132-170	177-180	30.3-32.6	18.1-20.5	34.2-37.7	34-36.5	12.1-14.3	19-20.4	6.3-6.6	9.1-10.4	6.5-7.2	6.4-7.1	17.1-18	5.7-6.2	18.3-19.5
M/70	120-175	127-181	29.6-33.4	18-22.3	33.3-44	30-41.3	10.7-18	17.4-23.1	5.1-6.7	8.6-12.2	5.1-7.8	5.7-8.1	15.4-20.5	5.2-7.1	17.2-23.5
M/71	190	195	34	18.1	38	35.6	12.5	20.1	6.3	16.2		6.7	18	6.1	18.7
M/72					37		13.3	19.4	6.1	10		6.7	17.6	6.2	19.6
M/73	140-165	120-216	29.3-34.1	20.2-31.2	37.5-43.1	37.2-40.7	13.6-16.2	20.2-23	6-6.4	10.3-12.4	6.2-7	7-8.6	17.6-20.5	5.7-6.7	19.2-22.5
M/74	127-160	169-201	29.1-33.4	18.6-21.7	37.3-41.2	35.1-39.2	13.4-16.3	20.3-22.2	6-6.7	10.1-11.4	6.2-7.5	6.2-8.2	17.2-19.2	5.5-6.3	19.2-22

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/75	112- 160	130+- 231	28.5- 33.2	18- 20.7	37- 41.2	34.1- 39.2	12.8- 15.5	18.7- 21.6	6.2- 6.4	9.4- 11.3	6.2- 7.2	6.1- 7.2	16.8- 18.5	5.7- 6.4	18.7- 22.2
M/77	190	230	37	20	43	40.2	16.1	23	6.4	11.6	7.5	7.7	19.1	6	22.1
M/78	175	230	33	19	43	40.3	16	23.1	6.5	11.7	7.2	7.4	19.7	6.1	21.2
M/79	168	215	34	18	44.2	41.8	16	23.5	6.4	12.2	7.5	8	19.2	6.3	22.1
M/80	190	170	32	21	38.8	36.2	13.7	20	6.6	9.5	6.5	6.5	18	5.5	20.3
M/81	180	215	36	23	42.2	39.3	14.8	21.6	6.5	10.3	7.4	7.3	18.6	5.6	21.2
M/82	185	225	34	21	42.1	39.3	15.3	22.3	6.3	11.5	7.2	7.3	19.7	6.2	21.7
M/83	182	220	35	20	44.3	42	18	24.1	6.6	12.7	8	8	19.5	6.1	22.7
M/84	189	225	35	20	42.3	40.7	15.2	23	6.7	11.4	7.7	7.2	20	6.1	22
M/90	83+- 155	145- 210	27.5- 32.3	16.1- 20.3	35.3- 41.6	33- 39.4	12.2- 17.5	18.2- 22.1	6.1- 6.6	8.7- 12	6.5- 7.7	6- 8.1	16.4- 18.5	5.5- 6.6	17.3- 21.5
M/91	61	99	23.3	12.5											
M/102	180	160	28	18	36.5	33.3	12.4	19.2	6.3	9	6.5	6.3	16.6	5.5	18
M/103	125	150	30	14+	32.5	29.2	11.7	16.7	6.2		6.2	5.1	15.3	5.7	16.5
M/104	175	190	36	23	37.8	35.5	13.4	20.4	6.2	10	7	6.8	18.2	5.8	19.3
M/105	180	200	33	22	35.6	33.4	12.2	18.7	6.2		7.2	6.3	17	5.5	17.1
M/106	158	160	30	22	37.1	34.7	13.4	19.7	6.1	9.3	6.5	6.6	17.2	6	19.5
M/107	180	215	34	22	36.3	33.7	12.6	19.1	6.2	9.1	7	6.3	16.7	5.5	18.1
M/108	115	135	26	21	33.2	30.4	11	17.1	6.2		6.5	5.7	15.4	5.6	16.6
M/109	104- 160	95+- 187	29- 34.4	18- 23	37.3- 43	34- 40.4	13- 15	19.1- 23.2	6.2- 6.5	8.5- 12.1	6.3- 7.4	6.4- 7.1	17.4- 19.2	6- 6.5	18.2- 21.7
M/110	190	21	32	22	42	39.3	15.5	21.3	6.5	11.2	7.7	7.5	18	6	21.4

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/111	156	180	26	19	32+		12.3	19	6.3	8.4		6.1	16.5	6	17.3
M/114	185	190	28.5	16+											
M/115	185	190	28	18+											
M/122	210	280	34	19	38.5	36.2	14.1	20.1	6.2	9.4	7	6.5	18	5.7	19.7
M/126	185	205	28	19	35	32.4	12.1	18.3	6	9.2	6.1	6.1	16.4	5.5	17.3
M/127	175	185	32.2	16+											
M/128	200	225	30	18	39	36.6	13.7	20.2	6.4	9.7	6.5	6.6	17.1	5.7	15.5
M/129	210	240	29	20	41.5	39.7	15	22.3	6.5	12.1	7.1	7.4	18.3	6	21.3
M/130	145	175	26	16	35.6	33.4	13	19.1	6.4	9.2	6.7	5.7	17.2	6.1	19.7
M/131	151	170	29.7	20				20.4	6.1	10.5		6.4	19.1	6.3	
M/132	95+- 110+	181- 215	30- 34.3												
M/139	200	220	31	16+	40.5	38.3	14.5	22	6.2	11.2	7.5	7.1	19.5	6.1	21
M/140	185	190+	28.3	17.6											
M/142	140	180	29		38.1	35.4	14.1	19.6	6.1	10.1	6.6	7.1	17.2	6	18.2
M/143	190	230	32	16+	38.7	36.3	13.3	20.7	6.3	10	7.2	7.2	18.2	6.1	19.7
M/144	160	140+	28.5	15+	40.7	38.4	15	21.7	6.2	10.5	7.1	7	19	7	20.7
M/145	175	180	30	19	38.5	36.2	14.1	20	6.5		6.8	7.6	17.7	6.5	19.8
M/148	38+	109	26.4		29.4	27.4	9.5	15	6	7	5.5	5.1	14.3	5.4	
M/150	145	150	31.1	17	37.6	34.7	13.1	20	6.4	9.5	7.2	6.8	18.1	6.1	19.1
M/168	83+- 90+	160+- 180	30.1- 30.2		38.3- 38.4	35.4- 36.2	13.1- 13.5	19.5- 20.2	6.1- 6.3	9.7- 10.1	6.4- 6.5	6-6.7	18.2- 18.5	5.7- 6.2	19.5- 19.7
M/197					41.2	39.5	15	22.3	5.7	12	7.1	7.5	19.1	6.3	20.7

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/207					36.1	33.2	12.6	18.6	5.5	9.1	6.2	6.4	17.2	5.3	17.7
M/208					40	38.2	15.1	21.7	6.1	11.6	7.3	7.6	18.7	4.4	21.3
M/209					38.3	35.5	14	20.2	6.2	10.1	6.7	7.3	18.2	6.1	19.3
M/210					32.2	29.1	11	16.5	6.2	8.1	6.3	5.1	15.1	5.4	16.2
M/211					39.3	36.6	14.7	20.6	6	10.3	6.5	6.7	18.3	6	18.7
M/212					40.5	38.2	14.4	21.2	6.2	10.6	7.1	7.6	19.1	6.4	21.2
M/213					39.5	37.2	15.2	21.1	6.1	10.6	6.3	7.2	18.2	6	20.3
M/214					41	38.2	15.7	21.5	6.4	11.1	7.1	7.3	18.2	6	21.6
M/215					38.1	36.1	13.5	20.2	6	10	7.3	7	17.3	5.5	20
M/239					38.2	36.2	13.2	20.3	6.5	10.1	6.6	6.7	17.6	6	20.1
M/240					39	36.5	13.2	20.1	6.4	9.6	6.4	6.7	18.2	6	20.2
M/241					38.1	36	12.8	21	6.2	10	6.4	7.2	18.1	6	21.2
M/242					40.4	37.4	14.1	22.1	6.1	11	7	8	18.3	6.1	19.3
M/243					40.7	38	15.2	22	6.2	11.1	7	7.4	18.2	6.1	20.1
M/244					42.3	40.3	15.2	23.1	6.5	12.1	8.2	8.1	20.4	6.2	22.1
M/245					36.7	34.1	12.3	19.6	6.4	9.6	6.2	6.6	17.2	5.5	19.2
M/251					39.6	37.2	14.3	21	6.4	11	8	7	18.7	6.1	20.6
M/252					39.4	38.1	14	21.2	6.1	11.1	8	7.5	19.2	6.5	21.1
M/253					41	38.2	14.2	21.6	6.6	11	8	7.1	19.1	6.5	21.6
M/254					38.1	35.1	13.3	19.4	6.1	10.1	7.3	6.6	15.6	5.7	18.7
M/255					35.3	32	12.5	18.3	6.1	9.2	6.6	5.7	16.4	5.3	18.2
M/256					41.2	39.5	13.6	22.1	6.2	12	7.4	7.3	20	7	22.4
M/257					38.5	36.7	10.4	20	6.4	10.4	7.2	7.4	17.2	6.1	19.5

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/258					43.4	41	16	23	6.6	12.5	7.7	8.3	20.1	6.1	22.5
M/259					39.1	36.3	15.1	20.4	6.1	10.6	7.4	7.4	17.3	6.1	20.2
M/260					33.4	29.6	11.7	17.4	6.1	8.7	6.2	5.4	16.1	5.2	17.2
M/266					39.4	37.4	14.5	21.6	6.1	11.1	6.1	7.6	18.2	6.1	20.2
M/275					38	34.2	13.2	18.7	6.2	9.5	6.5	6.4	17.4	5.5	18.4
M/287	195	220	32.5	18	42.1	39.4	16.2	22.5	6.2	11.7	7.2	7.6	19.2	6.3	21.5
M/289	190	190	31.4	16.4	32.5	30	11.6	17.7	6.2	8	6.7	5.6	15.5	5	17
M/290					39.3	36.7	14.1	21.1	6.6	10.2	7.5	7.1	18.3	6.1	20
M/291					39.7	36.7	14	20.7	6.4	11.2	7.6	7.3	18.1	6	21.6
M/315	190	210	30.5	17.8	40	37.4	15.3	21.2	6.1	10.5	6.8	7.1	19.1	6	21.1
M/316	200	210	34	17.2	41.6	39.6	15.4	23.1	6.4	12.1	7.6	7.2	19.3	6.4	21.5
M/317	135	150	25.9	15	32.2	29.6	12.2	17.2	6	7.5	5.6	5.5	15.3	5.2	16.2
M/318	190	195	28	15.5	40.1	37.4	15	21.1	6.5	10.1	6.6	7.2	18.3	5.6	20.2
M/319	195	200	31.7	15.2	39.7	37.4	15.2	20	6	11	7	7.1	20.3	6.2	20.1
M/320	185	190+	30	16.4	41.1	38.1	15	22	6.2	11	7.1	7.1	18.2	6.2	20.2
M/321	205	195	35.5	21	44.7	41.6	16.6	24.4	6.5	12.4	7.2	8.6	20.1	6	22.7
M/332	180	112+	38.4	16	40.6	38.3	15.1	21.4	6.1	11.2	7.2	7.1	18.1	5.7	20.3
M/333	135	155	28.7	15	34.7	32.2	11.6	18.2	6.2	8.2	6.2	6.2	16.7	5.6	17.1
M/335	155	180	30.4	20.1	38.6	36.4	13.3	20.3	6.2	10.2	7.2		18.4	6.1	20
M/383	87- 160	120- 192	25.5- 35.3	17.3- 20.7	36.7- 39.3	34.5- 36.5	12.3- 15.5	19.7- 20.5	6.1- 6.4	9.4- 10.3	6- 7.2	6.2- 7.2	17.2- 19	5.7- 6.5	18.2- 20.4
M/384	154	187	30.6	20.1	34+		14.1	20.2	6.1	10.3		6.4	18.1	6.1	20.3
M/385	95- 159	92+- 150	29.4- 32.7	15.1- 20.8	31.7- 40.1	29.7- 37.3	11.2- 13.7	7.5- 21.1	6.1- 6.4	8- 10.2	7- 8.4	5.2- 7.1	15.5- 18.5	5.7- 6.4	16.6- 20.5

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/399	151	180	31.4	19.2	39.1	36	13	20.1	6.3	10.2	7.5	6.8	17.4	5.1	19.2
M/400	150	183	31	18.6	38.4	36.1	13.3	20.4	6.4	9.4	6.7	6.6	17.2	6.2	19.1
M/402	110- 135	165- 180	29.2- 32.3	17.7- 20.4	37- 40	34.4- 37.4	14.3- 14.5	19.3- 21.1	6- 6.2	10- 11.1	6.3- 6.7	6.2- 7.2	16.6- 17.7	5.4- 6.2	19.5- 20.3
M/411	84- 90	107- 130	24.2- 25.4	15.1- 17.5	29.5- 30.1	27- 27.1	11.4- 12.5	13.3- 14.4	5.6- 6	6.5- 7	6.1- 7.3	3.4- 5.1	14- 15	5- 5.2	15.4- 15.7
M/413	170	193	31.5	21.1	41.4	39.4	15.1	22	6.5	11.3	7.3	7.3	18.4	6.2	21.2
M/414	190	200	31.3	16	41	37.8	14.4	20.6	6.4	10.2	7.3	6.2	18.2	6.3	20.3
M/418	165	190	29.1	17.2	39.3	37	14.1	21.1	6.2	11.1	7	7.3	18.2	6	20.6
M/419	150	205	31	18.1	39.1	36.6	14.6	20.5	6.1	10.3	7.1	7.2	18.4	6.2	21
M/420	95	117	24.7	14	29	26.2	9.6	15.1	5.5	7.3	5.6	5	13.5	5.2	14.6
M/431	125	170	30.3	19.6	36.4	33.7	13.2	19	6.5	9.2	6.6	6.7	18	6.1	19.3
M/432	147	158	29.6	19.5	36.3	34	13.1	19	6.3	9	6.9	7	18.1	6.1	18.5
M/433	140- 162	170- 200	32.1- 33	18.1- 21.4	36.7- 40.2	32.6- 37.4	14- 15.2	18.8- 20.6	6.3	9- 10.6	6.5- 7.6	6.2- 7	17.2- 18.1	5.6- 6.1	18.6
M/434	140	160	285	18.7	36.5	33.4	12.8	19.1	6.4	9.1	7.1	6.2	17.1	5.5	19.2
M/435	120	126	33	17.4	33.1	31.7	11	18.1	6.1	8.7	6	5.3	16.2	6	17.2
M/436	47+	72+	20.1		25.5	23.7		13.1	5	6.4	5.2	5	14	5.3	13.7
M/440	100+	180	31		38.5	36.7	13.2	20.5	6.2	10.3	7.1	6.8	18.2	6	20
M/441	150	193	31	18.4	39.3	36.4	15	20.1	6.3	10.1	6.7	7	18.4	5.6	20
M/456	110	130	27.3	16.5	31.7		10.1	17.3	6.1	7.5	6.4	5	15.7	5.6	16.7
M/472	100+	155	29		35	32.1	11.6	18.4	6.4	8.7	6.6	5.6	16.7	5.7	18.4
M/483	100- 145	131- 175	27.4- 32.3	16.5- 20.1	34.2- 38.1	32.1- 37.1	12.4- 13.6	18.5- 21.4	5.7- 6.4	9- 10.7	6.1- 7.4	6.7- 7.4	17.1- 19.2	5.4- 6	16.8- 20.2

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/485	140	205	33.2	20	41	40.3	14.6	22.4	6.6	11	7.3	6.8	19.7	6.2	22.2
M/490	122	152	30	16.1	38.4	36.3	14.3	17.1	6.6	10	6.6	6.7	17.3	6.1	20.1
M/491	140- 146	170- 171	29.3- 30.1	17.3- 17.4	34.1- 34.5	33- 33.7	12- 12.1	17.5- 18.8	6.3- 6.4	9- 9.2	6.4- 7.4	6.1	16- 16.1	5.6	17.8- 18.4
M/495	145- 170	200- 202	30.1- 32.6	17- 17.4	37.3- 40.1	35.1- 37.8	13.2- 15	20.3- 21.1	6.3	9.1- 10	7	5.9- 6.7	18.1- 19.5	6- 6.6	19.5- 20.5
M/506	130	179	32.2	21	36.1	35.5	14.2	20.2	6.4	10.1	7	6.2	18.2	6.2	20
M/532	185	167+- 195	29.1- 29.2	16- 18	38.1- 38.6	34.6- 36.2	14.1- 14.4	19.4- 20.7	6-6.1	6.5- 9.5	6.6- 9.7	6.5	18.3- 18.5	6	20.1- 20.3
M/533	130	200	32.6	22.2	41.4	39.7	15.7	22.4	6.2	11.8	8	8	19.7	6.1	21.7
M/534	78- 81	91- 105	23.1- 24.3	13.1- 15.1	28.2- 28.5	27- 27.2	8.6- 10.3	14.6- 15.5	6.1- 6.3	7- 7.1	4.2- 6	5- 5.2	14.3- 14.6	5.2- 5.5	14.3- 15
M/540	130	180	33	19	43.3	40.2	16.3	22.1	6.7	11.3	7.1	7.4	19.2	6	22.3
M/557	140	170	31.6	20.5	37.3	34.4	15.3	19.8	6.1	9.7	6.5	6.3	17.3	5.8	18.7
M/584	177	185	30.6	15.3											
M/587	85- 140	120- 200	26.7- 34.4	17.3- 22.1	29.1- 42.7	27.3- 41	8.5- 14	15.4- 23.2	6.1- 6.6	7.4- 11.7	6.1- 7.4	6-8	14.6- 19.4	5.3- 6.5	15.6- 21.7
M/605	105- 165	160- 185	28.6- 29	18.2- 20.4	34.2- 37.2	32.1- 35.7	11.4- 16.1	18.1- 21.1	6.2- 6.5	8.7- 10.1	6.4- 6.7	6- 6.6	15.7- 18	5.2- 5.6	16.7- 19.7
M/622	97	150	30	21	32	30	11.9	16.6	6.3	7.5	6.4	5.4	15.2	5.5	16.8
M/623	165	199	34	22	40.2	39.3	14.5	21.5	7	11.1	7.3	7.2	18.7	6.6	22.1
M/624	155	220	34	24	38.6	38	14.1	21.5	7	10.6	7.5	7.3	18.4	6.1	21
M/666	170	125+	33	21	39.7	37	14	21.4	6.2	10.6	7.1	6.7	17.8	6.6	19.5



ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/681	120-150	159-182	30-31.1	20.3-23.2	36-40.1	33.6-37.2	12.6-13.3	19.4-21.4	6.3-6.4	9.1-10.2	7.1-7.5	6-6.8	17.4-18.4	6-6.1	18.4-20.1
M/684	81	71	22	19		21.1	8	13.3	5.1	5.5		3.1		4.6	14.2
M/685	114	135	28.7	17.2	32.4	30.4	11	17	6	7.7	6.7	5.3	15.4	5.3	16
M/686	100	150	28.6	19.2	34.2	32.1	11.7	18.3	6.3	8.2	7.4	6	16.5	5.6	17.3
M/687	120	172	27.4	18	37.5	35.2	12.5	20.2	6.1	10.1	6.7	6.4	17.8	5.5	19
M/688	95	135	27.3	17	31.2	29.3	10.1	16.7	6.2	7.5	7	5.3	15	5.4	16
M/689	135	173	30.3	21.4	38.5	35.4	14.1	20.3	6.4	9.6	8	6.1	17.3	6.1	19.5
M/690	120	160	27.3	20.5	37.6	35.2	13.3	19.7	6.3	10	8	6.2	17.5	5.5	19.2
M/691	122	150	28.4	21.4	39.1	36.1	14.1	20.1	6.3	10	8.1	6.1	17.4	5.6	19.3
M/714	120-140	163-171	31.3-32	22	36-37.4	34.4-35.1	12.2-13.5	20-20.1	6.6-6.7	9.2-9.5	6.2-6.7	6-6.2	18.2-18.5	5.7-6.1	19.1-19.5
M/765	135	165	30.9	21.6	36.4	33.9	11.7	18.1	6.6	9.4	5.6	5.6	17.6	5.4	19.1
M/766	140	190	31.3	22	35.7	35.4	14.5	19.1	6.1	10.3	8.9	6.7	18.2	5.7	18.6
M/767	145	205	31.9	24.9	41.5	39	15.7	21.6	6.3	11.2	7.5	7.1	19.3	5.9	21.5
M/768					38.4	35.4	13.7	19.8	6.1	9.7	7.1	6.6	17.5	5.4	19.9
M/819	150	185	31.6												
M/830	90	142	27	16.3	29.3	27.4	8.8	15.5	5.7	7.4	5.5	5.1	13.4	5.3	15.9
M/831	170	190	30.9	20	38.3	37.8	13.1	21.5	6	10.6	6.9	7.1	16.9	5.5	21

*Distribution* : Throughout the country.

*Remarks* : A medium sized house rat with long tail, dorsum rufous brown and venter slaty grey or in various shades of grey but never white in colour, tail uniformly dark in colour. It is characterised by possession of clawed hallux and long tail (more than 120% of the Head and Body length). Generally five pairs of mammae present. White patches on the pectoral region observed in

the specimens (M/73, 77, 287, 317) and a few specimens possess tail ending in white tips. Pradhan and Mithel (1981) reported same chromosomes No.  $2n = 38$  but different karyomorphology in normal and white patched populations. M/437, M/541 specimens are young ones, so measurements were not taken. M/153, 174, 412, 439, 503 not traciabile.

### 35. *Rattus sikkimensis* Hinton, 1919

1919. *Rattus rattus sikkimensis* Hinton, *J. Bombay nat. Hist. Soc.*, **26** : 394.

2000. *Rattus sikkimensis* : Agrawal, V. C. *Rec. zool. Surv. India, Occ. Paper No.* **180** : 80.

*Common Names* : English : Sikkim Rat.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/706	1 M	Skin & Skull	Wet	Sagalee, Arunachal Pradesh	B. C. Dutta	19 Nov. 2005	Donated

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/706	160	183	36.2	23.6	41.3	39.2	15.2	23.1	7.5	11.1	6.2	7.4	20	6.1	22.3

*Distribution* : Sikkim, West Bengal, Meghalaya, Nagaland, Arunachal Pradesh and Manipur.

*Elsewhere* : Nepal, Myanmar, Thailand, China, Laos and Vietnam.

*Remarks* : Musser and Carleton in Wilson and Reeder (2005) synonymised *R. sikkimensis* under *R. andmanensis* (Blyth, 1860).

### Genus *Vandeleuria* Gray, 1842

### 36. *Vandeleuria oleracea oleracea* (Bennett, 1832)

1832. *Mus oleraceus* Bennett, *Proc. Zool. Soc. Lond.*, **1832** : 121.

2000. *Vandeleuria oleracea oleracea* : Agrawal, *Rec. zool. Surv. India, Occ. Paper No.* **180** : 63-65.

*Common Names* : English : Indomalayan Vandeleuria, Palm Mouse, Long-tailed Tree Mouse; Hindi : Chuha; Marathi : Undir; Bengali : Indur; Gujarathi : Undar; Kannad : Kok; Telugu : Koku; Malayalam : Eli; Tamil : Punniya.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/367	1 M	Skin & Skull	Wet	Nandalidak Ghat Borgaon-Surgana road, Nasik Dist., Maharashtra	D. B. Bastawade	28 Feb. 1985	Specimen & skull damaged
M/505	1 M	Skin & Skull	Wet	Fields near Khanota, Ujani Wetland area, Pune Dist., Maharashtra	M. S. Pradhan	23 Sept. 1990	
M/582	1 unsexed	Skin & Skull	Wet	Chunkhadi vill., Melghat Tiger Reserve, Amravati Dist., Maharashtra	P. P. Kulkarni	21 Dec. 1992	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/367	38+	109	17		15.5+		7	11.1	4			3		3.3	11.2
M/505	76	101	18.4	13.3	22.2	21.2	8.1	11.3	3.4	5.4	4.3	3.1	12.1	3.5	12.3
M/582	42	70	14.7	7.8	18.2	15.7	5.7	8.2	3	3.3	3.5	2.1		3.2	8.5

*Distribution* : Throughout the country.

*Elsewhere* : Sri Lanka (lowlands), S Nepal, Myanmar, SE China (W Yunnan), Thailand, SW Cambodia (Cardamom mountains), and S Vietnam; probably occurs in South Laos in suitable habitat (Corbet and Hill, 1992).

Suborder HYSTRICOMORPHA

Infraorder HYSTRICOGNATHI

Family HYSTRICIDAE G. Fischer, 1817

Genus *Hystrix* Linnaeus, 1758

37. *Hystrix indica* Kerr, 1792

1792. *Hystrix cristata* var. *indica* Kerr, In Linnaeus, *Anim. Kingdom*, 213.

2000. *Hystrix indica* : Agrawal, *Rec. zool. Surv. India, Occ. Paper. No. 180* : 160-162.

*Common Names* : English : Indian Crested Porcupine; Hindi : Sahi, Sayal; Bengali : Sajarū; Marathi : Salu or Salindar; Kannad : Yed, Moolu, Handi; Telugu : Yedu, Pandi, Malyalam and Tamil : Moolam, Punni.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/92	1 unsexed	Skin & Skull	Dry	Molem, Goa	B. S. Lamba	18 Dec. 1973	Specimen harden, unable to take measurements

*External & Cranial Measurements* :

ZSI,WRC,	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/92	160	150	75.5	83.1	35.1	44.8	17.2	8.4	79.2	58.6	98.1

*Distribution* : Found in suitable habitats throughout India.

*Elsewhere* : Nepal, Pakistan, West to Israel and north to southern Russian Turkestan, Tibet and south to Sri Lanka.

Order LAGOMORPHA

Family LEPORIDAE Fischer, 1817

Genus *Lepus* Linnaeus, 1758

38. *Lepus nigricollis* F. Cuvier, 1823

1823. *Lepus nigricollis* F. Cuvier, *Dict. Sci. Nat.* : **26** : 307.

2008. *Lepus nigricollis* : Nameer, *ZOOS' PRINT* : **XXIII** (8) : 5.

*Common Names* : Indian Hare, Black-naped Hare (Eng.).

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/171	1 M 1F	Skin & Skull	Dry	Darigaon, Ambenally Ghat, Satara Dist., Maharashtra	M. S. Pradhan	05 April 1980	Skins damaged
M/452	1 unsexed	Skin only	Dry	Katala Baba Hill, Sonbari vill., Molgi, Dhulia Dist., Maharashtra	M. S. Pradhan	23 Nov. 1985	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	mtr	dia	bl	apf	zw	iw	ml
M/171 (M)					92.1	79.4	42.9	36.2	13.9	27.4	11.9	22.4	40.9	15.6	61.1
M/171 (F)					93.6	82.5	42.5	39	14.8	27.3	11.2	24.3	43.1	18.8	70
M/452	430	120	105	113.5											

*Distribution :* Throughout India.

*Elsewhere :* Pakistan, Bangladesh, except Sunderbands, Sri Lanka, introduced into Java (?) and Mauritius, Gunnera Quoin, Anskya, Réunion and Cousin Isls in the Indian Ocean.

#### Order SORICOMORPHA

Family SORICIDAE G. Fischer, 1814

Subfamily CROCIDURINAE Milne-Edwards, 1872

Genus *Feroculus* Kelaart, 1852

39. *Feroculus feroculus* (Kelaart, 1850)

1850. *Sorex feroculus* Kelaart, *J. Ceylon Branch Asiat. Soc.* : 2(5) : 211.

2008. *Feroculus feroculus* : Nameer, *ZOOS' PRINT* : XXIII (8) : 5.

*Common Names :* English : Kelaart's Long-clawed Shrew; Regional : Not Available

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/586	1 M	Skin & Skull	Wet	Bhimnada, Eravikulam National Park, Kerala	K. C. Gopi	09 April 1994	
M/760	1 M	Skin & Skull	Wet	Forests, Upper Bhavani, Nilgiris, 6900 to 7200 ft.	Kartik Shankar	1994	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	gtl	pal	utr	iw	ml
M/586	80	65	18	10	26.8	12.2	11.8	4.8	13.5
M/760	75	75	20.5	10.7	27.1	12.8	12.5	5.15	13.6

*Distribution :* Montane swamps and marshes between 2200 and 2400 m at the border between Kerala (Eravikulam National Park) and Tamil Nadu (Udhagmandalam and Upper Bhavani), South India.

*Elsewhere :* Primary swamps and forests in the Central highlands of Sri Lanka.

*Remarks :* Presence of long claws on fore feet with thick soft dark coloured fur concealing the ear pinnae, tail with scattered long hairs. Presence of four unicuspid teeth (upper 18 teeth). As per IUCN Redlist, this species is categorized under Endangered category (Molur *et al.*, 2005). It is found in montane rain forest, collected from shola-grassland ecosystem (montane swamps and marshes) at altitudes between 2,200 and 2,400 msl (Pradhan *et al.* 1997). As compared to the specimens from Sri Lanka (Range given by Corbet & Hill, 1992), specimens under studied from India having taillength about 81-100% of Head and Body length (about 60% in Sri Lanka) and Head and Body length about 80-75 mm (100-120 mm in Sri Lanka). Possibly they are two distinct species. Taxonomic study of both the populations are recommended.

Genus *Suncus* Ehrenberg, 1832

40. *Suncus dayi* (Dobson, 1888)

1888. *Crocidura dayi* Dobson, *Ann. Mag. Nat. Hist.* (Ser 6) : 1 : 428.

2008. *Suncus dayi* : Nameer, *ZOOS' PRINT* : **XXIII** (8) : 5.

*Common Names :* English : Day's Shrew; Regional : Not Available.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

<b>ZSI, WRC, Regd. No.</b>	<b>Sex</b>	<b>Nature of Collection</b>	<b>Nature of Preservation</b>	<b>Locality</b>	<b>Name of Collector</b>	<b>Date of collection</b>	<b>Remarks</b>
M/595	1 M	Skin	Wet	Eravikulam Hut, Eravikulam National Park, Kerala	M. S. Pradhan	02 Mar. 1993	Skull damaged. Skull not dissected
M/599	1ex.	Skin & Skull	Wet	Turner's valley, Dist. Iddukki, Eravikulam National Park, Kerala	K. C. Gopi	11 April 1994	
M/798	2 M	Skin & Skull	Wet	Upper Bhavani (Shola Forests) 6900-7000 ft., Tamil Nadu	Kartik Shankar	Dec. 1995	Donated
M/799	1 M	Skin & Skull	Wet	Upper Bhavani Forest, Nilguries, (Shola Forests) 6900-7000 ft., Tamil Nadu	Kartik Shankar	1994	Donated
M/800	1 M	Skin & Skull	Wet	Upper Bhavani Forest, Nilguries, (Shola Forests) 6900-7000 ft., Tamil Nadu	Kartik Shankar	16 Feb. 1994	Donated, Skin & Skull damaged
M/801	1 M	Skin	Wet	Upper Bhavani Forest, Nilguries, Tamil Nadu	Kartik Shankar	24 Feb. 1994	Donated, Skull damaged
M/802	1 M	Skin & Skull	Wet	Upper Bhavani Forest, Nilguries, (Shola Forests) 6900-7000 ft., Tamil Nadu	Kartik Shankar	01 June 1994	Donated, Skin harden unable to take measurements

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/803	1 M	Skin & Skull	Wet	Upper Bhavani Forest, Nilgiris, Tamil Nadu	Kartik Shankar	07 Mar 1994	Donated, Skin harden unable to take measurements
M/804	1 M	Skin & Skull	Wet	Upper Bhavani Forest, Nilgiris, 6900-7000 ft., Tamil Nadu	Kartik Shankar	16 Feb 1994	Donated, Skin & skull damaged
M/805	1 M	Skin & Skull	Wet	Upper Bhavani Forest, Nilgiris, 6900-7000 ft., Tamil Nadu	Kartik Shankar	1994	Donated, Skin & skull damaged
M/806	2 exs.	Skin & Skull	Wet	Upper Bhavani Forest, Nilgiris, 6900-7000 ft., Tamil Nadu	Kartik Shankar	—	
M/807	2 M	Skin & Skull	Wet	Upper Bhavani Forest, Nilgiris, 6900-7000 ft., Tamil Nadu	Kartik Shankar	1994	Donated, one skull damaged
M/808	1 ex.	Skin & Skull	Wet	Nilgiris, Tamil Nadu	Kartik Shankar	—	Donated, Skin harden unable to take measurements
M/809	3 M	Skin & Skull	Wet	Upper Bhavani, Shola & Wattle, Alt. 2300 mtr, Tamil Nadu	Kartik Shankar	Sept. 1996	Donated, one skull damaged
M/811	1 M	Skin & Skull	Wet	Upper Bhavani, (Shola Forest), Tamil Nadu	Kartik Shankar	Dec. 1995	Donated, one skull damaged



*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	gtl	pal	utr	iw	ml
M/595	65	65	15	7					
M/599	80+	85	14		20.2	8.7	9.9	3.6	10
M/798	70	80-83	15.6-16.8	9.7-10.3	20.2-20.3	8.9	8.6-8.7	3.4-3.7	
M/799	60	80	16.5	9	20.2	9.7	9.9	3.9	10.6
M/800									9.3
M/801	65	72	14.2	9					
M/802					19.2	8.9	8.5	3.7	9
M/803					19.5	8.9	8.8	3.6	9.2
M/806	55	62-75	15.2-16.5	8.5-9.5	20.1-20.9	9.9-10.9	9.1-9.3	3.8	9.5-11.4
M/807	57-62	75	15-16.2	10.3	20.1	9.4	8.6	3.8	10.1
M/808					19.7	10.3	8.9	4.1	9.8
M/809	65-73	77-80	16.1-17	8.6-9.5	20.5-20.8	9.7-10.2	8.6-9.2	3.8 -3.9	10.3-10.4
M/811	62	70	15	8.1	19.3	8.4	8.1	3.7	9.7

*Distribution* : Endemic to India. Montane evergreen forests of S India (Eravikulam National Park, Kerala, Trichur, Upper Bhavani, Nilgiri and Palani Hills) (Pradhan and Kurup, 2001 and Pradhan, 2002).

41. *Suncus etruscus* (Savi, 1822)

1822. *Sorex etruscus* Savi, *Nuovo Giorn. De Letterati, Pisa* : 1 : 60.

2008. *Suncus etruscus* : Nameer, *ZOOS' PRINT* : **XXIII** (8) : 5.

*Common Names* : English : Etruscan Shrew, Savi's Pygmy Shrew, Pygmy white-toothed Shrew; Regional : Hindi : Chuchundar, Bengali : Chhucho, Kannad : Sondeli, Malyalam : Kandeli, Tamil : Munjuru, Telugu : Chunchu, Marathi : Chichundri.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/138	1M	Skin	Wet	Jaman Nalla, Pal, Jalgaon Dist., Maharashtra	R. H. Kamble	02 Feb. 1979	Skull not dissected
M/159	1F	Skin & Skull	Wet	Tasgaon, Dist. Sangli, Maharashtra	A. S. Mahabal	12 Sept. 1979	
M/476	1F	Skin & Skull	Wet	Near Igatpuri, Dist. Nasik, Maharashtra	D. B. Bastawade	13 Feb. 1985	
M/570	1F	Skin & Skull	Wet	Near Hipparga tank, 10km. North to Sholapur, Tuljapur Road, Sholapur Dist., Maharashtra	R. H. Kamble	23 Dec. 1986	
M/594	1M	Skin	Wet	Meenthetti, Eravikulam National Park, Kerala State	K. C. Gopi	06 April 1994	Skull not dissected
M/603	1F	Skin & Skull	Wet	Pilli vill. Near Kolkaz, Melghat Tiger Reserve, Dist. Amaravati, Maharashtra	P. P. Kulkarni	17 Dec. 1992	
M/613	1F	Skin	Wet	Dharni road and around near Kolkaz, Melghat Tiger Reserve, Dist. Amaravati, Maharashtra	D. B. Bastawade	12 Sept. 1979	Skull not dissected
M/614	1unsexed	Skin & Skull	Wet	Agricultural fields 3km south of Semadoh, Melghat Tiger Reserve, Dist. Amaravati, Maharashtra	P. P. Kulkarni	14 Dec. 1992	
M/630	1M	Skin & Skull	Wet	Gavidhon wadi chavni vill. Tah. Khalapur, Amba valley, Dist. Raigarh, Maharashtra	S. S. Thakur	29 Aug. 2001	Donated specimen

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/843	1unsexed	Skin	Wet	Sengatheri Kalakad Mundantharai Tiger Reserve	T. R. Shankar Raman & Divya Mudappa	23 Aug. 1998	Donated specimen; Skull not dissected
M/844	1unsexed	Skin	Wet	Sengatheri Kalakad Mundantharai Tiger Reserve	T. R. Shankar Raman & Divya Mudappa	06 Jan. 1999	Donated specimen; Skull not dissected

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	gtl	nas	pal	utr	iw	ml
M/138	35	27	7	5						
M/159	32	27	7.5	5	12.8	4.4	5.6	5.5	2.2	5.6
M/476	44	38.5	11	6.6	18.3	8	8.6	8.1	3.5	9.2
M/570	32	29.1	7.5	4.5	12.7	5.6	5.2	5.1	2.7	6.2
M/594	35	25	7	4						
M/603	54	37.3	10.5	7.2	12.4+	7.9	8.2	8.1	4.1	8.7
M/613	39	27.1	7.3	4.7						
M/614	40	26	7.1	5	13	4.9	5.6	5.4	2.4	7.5
M/630	33	27	8	6	12.5	5	5.1	5.7	2.5	6.2
M/843	40	29	8	7						
M/844	38	35	7.8	6.8						

*Distribution* : Throughout the country.

*Elsewhere* : S Europe and N Africa (Morocco, Algeria, Tunisia, Egypt); Arabian Peninsula and Asia Minor to Iraq, Turkmenistan, Afghanistan, Pakistan, Nepal, Bhutan, Burma, Thailand, Laos, Vietnam and Yunnan (China) and Sri Lanka. West and East African records (Guinea, Nigeria, Ethiopia) are doubtful and need confirmation.

42. *Suncus montanus* (Kelaart, 1850)

1850. *Sorex montanus* Kelaart, *J. Ceylon Br. Asiat. Soc.* : 2 : 211.

2008. *Suncus montanus* : Nameer, *ZOOS' PRINT* : XXIII (8) : 5.

*Common Names* : English : Asian Highland Shrew, Montane Shrew; Regional : Hindi : Chuchundar, Kannad : Sondeli, Malyalam : Kandeli, Tamil : Munjuru.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/572	1 F	Skin & Skull	Wet	Bank of Moyar river, close to Masinagudi, Bandipur Tiger Reserve, Karnataka	G. M. Yazdani	22 Sept. 1989	
M/784	3exs	Skin & Skull	Wet	Upper Bhavani forests 6900 to 7200 Ft. Alt., Tamil Nadu.	Kartik Shankar	Feb.-Nov. 1994	Skin dried, unable to measure. Specimens Donated
M/785	1ex.	Skin & Skull	Wet	Upper Bhavani Grassland, 6900 to 7200 Ft. Alt. ,Tamil Nadu.	Kartik Shankar	10 March, 1994	Specimen Donated
M/786	1ex.	Skin & Skull	Wet	Forest Upper Bhavani Grassland, 6900 to 7200 Ft. Alt., Tamil Nadu.	Kartik Shankar	10 March, 1994	Specimen Donated

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/787	1M, 1F	Skin & Skull	Wet	Upper Bhavani (Forest ) Nilgiris, 6900 to 7200 Ft. Alt., Tamil Nadu.	Kartik Shankar	30 March, 1994	Specimens Donated
M/790	1F	Skin & Skull	Wet	Grassland Shola Ecosystem, Tamil Nadu.	Kartik Shankar	04 May, 1995	Specimen hard unable to measure; Specimen Donated
M/792	2exs.	Skin & Skull	Wet	Upper Bhavani Forest, 6900 to 7200 Ft. Alt., Tamil Nadu.	Kartik Shankar	Feb-Nov., 1994	One specimen and both the skulls damaged; Specimens Donated
M/793	1M	Skin & Skull	Wet	Forest Upper Bhavani Nilgiris, 6900 to 7200 Ft. Alt.,Tamil Nadu.	Kartik Shankar	1994	Specimen Donated
M/794	1M	Skin & Skull	Wet	Upper Bhavani grassland Nilgiris, 6900 to 7200 Ft. Alt.,Tamil Nadu.	Kartik Shankar	27 March 1994	Specimen Donated
M/795	1F	Skin & Skull	Wet	Thai shoal (Blue Gum plantation, 6900 Ft. Alt., Nilgiris, Tamil Nadu.	Kartik Shankar	30 May, 1994	Specimen Donated
M/796	1M	Skin & Skull	Wet	Upper Bhavani Forest, 6900 to 7200 Ft. Alt., Tamil Nadu.	Kartik Shankar	Feb-Nov., 1994	Skull damaged; Specimen Donated

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/810	1M	Skin & Skull	Wet	Upper Bhavani Forest, 6900 to 7200 Ft. Alt. ,Tamil Nadu.	Kartik Shankar	28 June, 1994	Specimen Donated
M/821	4M	Skin & Skull	Wet	Upper Bhavani (Shola & Wattle) Alt. 2300 mts., Tanil Nadu	Kartik Shankar	Sept., 1996	Specimens Donated
M/822	5M, 4F	Skin & Skull	Wet	Upper Bhavani (Shola & Wattle) Alt. 2300 mts., Tanil Nadu	Kartik Shankar	Sept., 1996	Specimens Donated
M/823	1M	Skin & Skull	Wet	Kannikatti, RFAH-950m	D. Muduppa	08 Nov., 1996	Specimen Donated
M/824	1M	Skin & Skull	Wet	Kannikatti, RFAH-950m	D. Muduppa	27Aug., 1997	Specimen Donated
M/825	1F	Skin & Skull	Wet	Sengattheri, Kalakad Mundanthurai Tiger Reserve Forest, Alt. 1140mtr	D. Muduppa	11 June, 1996	Specimen Donated
M/826	1M	Skin & Skull	Wet	Sengattheri, Kalakad Mundanthurai Tiger Reserve Forest, Alt. 1140mtr	D. Muduppa	11 June, 1996	Specimen Donated
M/827	1M	Skin & Skull	Wet	Akkamalai, Annamalai range near Valparai, Alt. 1500 m	D. Muduppa	06 Dec. 1996	Specimen Donated
M/828	1ex.	Skin	Wet	Akkamalai grassland, Anamalai ranges near Valparai, Alt. 1550 m	D. Muduppa	04 Aug. 1997	Skull not dissected, Specimen Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	gtl	pal	utr	iw	ml
M/572	65	53	18	8.5	26.4	11.8	11.6	4.2	13.1
M/784					25.5-27.2	12.5-13.1	11.7-12.2	4.1-4.7	12.5-13
M/785	85	70	20.1	10.8	27.8	13.1	11.5	4.5	13.3

ZSI, WRC,	HB	TL	HF	E	gtl	pal	utr	iw	ml
M/786	80	55	18.4	11.3	25.7	13.7	11.7	4.15	13.8
M/787	87-100	70-75	18.5-19.2	9-9.3	26.5-28.2	12.4-13.1	11.9-12.3	4.35-4.6	13.6-13.8
M/790					28.3	13.4	13.2	4.6	13.7
M/792	80	65	16.5	8.6		12.1-13.5	12-13	4.4	11.9-13.8
M/793	85	75	17.8	11	26.3	12.5	12.1	4.2	13.6
M/794	85	67	19	8.9	26.9	12.4	11.6	4.5	13.8
M/795	85	60	18.5	10.5	25.8	13.1	11.6	4.2	13
M/796	92	70	19.1	11.3		13.3	12.7	4.5	13.1
M/810	69	57	17.7	10.5	21.6	12.5	12.3	4.2	14.1
M/821	80-90	67-80	17.1-19.1	11.3-13.2	26.3-28.3	12.4-13.1	11.9-12.5	4.1-4.4	12.7-15.1
M/822	84-90.2	65-83	18-20.3	10-13.5	26-28.2	12.1-13.4	11.6-12.9	4-4.5	13-14.3
M/823	68.9	72.9	20.6	12.6	25	12.7	11.4	4	17.7
M/824	65	74.3	18	10	23.7	11.2	10.5	3.6	12.6
M/825	91.5	80	19.5	11.3	28.2	13.5	12.6	4.6	15.1
M/826	96	77.5	19.3	11.1	27.1	13.1	12.2	4.6	13.5
M/827	86.7	77	19.8	11.1	26	11.7	10.7	4.7	13.7
M/828	65.7	75	19.1	9.2					

*Distribution* : Forested highlands in South India (Pradhan and Kurup, 2001 and Pradhan, 2002).

*Elsewhere* : Highlands in Sri Lanka.

*Remarks* : Fur with long soft hairs. Colour dark brown, almost black in colour.

#### 43. *Suncus murinus* (Linnaeus, 1766)

1766. *Sorex murinus* Linnaeus, *Syst. Nat. 12<sup>th</sup> ed.*, **1** : 74.

2008. *Suncus murinus* : Nameer, *ZOOS' PRINT*, **XXIII** (8) : 5.

*Common Names* : English : House Shrew, Grey Musk Shrew Common Shrew, Garden Shrew; Regional : Hindi : Chuchundar, Bengali : Chhucho, Kannad : Sondeli, Malyalam : Kandeli, Tamil : Munjuru, Telugu : Chunchu, Marathi : Chichundri.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/64	1F	Skin	Wet	Somwar Peth, Pune, Maharashtra	M. S. Pradhan	08 Feb. 1977	Skull not dissected
M/65	1 M	Skin & Skull	Wet	Nanapeth, Pune, Maharashtra	M. S. Pradhan	28 Jan. 1977	
M/66	1 F	Skin & Skull	Dry	Commercial Centre, Pune city, Maharashtra	M. S. Pradhan	11 Mar. 1977	
M/97	1 F	Skin & Skull	Dry	Near Food godown, Ganjipeth, Pune, Maharashtra	M. S. Pradhan	26 July 1977	
M/323	1 F	Skin & Skull	Dry	Panvel Town, Raigad dist., Maharashtra	M. S. Pradhan	27 Sept. 1981	
M/324	1 M	Skin & Skull	Dry	Panvel Town, Raigad dist., Maharashtra	M. S. Pradhan	27 Sept. 1981	
M/325	1 M	Skin & Skull	Dry	Panvel Town, Raigad dist., Maharashtra	M. S. Pradhan	27 Sept. 1981	Specimen displayed in museum
M/326	1 F	Skin & Skull	Dry	Panvel Town, Raigad dist., Maharashtra	M. S. Pradhan	27 Sept. 1981	
M/327	1 M	Skin & Skull	Dry	Panvel Town, Raigad dist., Maharashtra	M. S. Pradhan	27 Sept. 1981	
M/328	1 F	Skin & Skull	Dry	Panvel Town, Raigad dist., Maharashtra	M. S. Pradhan	27 Sept. 1981	



ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/329	1 M	Skin & Skull	Dry	Alibag Town, Raigad dist., Maharashtra	M. S. Pradhan	24 Sept. 1981	
M/330	1 M	Skin & Skull	Dry	Alibag Town, Raigad dist., Maharashtra	M. S. Pradhan	24 Sept. 1981	Skull not traciabile
M/331	1 F	Skin & Skull	Wet	Agriculture Research Centre, Karjat, Raigad dist., Maharashtra	M. S. Pradhan	03 Oct. 1981	
M/343	1 M	Skin & Skull	Wet	Sinhagad, Pune Dist., Maharashtra	M. S. Pradhan	04 Feb. 1985	
M/389	1 M 1 F	Skin & Skull	Wet	Suryamal Rest House, Thane Dist., Maharashtra	M. S. Pradhan	03 Oct. 1981	
M/390	1 M	Skin & Skull	Wet	Suryamal Rest House, Thane Dist., Maharashtra	M. S. Pradhan	11 Mar. 1984	Skull damaged
M/473	1 M	Skin & Skull	Wet	Darna inspection Bungalow, Nasik Dist., Maharashtra	D. B. Bastawade	16 Feb. 1985	
M/484	1 M	Skin & Skull	Wet	Rest house Dajipur, Kolhapur Dist., Maharashtra	M. S. Pradhan	16 Feb. 1989	
M/537	2 F	Skin & Skull	Wet	PWD Rest house, Khandala, Pune Dist., Maharashtra	M. S. Pradhan	04 July 1992	
M/559	1ex.	Skin	Wet	Chorao (Salim Ali) Bird Sanctuary, Mapusa Rd., Panajim, Goa	M. S. Pradhan	29 Sept. 1993	Skull damaged, not dissected
M/569	1 F	Skin & Skull	Wet	Rest house premises Wawarle, Karjat, Raigad dist., Maharashtra	M. S. Pradhan	01 Feb. 1994	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/571	1ex	Skin & Skull	Wet	Muthur Rest house premises Periyapatana range, Karnataka state	M. S. Pradhan	15 Mar. 1991	
M/629	1M	Skin & Skull	Wet	Kamshet, Pune Dist., Maharashtra	K. S. Ohal	18 June 1991	
M/663	1M	Skin & Skull	Wet	ZSI, WRS, Pune office Campus, Akurdi, Pune Dist., Maharashtra	P. P. Kulkarni	10 Aug. 2004	
M/664	1 F	Skin & Skull	Wet	Dehu Road, Pune dist., Maharashtra	P. M. Sureshan	23 Jan. 2004	
M/665	1 M	Skin & Skull	Wet	Dehu Road, Pune dist., Maharashtra	P. M. Sureshan	27 Jan. 2004	Skull damaged
M/678	1 F	Skin & Skull	Wet	Krishna Khore Vikas Mahamandal Rest House, Dimbe, Pune Dist., Maharashtra	P. P. Kulkarni	22 Feb. 2005	
M/679	1 F	Skin & Skull	Wet	Dehu Road, Pune dist., Maharashtra	P. M. Sureshan	04 Mar. 2004	
M/680	1 M	Skin & Skull	Wet	Dehu Road, Pune dist., Maharashtra	P. M. Sureshan	30 Mar. 2004	
M/682	1 M	Skin & Skull	Wet	Dehu Road, Pune dist., Maharashtra	P. M. Sureshan	23 Feb. 2004	
M/683	1 M	Skin & Skull	Wet	Dehu Road, Pune dist., Maharashtra	P. M. Sureshan	28 May 2004	
M/712	1 M	Skin & Skull	Wet	Around rest house, Lonar wildlife sanctuary, Buldana Dist., Maharashtra	P. M. Sureshan	21 Nov. 2003	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/718	1 M	Skin & Skull	Wet	Residential area, Bhandara, Bhandara Dist., Maharashtra	S. S. Talmale	12 Nov. 2004	
M/719	1 M	Skin & Skull	Wet	Residential area, Lakhani, Tal. Lakhani, Bhandara Dist., Maharashtra	S. S. Talmale	15 Nov. 2004	
M/720	1 F	Skin & Skull	Wet	Residential area, Lakhani, Tal. Lakhani, Bhandara Dist., Maharashtra	S. S. Talmale	16 Nov. 2004	
M/721	1 F	Skin & Skull	Wet	Residential area, Lakhani, Tal. Lakhani, Bhandara Dist., Maharashtra	S. S. Talmale	16 Nov. 2004	
M/722	1 M 1F	Skin & Skull	Wet	Residential area, Lakhani, Tal. Lakhani, Bhandara Dist., Maharashtra	S. S. Talmale	18 Nov. 2004	Subadult female cannibalized by male in the trap
M/829	1 M	Skin & Skull	Wet	Kannikatti Reserve forest Kalakad Mundanthurai Tiger Reserve, Kerala	D. Mudappa	25 Feb. 1997	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	cbl	pal	utr	iw	ml
M/64	80+	57	22.6	11.3					
M/65	110	84	25	11	36.3	17	15.1	5.4	17.5
M/66	160	98	23	15	35.2	17	15.1	5.5	16.6
M/97	155	85	22	15	34.4	15.3	13	5.3	15.8

ZSI, WRC,	HB	TL	HF	E	cbl	pal	utr	iw	ml
M/323	133	73	20.3	9.3	31.4	14.2	13.2	5.1	16.1
M/324	143	80	23.6	8.3	34.7	16.5	15	5.2	16.2
M/325					33.8	16.3	14.6	5	16.7
M/326	125	75	20.1	9.3	31.7	15.1	14.3	5	14.5
M/327	145	85	23	13.5	35.4	17	15.2	5.4	16.3
M/328	130	70	23.1	9	30.9	14.7	13.5	5.2	15
M/329	155	76	23	11.6	32.9	16	14.5	5	16.7
M/330	135	80	21.6	10					
M/331	95	66	19	11.3	31.4	15.5	14.3	5.1	15.7
M/343	90	67.4	19.1	9.7	29.4	14.2	13.1	5	14.2
M/389	85-110	64-74	18-19.7	9.6-12.1	29-33	14.2-15.8	13.1-14.3	4.7-5.1	14.4-16.4
M/390	113	76	21.4	13	32.2+	16.1	15.1	5.1	15.4
M/473	42+	63	19		29.6	14.3	13.4	5	14.1
M/484	83	70	20.1	11.1	31.2	15.3	14.2	5.1	15.2
M/537	87-109	62-75	18.8-20	10.2-11.2	29.8-32.4	14.1-15.1	13.2-13.4	5.2	14.5-16.2
M/559	97	83.5	22.7	11.7					
M/569	92	67	18.5	11.1	30	14.4	13.7	4.7	14.1
M/571	90	65	18	12	28.4	13.2	12.5	4.4	13.55
M/629	115	63	19.5	13	31.3	13.1	13.3	5.4	14
M/663	73	53	18	8.5	28.1	14.1	13.2	4.5	14.2
M/664	83	68	17	11	29.1	14.1	13.1	4.6	14.4
M/665	98	70	20	12	30.3+	15.8	15	5	15.4

ZSI, WRC,	HB	TL	HF	E	cbl	pal	utr	iw	ml
M/678	89	62	17.7	10.1	28.6	13.4	13	4.5	13.4
M/679	100	73	19.5	11.1	30.2	14.1	13.4	4.7	14.3
M/680	132	88	21.5	13	33	16.1	14.6	5.2	15.4
M/682	111	81	22.7	12.5	33.2	16	14.4	5.2	17.1
M/683	82	69	22.2	10.4	31.5	16.2	14.4	5	16.1
M/712	84	55	19.2	10.1	29.2	14.8	13.7	4.8	14.6
M/718	131	73	19.5	10.5	33	16.1	14.3	5.1	15.5
M/719	120	80	22	13	32.3	15.5	14.2	5.1	15.2
M/720	105	74	17.5	13	30	14.2	13.5	5	14
M/721	120	70	20	14	29	13.4	12.5	5.1	14.7
M/722	130	75	21	16	31.5	15	13.4	5.1	14.1
M/829	100	84.3	20.8	12.2	29.7	13.9	13.3	4.6	14.3

*Distribution* : Throughout India.

*Elsewhere* : Afghanistan, Pakistan, Sri Lanka, Nepal, Bhutan, Burma, China, Taiwan, Japan, continental and peninsular Indomalayan Region; introduced into Guam, the Maldivé Isls, Philippines, and probably many other islands; introduced in historical times into coastal Africa (Egypt to Tanzania), Madagascar, the Comores, Mauritius, and Réunion, and into coastal Arabia (Iraq, Bahrain, Oman, Yemen, Saudi Arabia).

*Remarks* : One damaged specimen (M/593) collected from Eravikulam National Park, identified upto genus *Suncus* sp.

#### Order CHIROPTERA

Family PTEROPODIDAE Gray, 1821

Genus *Cynopterus* F. Cuvier, 1824

#### 44. *Cynopterus brachyotis ceylonensis* Gray, 1871

1870. *Cynopterus marginatus* var. *ceylonensis* Gray, *Cat. Monkeys, Lemurs & Fruit-eating Bats Brit. Mus.* : 122.

2002. *Cynopterus brachyotis ceylonensis* : Alfred, Sinha and Chakraborty, *Rec. zool Surv. India, Occ. Paper No. 199* : 23-24.

**Common Names** : English : Lesser Short-nosed Fruit Bat; Regional : Hindi : Chamgadad; Bengali Cham gadili; Marathi : Watwaghul.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/513	1M	Skin & Skull	Wet	PWD Rest house premises, Mahabaleshwar, Dist. Satara,, Maharashtra	M. S. Pradhan	16 Jan. 1990	
M/530	4 exs.	Skin & Skull	Wet	Near Rest house Nagarhole National Park, Nilgiri Biosphere Reserve, Karnataka	M. S. Pradhan	03 Oct. 1989	
M/560	2F	Skin & Skull	Wet	Molem Rest house, Goa	M. S. Pradhan	13 Sept. 1993	

*External & Cranial Measurements* :

ZSI, WRC, Regd. No.	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	IC	CM <sup>1</sup>	CM <sub>2</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>2</sup> -M <sup>2</sup>
M/513	86		14.6	62.1	21.5	38.7	36.3	39.4	11	30.2	27.7	28.7	19	12.5	6.1	10.1	11.4	23	6.3	9.1
M/530	64-75	5.7-7.5	11.2-13.6	59.4-2.9	21.5-3.6	39.2-41.8	37.9-40.8	41.9-43.6	13.9-15.1	30.4-32.6	28.4-30.4	29-31.6	18.7-19.9	12.7-13.6	5.7-7	10.2-11.1	11.5-12.5	23.1-25	6.7-8	9.1-9.7
M/560	59.1-74.4	8-10.7	13-13.1	62.3-64.4	23.3-25.1	39.2-42.7	38.4-42.7	40.6-45	15-16.1	28.2-30	26.7-28.9	28.1-29.2	17.7-18.2	12.1-13.2	5.7-6	10-10.2	11-11.4	22.6-22.7		

**Distribution** : Goa, Kerala, Maharashtra, Andaman & Nicobar Islands and North East India within Indian limits. **Elsewhere** : Sri Lanka, Nepal, Myanmar, Thailand, Cambodia, Vietnam, S China, Malaysia, Borneo, Sumatra, Sulawesi, Magnole, Sanana, Sangihe Isls, Talaud Isls and adjacent small islands. Perhaps present in the Palawan region of the Philippines (Simmons, 2005).

#### 45. *Cynopterus sphinx sphinx* (Vahl, 1797)

1797. *Vespertilio sphinx* Vahl, *Skr. Nat. Selsk. Copenhagen*, 4(1) : 123.

2002. *Cynopterus sphinx sphinx*: Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 24.

*Common Names* : English : Greater Short-nosed Fruit Bat; Hindi : Chamgadad; Bengali : Cham gadili; Marathi : Watwaghul.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/45	1F	Skin & Skull	Wet	Poona University, Main Building, Pune, Maharashtra	D. B. Prasad	12 June 1975	
M/162	1M	Skin	Wet	Jog Falls, Tamil Nadu	Rama-krishna	29 Feb. 1980	Skull not dissected
M/341	1M	Skin	Wet	Mukundnagar, Pune, Maharashtra	B. K. Tikader	13 April 1978	Skull not traciabile
M/528	3exs.	Skin & Skull	Wet	Near Rest house Nagarhole, Nilgiri Biosphere Reserve, Karnataka	M. S. Pradhan	03 Oct. 1989	
M/531	1ex.	Skin & Skull	Wet	Nagarhole National Park, Nilgiri Biosphere Reserve, Karnataka	M. S. Pradhan	17 Mar. 1991	
M/538	2M	Skin & Skull	Wet	Around Rest house Dhakna, Melghat Tiger Reserve, Dist. Amaravati, Maharashtra	M. S. Pradhan	18 Feb. 1992	
M/547	2M 3F	Skin & Skull	Wet	Area between valley view point & PWD R.H. Khandala, Dist. Pune, Maharashtra	M. S. Pradhan	01 July 1992	
M/551	3exs	Skin & Skull	Wet	Rest House Putter, south Kanara dist., Karnataka	S. S. Kamble	05 Sept. 1991	
M/566	4M 2F	Skin & Skull	Wet	Forest Rest house & around Painganim, Tal. Cancona, Goa	M. S. Pradhan	19 Sept. 1993	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/578	1M 1F	Skin & Skull	Wet	Rest house complex Semadoh, Melghat Tiger Reserve, Dist. Amaravati	P. P. Kulkarni	16 Dec. 1992	
M/579	1 M	Skin & Skull	Wet	Rest house complex Semadoh, Melghat Tiger Reserve, Dist. Amaravati	P. P. Kulkarni	18 Dec. 1992	
M/585	1 M 3 F	Skin & Skull	Wet	Semadoh Rest house complex, Melghat Tiger Reserve, Dist. Amaravati	P. P. Kulkarni	14 Dec. 1992	
M/600	1 ex.	Skin	Wet	AFMC Main building, Pune, Maharashtra	Brigadier Tilak	23 Feb. 1996	Donated, Skull not dissected
M/673	1F	Skin & Skull	Wet	Around Rest house Keri, Goa	S. G. Patil	24 Feb. 2002	
M/677	1M 1 F	Skin & Skull	1 Wet, 1 Dry	Krishna Khore Vikas Mahamandal Residential colony, Dimbhe, Dist. Pune, Maharashtra	P. P. Kulkarni	23 Feb. 2005	
M/694	1 M 2 F	Skin & Skull	1 Wet, 2 Dry	Neted near Ashok Layland Club, Lakhani, Dist. Bhandara, Maharashtra	S. S. Talmale	21 Nov. 2004	
M/698	2M 10F	Skin & Skull	Wet	Guava orchard, Mendha village, Tal. Lakhani, Dist. Bhandara, Maharashtra	S. S. Talmale	17 Nov. 2004	



ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/725	1M 1F	Skin & Skull	Wet	Rest house Nalganga, Dist. Buldana, Maharashtra	S. G. Patil	15 Nov. 2005	
M/816	1 F	Skin	Wet	Nigadi Pradhikaran, Pune	Anil Khaire	16 May 2009	Donated, Skull not dissected

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	IC	CM <sup>1</sup>	CM <sub>2</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>2</sup> -M <sup>2</sup>
M/45	95	13.5	16.3	77.7	27.7	52.1	49.6	53.7	20.2	35	32.3	33.8	22.1	14.2	8.1	11.5	13	26.2	7.1	10.7
M/162	70		10.3	62.4	24.2	39.6	37.8	40.5	15.7	30.9										
M/341	100		17.2	76.2	30	49.5	47.5	52.2	17											
M/528	82.5-85	10.2-10.5	14.5-15	69-69.9	24.2-27.2	45-46.6	43.6-45.6	46.7-47.8	17.1-19	29.4-30.1	27.7-28	28.6-28.7	18.5-19.3	12.1-12.7	6.1-6.2	10.2-10.3	12.1-12.5	24.5-25.1	6.3-6.8	9.2-9.4
M/531	100	8.2	16.9	70.3	25.2	48.2	46.2	47.5	18.6	31.8	30.2	30.9	20.2	13.7	6.5	11.2	12.5	24.4	7	9.9
M/538	81.5-85	11.1-15.5	15.2-16.3	68-73.5	28.7-29.5	45.5-48.2	44.2-46.2	46.8-50.1	18.5-19	32.6-34.3	30.3-32.4	31.4-33.2	20.4-22.4	13.3-14.1	6.3-7.6	10.2-12.2	11.3-13.5	22.6-26.7	6.8-7.6	9.4-10.5
M/547	79-95	11.2-12.3	14.3-17.4	68.4-74.3	26.4-31.3	45.2-51	42.3-49.5	47-53.2	16-21.4	32.5-35.3	30.2-33.1	31.1-34.3	19.7-22.3	13.4-14.4	7.1-8	12.1-12.4	12.2-13.5	24.3-26.7	6.7-7.6	9.7-11
M/551	65.5-69		14.3-15.6	67.7-69.5	24.8-25.9	43.2-43.6	41.3-43.6	44.4-45.3	13.5-16.2	31.2-32.2	29.2-30.8	29.7-31.2	19.3-19.6	13.4-13.7	6.3-6.6	10.4-10.9	10.1-12	23.6-25.3	6.9-7.1	9.4-10
M/566	80-85	8-16.5	12.8-18	62.6-70.8	23.9-27.6	40.5-46.5	39.6-44.4	41.4-48.1	15.5-20	30.5-33.2	27.7-31.5	28.1-32.4	17.3-21.8	12.7-13.9	5.9-6.8	10-11.9	11.4-12.9	23.1-25.7	6.5-7.9	9.7-11.5
M/578	68-73.2	9-11.5	15.1-16.1	68.7-71.2	24.5-26.1	44.3-47.6	42.7-47.4	45-50.3	17.1-17.2	31.8-34.7	30.1-32.4	31.6-33.1	19.7-22.4	14-14.5	6.3-7.2	11.1-12.1	12.2-13.5	25.7-27.5	6.6-7.8	9.5-10.4
M/579	80.2	12	16	73.4	28.2	45.4	46.8	49.5	18.2	33.6	32.2	32.4	23	14.2	8	12.1	13.3	26.2	8.1	10.1
M/585	73.5-80	9.1-13.4	16.6-18.6	68.7-76.3	25.7-29.4	46-50.3	44-47.1	44.4-50.1	14.7-21	32.4-34.1	30.1-31.7	31.2-33.2	18.5-21.5	13.2-14.1	6.4-7.2	11-12.1	10.4-12.2	23.5-27.1	7-7.7	10-10.5
M/600	87.5		18.1	70.7	28.1	47.4	45.5	48.2	14											
M/673	100	8	12.4	71.1	27.5	44.3	44.2	48.5	17.3	31.7	29.7	20.7	13.6	7.1	11.1	11.9	25.1	9.4		

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	IC	CM <sup>1</sup>	CM <sub>2</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>2</sup> -M <sup>2</sup>
M/677	98.2- 96.4	6.1- 8.1	15.3- 17.3	70.3- 73.2	28.7- 30.1	47- 47.5	46.1- 46.4	48.5- 49.2	17.5- 18.5	33.1- 33.5	31.6- 31.7	32.2- 32.3	20.3- 20.4	13.2- 14	7.2- 7.3	11.5- 11.7	13- 13.1	25.4- 27.3	7.3	10- 10.3
M/694	94- 97	11- 13.5	13.3- 18.3	73.2- 74	29.2- 29.7	47.2- 50.3	45- 49.1	48- 51.7	18.7- 20.5	33.4- 34.4	31.4- 32.7	32.5- 33.1	20.1- 21.4	13.6- 14.1	7.2- 7.4	11.6- 12.5	13.1	26.1- 26.4	7- 7.4	10.1- 10.6
M/698	77- 99	6- 14.5	13.3- 18.5	67.5- 77.1	25- 31.3	45.8- 51	45.3- 48.7	46.1- 52.5	17- 21	31- 35	28.1- 33.3	29.3- 34.2	18.4- 23	13- 14.2	6.4- 7.5	10.7- 12.6	12- 13.6	24- 26.4	6.8- 8.5	9.6- 11
M/725	87- 90	12.3- 15.5	14.5- 15.1	74.7- 78.1	27- 28.5	47.5- 50.1	46.2- 48.6	48.2- 51.2	20- 20.4	33.7- 34	32.1- 31.5	33.1- 33	22- 22.2	14.2- 14.3	7.3- 7.5	11.6	12.4- 13	26.9- 27	7.1- 7.6	10.3- 10.4
M/816	90	15	15	70	26.4	45	45.2	47.4	19.1											

*Distribution* : Throughout the country.

*Elsewhere* : Sri Lanka, Pakistan, Bangladesh, South China, South East Asia including Myanmar, Vietnam, and Cambodia, West Malaysia, Sumatra, adjacent small islands; perhaps Borneo.

Genus *Pteropus* Brisson, 1762

46. *Pteropus giganteus giganteus* (Brünnich, 1782)

1782. *Vespertilio gigantea* Brünnich, *Dyrenes Historie*, 1 : 43.

2002. *Pteropus giganteus giganteus* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 26.

*Common Names* : English : Indian Flying Fox; Hindi : Chamgadad; Bengali : Badur; Gujarati : Vadvagol; Kannad : Sikatyelle; Punjabi : Chamgiddar; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/88	1 M	Skin	Dry	Deola, Dist. Nasik, Maharashtra	M. Babu Rao	22 Sept. 1973	Skull not dissected
M/89	1 M	Skin	Dry	Deola, Dist. Nasik, Maharashtra	M. Babu Rao	22 Sept. 1973	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/339	1 F	Skin & Skull	Dry	Bank of Chikli river, Gadkhangaon, Amalner, Dist. Jalgaon, Maharashtra	R. H. Kamble	29 Nov. 1983	Skull damaged
M/340	1 M	Skin	Dry	Ankaleshwar, Gujarat	G. M. Yazdani	18 Nov. 1972	Skull not traciabile
M/521A	1 F	Skin	Wet	Parvati Temple, Maharashtra	C. B. Prasad	09 June 1975	Skull not dissected
M/581	1ex.	Skin	Dry	WRS premises in Shivajinagar, Pune, Maharashtra	R. S. Bhosle	May 1993	Skull not dissected
M/641	1 F	Skin & Skull	Wet	Mutha, Pune, Maharashtra	V. S. Korad & K. D. Yardi	12 July 2002	Donated
M/642	3 M	Skin & Skull	Wet	Uttamnagar, Pune, Maharashtra	V. S. Korad & K. D. Yardi	12 July 2002	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>2</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>2</sup> -M <sup>2</sup>
M/88	250	43.6	140	78	127	115	105	30.7											
M/89	255	46	165	78.2	117	112	115	29.6											
M/339	245	43	135	71	112	107	111.6	32	67.5			36.3		9	25.5	30	55.1	11.6	18
M/340	280	55	166	84.3	118	115	117.5	30.5											
M/521A	210	46.3	144	66.6	107	99	103	35.2											
M/581	225	51	137	55	94	90	93	32											
M/641	240	48.2	178	80.7	123	114.5	117.3	38	73.5	66.4	71.7	39.3	25	10.1	27.1	29.7	57.2	14	18.5
M/642	237-245	47.1-48.1	178-184	81.1-84	129-139	120-129	124-135	36.1-37.7	74.6-77.5	68.1-68.7	73.2-74.6	40.7-46	25.2-26.5	10.5-11.1	28.1-30.1	31.1-32.6	59.2-60.3	14.5-16.1	19.3-19.1

*Distribution* : Throughout India (incl. Andaman Isls).

*Elsewhere* : Sri Lanka, Pakistan, Bangladesh, Nepal, Myanmar, Tsinghai (China).

Genus *Rousettus* Gray, 1821

47. *Rousettus leschenaultii leschenaultii* (Desmarest, 1820)

1820. *Pteropus leschenaultii* Desmarest, *Mammalogie, in Encyclop. Méthod.*, **1** : 110.

2002. *Rousettus leschenaultii leschenaultii* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 28.

*Common Names* : English : Leschenault's Rousette, Fulvous Fruit Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malayalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/446	M	Skin & Skull	Wet	Sanjay Gandhi National Park, Borivali, Mumbai, Maharashtra	D. F. Singh	01 Sept. 1987	Skull damaged
M/548	M	Skin & Skull	Wet	Sinhagad Fort, Dist. Pune, Maharashtra	M. S. Pradhan	06. Oct. 1992	
M/550	F	Skin & Skull	Wet	Rest house Putter, South Kanara Dist., Karnataka	S. S. Kamble	05. Sept. 1991	
M/563	F	Skin & Skull	Wet	Forest cottages & around in Bodla Sanctuary, Goa	M. S. Pradhan	25 Sept. 1993	
M/564	2M	Skin & Skull	Wet	Molem Rest house & around Tal. Sanguem, Goa	M. S. Pradhan	13 Sept. 1993	
M/567	2M 2F	Skin & Skull	Wet	Forest Rest House & around, Painginim, Tal. Cancona, Goa	M. S. Pradhan	19 Sept. 1993	
M/655	M	Skin & Skull	Wet	Purandar, Dist. Pune, Maharashtra	K. D. Yardi	25 May 2002	Donated

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/692	2M	Skin & Skull	Wet	Around Rest House Sanguem, Goa	S. G. Patil	02 Mar. 2002	
M/693	2M	Skin & Skull	Wet	Naveliuem, Paingium road, Goa	P. D. Rane	23 Nov. 1993	
M/697	F	Skin & Skull	Wet	Guava orchard, Mendha village, Tal. Lakhani, Dist. Bhandara, Maharashtra	S. S. Talmale	17 Nov. 2004	
M/708	2F	Skin & Skull	Wet	On the way to Kamalja temple, Waghmandir, Lonar WLS, Dist. Buldana, Maharashtra	S. G. Patil	23 Sept. 2003	
M/709	M	Skin & Skull	Wet	On the way to Kamalja temple, Bhormahadev temple, Lonar WLS, Dist. Buldana, Maharashtra	S. G. Patil	23 Sept. 2003	
M/710	3M 1F	Skin & Skull	Wet	SW of Forest rest house near Crater lake, Lonar WLS, Dist. Buldana, Maharashtra	P. M. Sureshan	19 Nov. 2003	
M/817	F	Skin & Skull	Wet	Sawarai Sada Cave, Radhanagari WLS, Dist. Kolhapur, Maharashtra	S. G. Patil	11 Dec. 2007	
M/820	2M 2F	Skin & Skull	Wet	Sawarai Sada Cave, Radhanagari WLS, Dist. Kolhapur, Maharashtra	S. S. Talmale	20 Feb. 2010	

*External & Cranial Measurements :*

ZSI,WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	IC	CM <sup>2</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>2</sup> -M <sup>2</sup>	Thumb & Claw
M/446	120	11	20.1	87	39.7	52.2	55.3	56.3	18.1							14.5	16.1		7.5	11.1	27.5
M/548	82	13	20.7	69.3	27.7	43.6	44.7	45.5	16.7	33	30.2	31.7		14.4	7.4	12.7	14.5	23.4+	6.7	10.2	28.6
M/550	90	12.4	18.6	75	34.7	48.7	49.3	49.4	16.3	35.8	32.1	34.2	21.4	15.5	7	12.6	14.2	27.4	7	10.1	25.6
M/563	90	12.3	20	80.4	35.6	50	51.6	52.6	19.6	37.8	34.2	36.2	21.7	15.2	7.8	14.4	15.5	29	7.1	10.6	

ZSI,WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	IC	CM <sup>2</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>2</sup> -M <sup>2</sup>	Thumb & Claw
M/564	86-92	12.6-13	19.5-20	71.1-74	28.7-32.6	44.7-45.8	45.5-47.5	46.2-48.9	16.7-17.5	33.7-36.3	30.0-32.8	31.5-34.8	19.6-20.6	14.5-15	6.7-6.9	12.5-13.7	13.8-14.9	25.7-27.9	6.5-6.7	9.8-10.7	
M/567	91-110	12.7-16.5	18.9-21.2	75-87.5	32.7-38.8	46.8-55.2	48.8-55.8	49-56.2	18-20.6	35.9-40.1	32.9-37	34.5-39.1	22.1-23.4	15.1-15.5	6.9-8.4	13.3-14.7	15.2-16.5	27.5-31.3	7.3-7.9	10.5-11.4	
M/655	113	14.3	18.1	80.2-86.6	37.3-39.7	51.5-54.4	55.1-56.4	55.3-57.4	18-19.1	38.7-39.6	36.1-36.7	37.3-38.3	22.3-23.3	15.5-16.1	8.1-8.4	14.5-15.1	16.3	31.2-31.3	8.1	12-12.2	28.7
M/692	125	7		85.4	41.4	51.7	54.6	54.4	18.5	39.1	36.4	36.7	24.1	16.3	8.1	14.6	16.6	31.3		11.3	
M/693	110-112	9-12.4	18.6-21.5	86-86.4	36-40.2	52.4-53.3	53.7-55.1	55-55.4	18-18.1	37.4-38.5	35.2-36.1	36.1-37.1	22.5-23	15.2-15.5	8.1	14.4-15.1	16-16.4	30-31.1		11.3-11.6	
M/697	98	14.4	18.3	75.3	35.1	49.2	51.4	53.1	18	36.7	33.2	35.1	22.3	15.5	8.2	14.2	15.2	28.1	7.4	11.3	27
M/708	84-99	12.4-14.2	20-20.1	76.7-78.3	33.7-34.5	46.3-48.4	50.1-50.2	52.1-52.7	18.1-18.2	36.1-36.6	33.2-33	34.2-35.2	20.4-21.7	14.6-15.1	7.5-7.6	13.6-14	15-15.2	27.5-28.3	6.7-7	11.1	26-29.6
M/709	84.5	12.5	22.3	83.4	36	53.5	54.4	56	16	40	37	38.6	23	15.7	8.6	15.5	17.1	31.7	8.3	11.4	29
M/710	90-112	13.5-15.5	18.4-23.1	72.4-87.6	31.1-40.7	45-56	47.7-59.1	46.6-59.5	15.5-18.4	34.6-40.3	31.5-37.7	33.1-39.4	20.1-24	14.4-16.1	7.1-8.3	13.3-15.1	15.1-16.8	27-32.3	7.1-8.2	10.3-11.4	27.7-30.2
M/817	95	12	20.2	76	32.8	47	50	48.8	17	36.8	33.4	35.3	21.7	15.2	7.5	13.7	15	28.4	7.1	10.9	
M/820	110-117.5	12.5-15	18.1-21.7	74.9-85.3	34.6-41.7	47.5-54.3	51-55.5	50.4-57.5	18.2-20	36.9-38.8	33.7-35.5	35.2-37.4	20.9-23.4	14.5-15.4	7.4-7.9	13.5-14.3	15.3-16.2	28.2-29.7	7.2-7.7	10.6-11.4	

*Distribution* : Throughout India; Elsewhere : Sri Lanka; Pakistan to Vietnam and S China; Peninsular Malaysia; Sumatra, Java, Bali, and Mentawai Isls (Indonesia).

Family RHINOLOPHIDAE Gray, 1825

Genus *Rhinolophus* Lacépède, 1799

48. *Rhinolophus beddomei* K. Andersen, 1905

1905. *Rhinolophus beddomei* K. Andersen, *Ann. Mag. Nat. Hist.*, ser. 7, 16 : 253.

1997. *Rhinolophus beddomei* : Bates and Harrison, *Bats of the Indian Subcontinent* : 74-76.

*Common Names* : English : Bedomme's Horseshoe Bat; Hindi : Chamgadad; Kannad : Sikatyelle; Malayalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/654	1 F	Skin & Skull	Wet	Mahabaleshwar, Dist. Satara, Maharashtra	Abhijit Koratkar & M. C. Gaikawad	27 Oct. 2003	
M/745	1 M	Skin	Wet	Trichur from the hollow of a wall of well, Kerala	A. Madhavan	14 Jan. 1991	Received on Donation from HOD, Inst. of Sci., Nagpur; Skull not dissected

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/654	67.3	37.6	15.6	65	32.3	51.7	48.5	42.1	32.1	28.1	24.4	25.5	14.2	10.7	3.1	10.1	11	19	6.6	10.1
M/745	65	43	16.7	62.6	31.2	52.5	49.6	42.8	27.1											

*Distribution* : Andhra Pradesh, Karnataka, Maharashtra, Kerala, Tamil Nadu (Bates and Harrison, 1997; Das, 2003).

*Elsewhere* : Sri Lanka.

#### 49. *Rhinolophus lepidus* Blyth, 1844

1844. *Rhinolophus lepidus* Blyth, *J. Asiat. Soc. Bengal*, **13** : 486.

2002. *Rhinolophus lepidus* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No.* **199** : 39.

*Common Names* : English : Blyth's Horseshoe Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/165	1 F	Skin	Wet	Jogfalls, Tamil Nadu	Rama-krishna	03 Mar. 1980	Skull not dissected
M/449	1 F	Skin & Skull	Wet	Rest house Pundra, Dist. Kolhapur. Maharashtra	D. B. Bastawade	28 Sept. 1986	
M/662	1 M 1 F	Skin & Skull	Wet	Panchgani cave, Dist. Satara, Maharashtra	M. S. Pradhan	04 Sept. 2003	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/165	30	10	6.52	41.2	15.5	31.5	32.5	31.5	12.4											
M/449	40	22	7.7	39.7	15	31.1	31.2	31.1	16.1	16.1	13.5	14.7	8.1	6.7	2.4	6-6.4	6.1-7	10.1-11.7	3.3-4.5	5.6-6.3
M/662	40-42	16-20.1	6.7-7.3	40.4-40.6	16-17.5	31.3-31.4	31.7-32.3	30.6-31.3	15-15.2	16.4-17.4	14.3-15.1	14.2-15	8.3-8.4	7.2-8	2.6-3.1					

*Distribution* : Andhra Pradesh, Bihar, Delhi, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram, Nagaland, Orissa, Rajasthan, Tamil Nadu and West Bengal states within Indian limits.

*Elsewhere* : Afghanistan, Pakistan, Nepal, Myanmar, Thailand, Szechwan and Yunnan (China), Peninsular Malaysia, Sumatra (Indonesia).

50. *Rhinolophus rouxii* Temminck, 1835

1835. *Rhinolophus rouxii* Temminck, *Monogr. Mamm.*, 2 : 306.

2002. *Rhinolophus rouxii* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 42.

*Common Names* : English : Rufous Horseshoe Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.



Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/163	1 M 1F	Skin	Wet	Jogfalls, Tamil Nadu	Rama-krishna	02 Mar. 1980	Skull not dissected
M/544	1 M	Skin	Wet	Devrukh Rest house, Dist. Ratnagiri, Maharashtra	M. S. Pradhan	08 Jan. 1989	Skull damaged
M/552	1 M 1 F	Skin & Skull	Wet	Rest house Karkal, Dist. South Kanara, Karnataka	S. S. Kamble	09 Sept. 1991	
M/553	1 M	Skin & Skull	Wet	PWD Rest house Khandala & around, Dist. Pune, Maharashtra	M. S. Pradhan	04 July 1992	
M/748	1 M 1 F	Skin & Skull	Wet	Pebkila, Matheran, Dist. Raigad, Maharashtra	V. S. Korad	21 Oct. 2002	Donated
M/749	1 M	Skin	Wet	Katurde, Mulshi, Dist. Pune, Maharashtra	V. S. Korad	04 Nov. 2003	Skull not dissected, Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/163	50.2-53.7	22.3-24	10.1-11.5	48.6-48.9	20.9-21	37.6-38.5	37.9-38.5	36.2-37	17-18.8											
M/544	54	23.3	12.1	50	24.2	40.2	41.4	38.3	18.7											
M/552	42-51	22.3-23.1	10.7-11	46.7-49.2	22.2-23.5	38.3-39.1	38.2-38.7	37.2-37.7	15.7-16.2	22.1-22.3	19-20		11.1-11.3	9	2.6-2.7	8.7-9.2	9.5-9.6	15.1-15.4	5.7-6.1	8.3-8.4
M/553	53	21.4	11.1	48	22.7	37.3	37	36.5	16.5	21.8	19.2		10	9.8	3	9	9.2	15.6	6.1	8.3
M/748	49-55	22-23	10.2-11.3	48.1-48.3	21.6-22.9	37.5-38.2	37.7-38.7	36.9-38.1	17.5-18.4	21.2-23.6	18.2-20.2	19.2-21.3	11.2-11.6	9.1-9.6	2.5-2.7	8.1-9.3	8.8-10	14.7-16.3	5.2-6	7.9-8.6
M/749	57.5	24	11.7	50	21.5	39.9	39.5	37.7	20.3											

*Distribution* : Andhra Pradesh, Goa, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mizoram, Orissa, Pondicherry, Tamil Nadu, Uttar Pradesh, West Bengal states within Indian limits.

*Elsewhere* : Sri Lanka, South Myanmar and Vietnam.

Family HIPPOSIDERIDAE Lydekker, 1891

Genus *Hipposideros* Gray, 1831

51. *Hipposideros ater ater* Templeton, 1848

1848. *Hipposideros ater* Templeton, *J. Asiat. Soc. Bengal*, **17** : 252.

2002. *Hipposideros ater ater* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No.* **199** : 45.

*Common Names* : English : Dusky Leaf-nosed Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/659	1 F	Skin & Skull	Wet	Khopoli, Dist. Raigad, Maharashtra	M. C. Gaikawad & V. M. Chavan	27 Sept. 2003	Donated

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/659	45	26	7.4	41.6	18.4	31.6	32.5	30.1	18.1	18	15.4	16	9.1	8	3.1	6.4	7	12.1	4	6.5

*Distribution* : Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Tamil Nadu states within Indian limits (Bates and Harrison, 1997; Srinivasulu and Srinivasulu, 2006).

*Elsewhere* : Sri Lanka.

*Remarks* : No supplementary leaflet present on each side of horseshoe; In the wing, 4<sup>th</sup> metacarpal exceeds the 5<sup>th</sup> in length; Third metacarpal short. Specimens from Indian mainland and Sri Lanka referred to *Hipposideros ater ater*. However, specimens from Nicobar Island and Nallamala Hills, Andhra Pradesh designated as *Hipposideros ater nicobarulae* Miller, 1902 and *Hipposideros ater nallamalaensis* Srinivasulu and Srinivasulu, 2006 respectively.

52. *Hipposideros fulvus fulvus* Gray, 18381838. *Hipposideros fulvus* Gray, *Mag. Zool. Bot.*, **2** : 492.2002. *Hipposideros fulvus fulvus* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 47.

*Common Names* : English : Fulvus Leaf-nosed Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/39	2 M	Skin & Skull	Wet	Mabaleshwar, Dist. Satara, Maharashtra	G. Topal	10 Aug. 1967	
M/657	1 M	Skin & Skull	Wet	Pandharpur, Dist. Sholapur	M. C. Gaikawad & S. G. Kakade	27 Dec. 2002	Donated by V. S. Korad

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/39	43-45	24-25	8.5-9.2	40.5-41.4	19-19.2	30.6-32.5	30.7-33.1	28.4-30.6	18.7-20.5	18.1-18.5	15.5-15.7	16.2-16.3	9.3-9.4	9-9.2	3-3.2	6.5	6.7-7	11.7-11.8	3.7-3.8	6.5
M/657	50.5	26.1	8.2	43.1	20	33.5	34.4	31.1	19.5	19	16.4		9.4	8.2	2.9	6.8	7.4	12.1	4.1	6.7

*Distribution* : Almost throughout the country including Jammu and Kashmir (Saikia *et al.*, 2006).

*Elsewhere* : Afganistan, Sri Lanka, Pakistan to Vietnam.

53. *Hipposideros galeritus brachyotus* (Dobson, 1874)1874. *Phyllorhina brachyota* Dobson, *J. Asiat. Soc. Bengal*, **43** (2) : 237.2002. *Hipposideros galeritus brachyotus* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 47-48.

*Common Names* : English : Cantor's Leaf-nosed Bat; Hindi : Chamgadad; Marathi : Watwaghul.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/656	1 M	Skin & Skull	Wet	Shivthar Ghal, Dist. Raigad, Maharashtra	M. C. Gaikawad & S. S. Manchi	22 Dec. 2002	Donated by V. S. Korad

*External & Cranial Measurements :*

ZSI, WRC, Regd. No.	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/656	44	30	7.5	48	19.1	33.7	37.2	35.6	14	17.7	15	15.5	9.2	7.7	2.5	5.6	6.1	10.6	3.2	6.1

*Distribution :* Andhra Pradesh (Srinivasulu, 2006), Bihar, Gujarat, Karnataka, Madhya Pradesh and Maharashtra (Bates and Harrison, 1997).

*Elsewhere :* Sri Lanka.

#### 54. *Hipposideros lankadiva* Kelaart, 1850

1850. *Hipposideros lankadiva* Kelaart, *J. Sri Lanka Branch Asiat. Soc.*, 2(2) : 216.

2002. *Hipposideros lankadiva* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 48.

*Common Names :* English : Indian Leaf-nosed Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/609	1 M	Skin & Skull	Wet	Deserted forest rest house, Kolsa, Tadoba National Park, Dist. Chandrapur, Maharashtra	P. P. Kulkarni	05 April 1996	Skull damaged

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/742	1 M	Skin & Skull	Wet	Locality not mentioned on original label	—	07 Oct. 1985	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur; Skull damaged

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/609	92	53	15.6	91.4	35.1	61.3	65.1	67.1	26	25.5+			18.1+		4.1	13.5	15	23.7	7.7	12.7
M/742	90	45	16.2	87.3	34	56.5	60.5	61	26.2	28+			16.5	11.4	4	12.6	14.2	23.1	7.3	11.5

*Distribution* : Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Orissa, Tamil Nadu states within Indian limits.

*Elsewhere* : Sri Lanka.

*Remarks* : Simmons in Wilson and Reeder (2005) synonymised all the taxa viz. *indus*, *mixtus*, *unitus* (earlier recognized as a subspecies) and *schistaceus* (earlier recognized as a separate species) under *Hipposideros lankadiva*.

55. *Hipposideros pomona gentilis* (Andersen, 1918)

1918. *Hipposideros gentilis* Andersen, *Ann. Mag. Nat. Hist.*, ser. 9, 2 : 380, 381.

2005. *Hipposideros pomona gentilis* : Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. I : 375.

*Common Names* : English : Pomona Leaf-nosed Bat, Andersen's Leaf-nosed Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/660	1 F	Skin & Skull	Wet	Mulshi, Dist. Pune, Maharashtra	S. S. Manchi & V. S. Korad	07 July 2002	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/660	46	27.4	6.5	41.5	18.5	32.5	33.1	30.2	20	18.1	15.4	16.2	9.1	8.2	3.1	6.5	7.1	11.3	3.4	6.5

*Distribution :* Arunachal Pradesh, Assam, Maharashtra, Meghalaya, Mizoram, Nagaland; Sikkim, Uttar Pradesh, West Bengal (Bates and Harrison, 1997; Das, 2003; Korad *et al.*, 2010).

*Elsewhere :* Nepal, Bangladesh, Myanmar, Southern Thailand and Northern Malay Peninsula (Das, 2003).

*Remarks :* Corbet and Hill (1992), Bates and Harrison (1997), Das (2003) recognized *Hipposideros pomona pomona* from Southern India (skull size small with condylo-canine length, ranges 14.2-14.6 mm) and *Hipposideros pomona gentilis* from Northern India (skull size large with condylo-canine length, ranges 15.0-16.0 mm.) through Myanmar and Southern Thailand to North Malaya.

#### 56. *Hipposideros speoris speoris* (Schneider, 1800)

1800. *Vespertilio speoris* Schneider, In Schreber, Die Säugethiere, pl. 59b.

2002. *Hipposideros speoris speoris* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 50.

*Common Names :* English : Schneider's Leaf-nosed Bat; Hindi : Chamgadad; Kannad : Sikatyelle; Malayalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/44	2 M	Skin & Skull	Wet	Ellora, Dist. Aurangabad, Maharashtra	R. N. Chopra	06 Sept. 1964	One skull damaged

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/410	1 F	Skin & Skull	Wet	Bibvewadi, Pune, Maharashtra	Prof. Nalawade	23 Nov. 1984	Donated
M/447	1 M	Skin & Skull	Wet	Rest house Deorukh, Dist. Ratnagiri, Maharashtra	R. M. Sharma	15 Aug. 1987	
M/450	1 F	Skin & Skull	Wet	Rest house Deorukh, Dist. Ratnagiri, Maharashtra	R. M. Sharma	17 Aug. 1987	
M/565	1 M	Skin & Skull	Wet	PWD Rest house campus, Khandala, Dist. Pune, Maharashtra	M. S. Pradhan	15 Jan. 1994	
M/619	1 M	Skin & Skull	Wet	Pench river, Pench National Park, Dist. Nagpur, Maharashtra	S. G. Patil	25 April 1997	Young one
M/658	1 M	Skin & Skull	Wet	Bhuleshwar (Yavat), Dist. Pune, Maharashtra	Abhjit Koratkar & M. C. Gaikawad	04 Aug. 2002	Donated by V. S. Korad
M/732	1 M	Skin & Skull	Wet	Kandri mines, Dist. Nagpur, Maharashtra	————	05 April 1985	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur
M/738	1 F	Skin & Skull	Wet	Locality not mentioned on original lable	————	14 Sept. 1978	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/746	1 F	Skin & Skull	Wet	Mandu, Madhya Pradesh	————	17 Jan. 1995	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/44	52-53	21-23.1	7-8.1	50-50.1	21.1-21.5	32-33.1	36.4-38.3	37.7-39	14.2-15.4	19.1	16.2	17	10.6	9	2.6	6.7	7.3	12.5-12.6	4.1	7.2
M/410	51	25	8	52.3	22.6	35.2	39.4	41	15.1	19.1	16.2	16.7	10.3	8.6	3.1	7	7.5	12.4	4.3	7.6
M/447	41	21.5	7.7	50.3	20.2	33.1	37.4	39.8	12.4	19.6	17	17.1	11	9.2	2.7	7.1	7.6	13.3	4.3	7.4
M/450	51	20.4	8.3	49.7	19.7	31.5	35.5	37.1	14.1	19.3	16.4	17.2	10.2	8.6	3.4	7	7.3	13.1	4.2	7
M/565	57	20	9.2	53.1	23.3	35.6	39.3	41.1	14	20.1	17.2		11.3	9.3	3.3	7.3	8.1	13.7	5	7.7
M/619	38	30	7.2	46.3	19.1	32.7	37	36	10	17.1	14.6	15.1	9.1	7.2	4.1	5.7	6	10.1	3.2	6.2
M/658	51	25	9.4	52.1	22.7	33.4	36.1	37.5	11.5	19.5	17		11	9.2	3.4	7.1	7.3	13.1	4.8	7.6
M/732	55.1	23.2	8	49.1	22.1	32.1	36.5	37.3	15.5	19.2			10.5	8.2	3.2	7.2	7.4	13	4.7	7.3
M/738	52.1	21.5	7.5	51.1	21.4	34.1	38.2	39.5	17	19.4	16.3	17.1	11	9.6	3.3	7.1	7.5	10.5	4.6	7.5
M/746	40	23	8.4	51.2	21.2	33.3	37.4	38.2	16.1	18+	15.7	16.6	10.2+	8.7	3.5	6.7	7.7	12.5	5	7.3

*Distribution* : Andhra Pradesh, Gujarat, Karnataka, Kerala, Maharashtra, Orissa, Tamil Nadu, Uttrakhand (Bates and Harrison, 1997).

*Elsewhere* : Sri Lanka.

Family MEGADERMATIDAE H. Allen, 1864

Genus *Megaderma* E. Geoffroy, 1810

57. *Megaderma lyra lyra* E. Geoffroy, 1810

1810. *Megaderma lyra* E. Geoffroy, *Ann. Mus. Nat. Hist. Nat. Paris*, **15** : 190.

2002. *Megaderma lyra lyra* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No.* **199** : 35-36.



*Common Names* : English : Indian False Vampire bat, Greater False Vampire Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/164	1 ex.	Skull	Wet	Jog falls, Tamil Nadu	Rama-krishna	03 Mar 1980	Skin. damaged
M/342	2 F	Skin & Skull	Wet	Cave near Parud vill., Mahabaleshwar, Dist. Satara, Maharashtra	R. H. Kamble	6 Jan. 1985	
M/527	1 ex.	Skin & Skull	Wet	Muthur Rest house, Periapatanam range, Nagarhole national Park, Karnataka	M. S. Pradhan	15 Mar. 1991	
M/608	2 M	Skin & Skull	Wet	Deserted forest rest house. Kolsa, Tadoba national Park, Dist. Chandrapur, Maharashtra	P. P. Kulkarni	05 April 1996	
M/616	2 M 1 F	Skin & Skull	Wet	Pipria & around, Pench National Park, Dist. Nagpur, Maharashtra	M. S. Pradhan	26 Feb. 1999	
M/617	2 M	Skin & Skull	Wet	Ranidoh & around, Pench National Park, Dist. Nagpur, Maharashtra	M. S. Pradhan	03 Mar. 1999	
M/695	3 M 2 F	Skin & Skull	Wet	Deserted house at Samewada village, Tal. Lakhani, Dist. Bhandara, Maharashtra	S. S. Talmale	19 Nov. 2004	
M/730	1 F	Skin & Skull	Wet	Sindewahi, Dist. Chandrapur, Maharashtra	N. H. Dhoble	17 Oct. 2005	Donated

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/736	1 F	Skin & Skull	Wet	Kandri mines, Dist. Nagpur, Maharashtra	—	12 Dec. 1984	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

*External & Cranial Measurements :*

ZSI,WRC,	HB	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>	Nose-leaf
M/164									27.5	23.2	24.9	16.5	12.1	5	8.5	10.2	19.4	6.1	10	
M/342	75-76.5	16.4-16.5	64.5-65	31.1-32.1	57.2-58	54.1-54.7	49.1-49.5	36.4-37.5	28-28.3	24.7-25.2		15.1-16.3	11.7-12.5	5.3	10.7	11.7	19.1-19.7	5.1-5.5	10-10.1	12.4-13.1
M/527	90	15.4	63.2	33.9	56.1	52.5	47.5	34.3	27.5	25.1	25.3	11.7	12.1	4.7	10.7	12.1	19.7	5.7	10.1	12.1
M/608	79-81	15.7-17.4	61.1-65	31.5-35.3	56.7-59.1	53.2-55.5	47.3-49.7	34.5-37.7	16+-29.3	25.9		16	12	5.1	10.4-11.3	11.7-12.6	18.7-20.1	5.3-5.6	9.7	8.3-9.3
M/616	70-72.5	16.3-18.5	65.4-66.6	32.2-34.1	58.7-59.4	54.7-55.3	48.5-49.5	37.1-37.4	28.1-28.2	25.1-25.2	25.3	16.1-16.7	12-12.3	5-5.1	10.7-11.1	11.7-12	19.2-19.5	5.2-5.4	9.3-10.1	11.6-12.7
M/617	71-73	15.7-16.3	64-66.3	32.4-35.7	57.6-58.1	53.8-54.3	48-48.4	35.1-36.3	28.1-28.2	25.1-25.2		15.3-16	12.2-12.7	5.2	10.7-11.1	12-12.1	19.3-19.4	5.2-5.5	9.6-10	11.3-11.7
M/695	74-84	14.4-18.3	64.7-68.1	34-36	57.7-61	52.7-56.2	46.5-50.2	33-36	28.1-29.1	25.2-26	25.5-26.2	15.2-16.5	12-12.5	5-5.3	11.3-11.7	12.1-12.5	19.3-20.2	5.5-6	10-10.2	12
M/730	70.6	18.1	67.8	33.5	60	56.2	50.6	37.5	28.4	25.3		16.7	12.1	5.3	11.1	12.2	19.7	5.4	10.1	12.4
M/736	77	16.5	66.2	32.5	60.3	55.2	47.7	33.3	27.1	24.2		15.6	11.7	5	10.2	11.3	19	4.6	9	

*Distribution* : Throughout Indian mainland from Jammu and Kashmir in the north to Kanya Kumari in the south, Gujarat in the west to Arunachal Pradesh and Nagaland in the east within Indian limits.

*Elsewhere* : Afghanistan, Pakistan, Nepal, Sri Lanka, Bangladesh and Myanmar (Bates and Harrison, 1997).

*Remarks* : Medium sized bat with large ears attached to each other for atleast a third to half their length. Dorsal colour slaty grey; Under parts paler. Posterior termination of noseleaf truncated. Upper canine powerful; First upper premolar (pm<sup>2</sup>) minute, concealed between the canine and large second premolar (pm<sup>4</sup>).

58. *Megaderma spasma horsfieldii* Blyth, 18631863. *Megaderma horsfieldii* Blyth, *Cat. Mamm. Mus. Asiat. Soc. Bengal*, 23.2005. *Megaderma spasma horsfieldii* : Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. I : 380.

**Common Names** : English : Lesser False Vampire Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/502	1 F	Skin & Skull	Wet	Rest house Pundre & around, Dist. Kolhapur, Maharashtra	M. S. Pradhan	21 Feb. 1989	
M/546	2 M 3 F	Skin & Skull	Wet	Tarubanda Rest house & around, Kolkaz, Melghat Tiger Reserve, Dist. Amaravati, Maharashtra	M. S. Pradhan	14 Feb. 1992	

*External & Cranial Measurements* :

ZSI,WRC,	HB	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>	Nose-leaf
M/502	56	14.6	55.3	31.3	50	45.7	40.4	31.8	26	23		14.1	10.5	4.1	10	11	17.3	5	8.5	6.1
M/546	60-66	15-17	58.2-61.1	32.1-33.1	52.1-54.3	47.2-50.4	42-44	36-38	25.2-26.1	22.5-24.1	22.7-24.2	13.7-14.2	10.4-11.1	4-4.4	9.7-10.2	11.1-11.5	17.4-18.4	5.1	8.3-9.1	5.5-7.1

**Distribution** : Andaman Islands, Andhra Pradesh, Assam, Goa, Gujarat, Karnataka, Kerala, Maharashtra, Mizoram, Tamil Nadu, West Bengal (Bates and Harrison, 1997; Das, 2003).

**Remarks** : Smaller species than *Megaderma lyra* with ears attached to each other near their bases at about 10-15% of the height of the inner margin, tragus bifid. Tip of noseleaf not truncated. This subspecies is confined to humid and forested biomes; its natural roost sites appear to be caves, disused wells, mud temple, verandahs, lofts of tiled roofed houses, abandoned dwellings and hollow tree trunk with many exits.

## Family RHINOPOMATIDAE Bonaparte, 1838

Genus *Rhinopoma* E. Geoffroy, 181859. *Rhinopoma hardwickii hardwickii* Gray, 18311831. *Rhinopoma hardwickii* Gray, *Zool. Misc.*, **1** : 37.2002. *Rhinopoma hardwickii hardwickii* : Bates and Harrison, *Bats of Indian Subcontinent* : 35-37.

*Common Names* : English : Lesser Mouse-tailed Bat, Lesser Rat-tailed Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Marathi : Watwaghul.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/607	1 M	Skin & Skull	Wet	Cave back of guest house in compartment No. 91, Tadoba National Park, Dist. Chandrapur, Maharashtra	P. P. Kulkarni	06 April 1996	
M/740	1 F	Skin & Skull	Wet	Locality not mentioned on original label	————	02 April 1981	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/607	68	57	13.3	57.1	29.3	41.6	34.1	41.5	15.5	19.2	16.7	17.6	11.3	8.2	3.1	6.3	7	13.7	4.5	8.2
M/740	63.4	64.2	14.5	58.6	27.5	41.3	37.4	42.5	16	18.5	16.4	17.2	10.7	8	3.5	6.3	7	12.4	4.5	8.1

*Distribution* : Andhra Pradesh, Assam, Bihar, Delhi, Gujarat, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Rajasthan, Uttar Pradesh, West Bengal.

*Elsewhere* : Afghanistan, Myanmar, Bangladesh, Pakistan, Thailand (Ghosh, 2008).

*Remarks* : Medium sized mouse-tailed bat with tail generally longer than forearm. A small but well defined triangular dermal ridge present on the snout. Pelage uniform light grey brown on the back and slightly pale on the belly, lower back and belly naked. The species sometimes spelled *hardwickei* (because the species was named after Major General Hardwicke), but the original spelling is *hardwickii* ( Kock *et al.*, 2001).

60. *Rhinopoma microphyllum kinneari* (Wroughton, 1912)

1912. *Rhinopoma kinneari* Wroughton, *J. Bombay nat. Hist. Soc.*, **21** : 767.

2005. *Rhinopoma microphyllum kinneari* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No.* **199** : 35-36.

*Common Names* : English : Greater Mouse-tailed Bat; Hindi : Chamgadad; Bengali : Badur; Marathi : Watwaghul.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/735	1 F	Skin	Wet	Locality not mentioned on original label	————	15 April 1980	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur
M/739	1 M	Skin & Skull	Wet	Locality not mentioned on original label	————	13 July 1980	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/735	67.4	46	15	64	23.3	42.7	37.1	45.1	17.3											
M/739	76	52.5	15.1	68.1	28.1	47.8	41.3	52.3	19.1	19.7	17.4		11.4	9.2	3.2	6.7	7.5	15	4.7	9.2

*Distribution* : Bihar, Delhi, Gujarat, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Uttar Pradesh, West Bengal.

*Elsewhere* : Afghanistan, Bangladesh, Indonesia, Myanmar, Pakistan, Thailand.

*Remarks* : A medium sized bat with long mouse-like tail emerging from edge of narrow uropatigium, usually shorter than forearm. Ears well developed with a bluntly sickle-shaped tragus. Dermal ridge on the muzzle small. Corbet and Hill (1992) though treated *kinneari* as a synonym of *Rhinopoma microphyllum* remarked that Indian and Sumatran specimens are little larger than Pakistan specimens. Bates and Harrison (1997), Alfred *et al.* (2002), Simmons in Wilson and Reeder (2005) have treated *Rhinopoma microphyllum kinneari* (Wroughton) as a valid subspecies for Indian region.

Family EMBALLONURIDAE Gervais, 1855

Subfamily TAPHOZOINAE Jerdon, 1867

Genus *Taphozous* E. Geoffroy, 1818

61. *Taphozous longimanus longimanus* Hardwicke, 1825

1825. *Taphozous longimanus* Hardwicke, *Trans. Linn. Soc. Lond.*, 14 : 525.

2002. *Taphozous longimanus longimanus* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 33.

*Common Names* : English : Long-winged Tomb Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu ; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/37	1 M	Skin & Skull	Wet	Wadgaon, Poona, Dist. Pune, Maharashtra	B. S. Lamba	29 Sept. 1965	
M/711	1 M	Skin & Skull	Wet	Old deserted temple, Lonar lake, Dist. Buldana, Maharashtra	K. J. Kunte	10 Sept. 1992	Donated
M/750	1 M 1 F	Skin & Skull	Wet	Raigad Fort area, Dist. Raigad, Maharashtra	V. S. Korad	2004	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	IC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/37	64	23	12.1	59.5	24.2	35.5	46.1	57.7	15.1	21	19.5	19+	12.4	10	7	9.1	9.4	16.1	4	9.1
M/711	63	20	12.4	55.4	20.6	30.3	38.1	48.3	14	20.7	18.3	19.6	10.3	10.3	5.5	8.5	9.7	15.1	3.5	8.7
M/750	62- 63	20- 24.4	12.5- 14	58.2- 61.9	22.3- 25.8	32.7- 37.3	41.9- 49.3	58- 61.8	13.3- 13.5	20.1- 20.2	19.5- 20.4	21.4	11.7- 12.4	9.8- 9.9	5.5- 6.8	8.8- 9	9.8- 10.9	15.3- 16	3.7	8- 8.5

*Distribution* : Widely distributed from Tamil nadu in the south, nothwords to Gujarat and Rajasthan in the west, Tripura and Nagaland in the east within Indian limits.

*Elsewhere* : Nepal, Sri Lanka, Bangladesh, Myanmar, possibly Thailand (Das, 2003).

**62. *Taphozous melanopogon melanopogon* Temminck, 1841**

1841. *Taphozous melanopogon* Temminck, *Monogr. Mamm.*, **2** : 287.

2002. *Taphozous melanopogon melanopogon* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 33-34.

*Common Names* : English : Black-bearded Tomb Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/336	1 F.	Skin	Wet	Old Goa, Goa	G. M. Yazdani	19 Dec. 1975	
M/580	4 M 3 F	Skin & Skull	Wet	Gavilgad Fort near Chikaldara, Melghat Tiger Reserve, Dist. Amaravati, Maharashtra	P. P. Kulkarni	19 Dec. 1992	
M/733	1 M	Skin & Skull	Wet	No History	—	—	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/741	1 F	Skin & Skull	Wet	Locality not mentioned on original label	————	17 June 1985	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	IC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/336	73.5	23.6	13.4	66.6	24.4	39.4	50.1	61.2	12.7											
M/580	64-73	19.2-24	12.3-14.2	64.1-66.4	23.2-25.2	37.2-40.2	46-49.3	56.6-60.1	14.5-22.1	20.1-22.6	20-21.2	20.1-21.3	10-13	7-10.2	6.6-7.1	9-10.2	9.7-15.2+	16-17.5	3.6-4.1	8.7-9.4
M/733	70	22.2	11.2	64.6	23.8	38.3	46.4	57.7	19.2	20.6	19		11.2	9.6	6.7	8.1	9.4	15.1	3.3	7.7
M/741	72.5	25	13.3	64.5	24.3	37.4	46.3	57	20	21	19.4		12	9.7	5.1	8.7	9.5	15	3.2	8.4

*Distribution* : Widely distributed in the Indian Peninsula, north to Rajasthan on the west, and Bihar on the east; also Andaman Islands (Ghosh, 2008).

*Elsewhere* : Bangladesh, China, Indonesia, Malaysia, Myanmar, Philippines, Sri Lanka, Lesser Sunda islands, Thailand, Vietnam and many small adjacent islands ( Alfred *et al.*, 2002).

63. *Taphozous nudiventris kachhensis* (Dobson, 1872)

1872. *Taphozous kachhensis* Dobson, *J. Asiat. Soc. Bengal*, **41** (2) : 221.

2005. *Taphozous nudiventris kachhensis* : Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. I : 384.

*Common Names* : English : Naked-rumped Tomb Bat; Hindi : Chamgadad; Bengali: Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.



Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/743	1 F	Skin & Skull	Wet	Fort (Only mentioned on original label)	————	27 April 1980	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur
M/759	1 M 1 F	Skin & Skull	Wet	Kharosa cave & around, Nilanga, Dist. Latur, Maharashtra	D. B Bastawade	26 Sept. 2006	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	IC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/743	90	23	16	73.3	29.7	46.2	55.4	66.2	22.3	25.6	23		14.3	11.3	5.6	10.2	11	19.4	4.6	10.1
M/759	85- 90	27- 32	16.3	69.7- 75.2	26.5- 30.2	43.6- 47.4	51.6- 57.3	63- 70.6	22- 23	26.4- 27	23.9- 24.2	24- 24.6	15.9- 16.4	11.9- 12.4	5.2- 5.5	11- 11.1	12.4- 12.9	20.3- 20.8	5.4- 5.8	10.8- 11.2

*Distribution* : Almost throughout the country from Jammu and Kashmir in the north to Kanya Kumari in the south, and Punjab in the west to Arunachal Pradesh in the east (Alfred *et al.*, 2002).

*Elsewhere* : Afghanistan and Pakistan, Possibly Bangladesh (Das, 2003).

Family MOLOSSIDAE Gervais, 1856

Subfamily MOLOSSINAE Gervais, 1856

Genus *Chaerephon* Dobson, 1874

64. *Chaerephon plicatus plicatus* (Buchanan, 1800)

1800. *Vespertilio plicatus* Buchanan, *Trans. Linn. Soc. Lond.*, **5** : 261.

2005. *Chaerephon plicatus plicatus* : Simmons, N. In Wilson and Reeder, *Mammal Species of the World*, 3<sup>rd</sup> ed., Vol. **I** : 434.

*Common Names* : English : Wrinkle-lipped Free-tailed Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malayalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/640	1 F	Skin & Skull	Wet	Nanawada, Pune, Maharashtra	V. S. Korad & K. D. Yardi	04 Aug. 2002	Donated
M/744	1 M	Skin	Wet	Locality not mentioned on original label	————	30 July 1990	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/640	67.1	38	8.1	48.6	14.7	29	47.3	49.1	19.1	19.3	17.7	19.1	12	9.6	5.1	7.4	8.1	14.1	4.6	8.5
M/744	71	33	8.5	46.5	15.4	27.8	45	46.2	18.1											

*Distribution :* Andhra Pradesh, Goa, Madhya Pradesh, Maharashtra, Meghalaya, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal (Bates and Harrison, 1997; Das, 2003).

*Elsewhere :* Myanmar, southern China including Hainan, Hong Kong, Tibet, Vietnam, Cambodia, Thailand, Malaya Peninsula, Singapore, Sumatra, Borneo (Das, 2003).

*Remarks :* This species was included under the genus *Tadarida* Rafinesque and subgenus *Chaerephon* Dobson by Ellerman and Morrison-Scott (1951), Corbet and Hill (1992), Bates and Harrison (1997), Das (2003) and many others. However, following the revisionary work of Freeman (1981), Koopman (1993), Alfred *et al.* (2002) and Simmons (2005) retained the species under independent Genus *Chaerephon* Dobson.

Genus *Otomops* Thomas, 191365. *Otomops wroughtoni* (Thomas, 1913)1913. *Nyctinomus wroughtoni* Thomas, *J. Bombay Nat. Hist. Soc.*, **22** : 87.2006. *Otomops wroughtoni* : Alfred, Ramkrishna and Pradhan, *Validation of Threatened Mammals of India* : 103-106 (Publ. ZSI, Kolkata).*Common Names* : English : Wroughton's Giant Mastiff Bat, Wroughton's Free-tailed Bat; Hindi : Chamgadad; Kannad : Sikatyelle.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/173	1 F	Skin & Skull	Dry	Barapede cave, Anmod, North Kanara, Karnataka	Rama-krishna	25 Feb. 1980	
M/626	1 M	Skin	Wet	Barapede cave, Talewadi, Dist. Belgaum, Karnataka	Rama-krishna	01 Mar. 2002	Skull not dissected

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/173	95	32.8	9.7	66.8	19.1	35	61.1	67	26.2	24.6	21.8	22.8	13.1	11.4	5.45	8.2	9.3	16.1	5.3	9.2
M/626	75	40.5	12.4	65.1	17.4	33	60.2	64.2	31.1											

*Distribution* : Barapede Cave, Near Talewadi, Kanara (Karnataka).*Elsewhere* : Cambodia.

*Remarks* : Large sized species with forearm length averages 65 mm; Dorsal surface rich glossy brown on head, back and rump; shoulders and nape of neck pale grayish white; ventral surface dull brown but grey collar. As per IUCN criteria the species has been listed under the category of Critically Endangered. It is also included in Schedule-I (Part-I) in the Indian Wildlife (Protection) Act, 1972 (amended upto 2006).

Genus *Tadarida* Rafinesque, 181466. *Tadarida aegyptiaca thomasi* Wroughton, 19191919. *Tadarida thomasi* Wroughton, *J. Bombay nat. Hist. Soc.*, **26** : 732.2005. *Tadarida aegyptiaca thomasi*: Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. **I** : 449.

*Common Names* : English : Egyptian Free-tailed Bat; Hindi : Chamgadad; Bengali : Badur; Gujarati : Vadvagol; Kannad : Sikatyelle; Malayalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/598	1 M	Skin & Skull	Wet	AFMC main building, Pune, Maharashtra	R. Srivastava	12 Jan. 1996	Donated
M/755	1 F	Skin & Skull	Wet	Khondai, Tal. Mulshi, Dist. Pune, Maharashtra	V. S. Korad	07 July 2002	Donated. Skull damaged & not extracted; 1 separate Skull only

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/598	68	42.3	8.1	49	14.6	28.7	47	48.7	17.3	19.6	17.1	19.4	11.3	9+	5	7.4	8.6	13.6	4.6	8.7
M/755	63	39	8.1	46	13.3	28.2	46.1	47.8	16.8											
M/755										20.3	18.4	19.9	12.1	9.9	4.7	7.5	7.7	13.9	5.2	8.3

*Distribution* : Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, West Bengal (Bates and Harrison, 1997; Chakraborty *et al.*, 2004).

*Elsewhere* : Sri Lanka.

*Remarks* : Wroughton (1919) distinguished *Tadarida aegyptiaca thomasi* from Gujarat and *T. e. gossei* from Maharashtra on the basis of fur colour. Ellerman and Morrison-Scott (1951) have listed the same. However, Brosset (1962) and Kashyap (1978) reported individual variations. Sinha (1970) synonymised *gossei* under *Tadarida aegyptiaca thomasi*. Bates and Harrison (1997) followed the same view. Das (2003) suggested *Tadarida aegyptiaca tragata* (Dobson) for Indian form, since *tragata* has priority

over *gossei* and *thomasi*. Chaturvedi (1964) has shown that *tragata* is conspecific with *aegyptiaca*. However, Simmons (2005) recognised both *tragata* and *thomasi* as a subspecies of *Tadarida aegyptiaca* for Indian population without any comment and geographic demarcation.

Family VESPERTILIONIDAE Gray, 1821

Subfamily VESPERTILIONINAE Gray, 1821

Tribe NYCTICEIINI Gervais, 1855

Genus *Scotophilus* Leach, 1821

67. *Scotophilus heathii heathii* (Horsfield, 1831)

1831. *Nycticejus heathii* Horsfield, *Proc. Zool. Soc. Lond.*, **1831** : 113.

1997. *Scotophilus heathii heathii* : Bates and Harrison, *Bats of the Indian Subcontinent* : 146-149.

*Common Names* : English : Greater Asiatic Yellow House Bat; Hindi : Chamgadad; Bengali : Badur; Gujarati : Vadvagol; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/590	1 M 1 F	Skin & Skull	Wet	Semadoh complex, Melghat Tiger Reserve, Dist. Amaravati, Maharashtra	M. S. Pradhan	07 April 1994	
M/618	2 M 2 F	Skin & Skull	Wet	Around Sillari Rest house, Pench National Park, Dist. Nagpur, Maharashtra	M. S. Pradhan	25 Feb. 1999	One skull not extracted
M/661	2 M	Skin & Skull	Wet	Kolsa Rest house, Tadoba National Park, Dist. Chandrapur	P. P. Kulkarni	18 April 2000	
M/753	1 F	Skin & Skull	Wet	Nira Narsingpur, Tal. Indapur, Dist. Pune	V. S. Korad	26 Jan 2003	Donated.

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/590	70-74	55-61	10.4-11.2	60.5-61	24.1-24.3	52.7-54.7	56.1-58.2	58.1-59.2	15.5-16.1	23.2	19.7-20.3	20.2-20.3	14.7-15.2	9.6-10.1	5.5-5.7	7.7-8	8.6-8.7	15.3-16.1	7.3-7.4	9.6-9.7
M/618	65-77	57-63	11.2-13.1	55.4-61.7	21-24.3	51.5-55.7	54.7-60.5	55-61	14.1-17.3	23.1-23.7	20.2-20.4	20.1-20.5	15.1-15.3	9.4-10.1	5.2-6.1	7.4-7.7	8.4-8.5	15.6-16.3	7.2-7.6	9.4-10.1
M/661	80.1-83	54.2-60.3	12.5-13.8	59.2-61.6	24.1-25.2	56.8-57.1	57.8-61.2	60.1-62.5	12.6-12.8	21.3	19.5-20.5	20.3-20.7	15.3	9.6-10.2	5.3-5.6	7.5-8.4	8.5-8.9	15.5-15.9	7.3	9.8-10
M/753	71	65	11.1	58.7	22.8	54.4	58.5	59.9	16.4	22.6	20	20.4	15.5	10.2	6	7.5	8.7	15.5	7.3	9.9

*Distribution* : Widely distributed throughout the country (Ghosh, 2008).

*Elsewhere* : Afghanistan, Pakistan, Nepal, Sri Lanka, Bangladesh, Myanmar (Das, 2003).

68. *Scotophilus kuhlii kuhlii* Leach, 1821

1821. *Scotophilus kuhlii* Leach, *Trans. Linn. Soc. Lond.*, **13** : 71.

2002. *Scotophilus kuhlii kuhlii* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No.* **199** : 74.

*Common Names* : English : Lesser Asiatic Yellow House Bat; Hindi : Chamgadad; Bengali : Badur; Gujarati : Vadvagol; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/542	1 M 2 F	Skin & Skull	Wet	Sipna river near Semadoh, Melghat Tiger Reserve, Dist. Amaravati, Maharashtra	M. S. Pradhan	06 Feb. 1992	
M/731	1 F	Skin & Skull	Wet	Locality not mentioned on original lable	————	20 Oct. 1952	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/734	1 M	Skin & Skull	Wet	Palm tree house, Jamshedpur, Jharkhand	————	08 Oct. 1981	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur
M/754	1 M	Skin & Skull	Wet	Wetale, Tal. Khed, Dist. Pune, Maharashtra	V. S. Korad	08 May 2003	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/542	63-73.5	45-55	9.1-10	48.6-51.5	19-19.6	45.3-47.4	48.7-50.2	48.1-51.4	11.3-13	18.6-19.2	17-17.4	17.3-17.7	12.6-13.1	8.7-9.1	4.1-5	6.3-6.6	7.2-7.4	13.1-14.1	5.7-6.2	8.2-8.4
M/731	68.7	45.5	10	50.7	20.1	47.5	51	50.7	14	19	16.7	17.1	12.4	8.6	5.2	6.1	7.1	13.1	5.9	8.2
M/734	63.7	43.2	9.5	46.2	18.4	44	46.5	46.4	14.1	17.5	14.7	—	11.1	8.3	5.2	6	6.4	13	5.1	7.7
M/754	62	45	9.5	47.8	17.6	45	49.4	49.7	12.8	18.7	17.3	17.7	13	8.6	4.6	6.4	6.8	14.1	6.1	8.5

*Distribution* : Widely distributed throughout the country including Nicobar islands (Alfred *et al.*,2002);

*Elsewhere* : Bangladesh, Myanmar, Pakistan and Sri Lanka (Das, 2003).

*Remarks* : Very much similar to Greater yellow bat *Scotophilus heathi*, but smaller in Forearm length (below 55 mm). Ellerman and Morrison-Scott (1951) have used the name *Scotophilus temmincki wroughtoni* Thomas for the present species in India. Bates and Harrison (1997) provisionally referred *Scotophilus kuhlii wroughtoni* for specimens from Indian Subcontinent. However, Hill and Thonglongya (1972) have shown *Scotophilus kuhlii kuhlii* is the correct name for this bat. Sinha (1980), Alfred *et al.*(2002), Das (2003) and Simmons (2005) have followed the same view.

Tribe PIPISTRELLINI Tate, 1942

Genus *Pipistrellus* Kaup, 1829

69. *Pipistrellus ceylonicus indicus* (Dobson, 1878)

1878. *Vesperugo indicus* Dobson, *Cat. Chiroptera Colln. Br. Mus.* 222.

2005. *Pipistrellus ceylonicus indicus* : Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. I : 474.

*Common Names* : English : Kelaart's Pipistrelle; Hindi : Chamgadad; Bengali : Badur; Gujarati : Vadvagol; Kannad : Sikatyelle; Malayalam : Borvalu; Marathi : Pakoli, Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/47	1 F	Skin & Skull	Wet	Parvati temple, Pune, Dist. Pune, Maharashtra	C. B. Prasad	09 June 1975	Skull damaged
M/48	1 M	Skin & Skull	Wet	Kopargaon, Dist. Ahamednagar, Maharashtra	M. Baburao	13 Oct. 1973	Young one
M/409	1 F	Skin & Skull	Wet	Ambegaon, Tal. Khed, Dist. Pune, Maharashtra	Prof. Nalawade	Dec. 1984	Donated
M/543	1 M	Skin & Skull	Wet	ZSI building, Shivajinagar, Pune, Maharashtra	M. S. Pradhan	11 Mar. 1988	
M/637	1 F	Skin & Skull	Wet	Mahilashram Girls School, Pune, Maharashtra	V. S. Korad & K. D. Yardi	18 Jan. 2000	Donated
M/672	1 M	Skin & Skull	Wet	Talegaon-Dabhade, Dist. Pune, Maharashtra	Sanjay Thakur	Sept. 2002	Donated
M/726	1 M	Skin & Skull	Wet	Nalganga Rest house (Back of Notice board), Dist. Buldana	S. G. Patil	15 Nov. 2005	
M/737	1 M	Skin & Skull	Wet	From the hollow on the Cocoa tree trunk, Trichur, Kerala	A. Madhavan	10 Sept. 1994	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur



*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/47	46	35	8.1	38.5	15.6	35	36	36	11.3	15.5	15	14.3		7.1	4	5.6				
M/48	36	27	6.1	31.2	12.2	26	25.3	25.2	8.6	13.2	12		7.6		4.5	4.7	4.5	9.7	3.6	6.3
M/409	41.5	35	6.6	34.6	13.6	33.1	35	34	10.3	13.8	14.1		9.1	7.3	4.6	5.5	6	11	4.5	6.4
M/543	48	34.1	5.6	36	13.4	32.5	34.1	35	11.3	15.3	14		9	7.5	4.6	5.4	5.7	11.5	5.1	7.2
M/637	45.2	35	6.7	35.4	14.1	33.2	34.3	34.5	10.1	14.7	13.4	14.4	9.4	7.4	3.7	5.5	6	10.1	5	5.7
M/672	51	37.4	7.3	35.3	13.5	32	33.3	33.3	11.2	15	14.1		9.2	7.4	4	5.3	6.2	10.5	5.1	6.7
M/726	48	38	8	39.3	14.2	35.3	36.2	38	11.1	15.5	14.2	15	9.7	7.4	4.1	5.7	6.2	11.1	5.2	7.1
M/737	50	34	8.2	37.5	14.1	38	33.1	36	14	14.4	13.1	13.7	8.6	7	4.6	5.3	6	10	4.1	6.4

Distribution : Andhra Pradesh, Bihar, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal states within Indian limits.

*Elsewhere* : Pakistan, possibly Bangladesh (Das, 2003).

*Remarks* : Ellerman and Morrison-Scott (1951) have recognized three subspecies of *Pipistrellus ceylonicus*, viz., *indicus*, *crysothrix* and *subcanus* for the Indian mainland, on the basis of the differences in size and colour. Brosset (1962) has observed considerable individual variation in pelage colour in the same colony of *P. ceylonicus*. Khajuria (1980) has synonymised *crysothrix* with *indicus*. Lal (1984) has considered both *crysothrix* and *subcanus* as synonyms of *indicus*. Corbet and Hill (1992), Bates and Harrison (1997), Alfred *et al.* (2002) and Das (2003) have followed the Lal's (1984) view of treating Indian *Pipistrellus ceylonicus* population as *Pipistrellus ceylonicus indicus*. However, Simmons, 2005 recognised two subspecies from India viz., *subcanus* (type loc. Yalala, Junagadh, Gujarath) and *indicus*.

### 70. *Pipistrellus coromandra* (Gray, 1838)

1838. *Scotophilus coromandra* Gray, *Mag. Zool. Bot.*, **2** : 498.

2002. *Pipistrellus coromandra* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No.* **199** : 67.

*Common Names* : English : Indian Pipistrelle; Hindi : Chamgadad; Bengali : Badur; Gujarati : Vadvagol; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Pakoli, Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/554	1 M 1 F	Skin & Skull	Wet	Pimpri-Chinchwad, dist. Pune, Maharashtra	Prof. Nalawade	Nov. 1993	Donated, Skulls damaged
M/639	1 M	Skin & Skull	Wet	Mahilashram School, Pune, Maharashtra	V. S. Korad & K. D. Yardi	08 Mar. 2000	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>	
M/554	40-43	22-23	7.7-8	31	11.6-12.2	24-25.3	23.3-24.1	24.2-24.4	9.4-9.5												
M/639	39	29		30.1	12	27.4	29	28.6	7	12.1	10.7	11.4	7.4	6.2	3.7	4.1	4.1	7.2	3.7	5.2	

*Distribution :* Widely distributed in peninsular India, north to Jammu and Kashmir, east to north eastern states including Tripura also Car Nicobar Island (Alfred *et al.*, 2002).

*Elsewhere :* Afghanistan, Bangladesh, Sri Lanka, Pakistan, Nepal, Bhutan, Myanmar, Cambodia, Thailand, S China.

#### 71. *Pipistrellus javanicus babu* Thomas, 1915

1915. *Pipistrellus babu* Thomas, *J. Bombay nat. Hist. Soc.* **24** (1) : 30.

2005. *Pipistrellus javanicus babu* : Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. **I** : 475.

*Common Names :* English : Javan Pipistrelle; Hindi : Chamgadad; Bengali : Badur; Marathi : Pakoli, Watwaghul.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/635	1 M	Skin & Skull	Wet	Ferguson college, Pune, Maharashtra	V. S. Korad & K. D. Yardi	02 Aug. 1999	Donated
M/747	1 M	Skin & Skull	Wet	Locality not mentioned on original lable	————	30 Jan. 1980	Donated by HOD, Dept. of Zoology, Inst. of Sci., Nagpur

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/635	46	35	8.1	35	13.3	32.5	33.2	34	10	14.4	12.4	13	9.3	7.4	4.3	5.2	5.6	10.4	4.7	6.5
M/747	47	36	6.6	36.5	14	36.5	35.8	37.4	12.2	14.6	13.2	14.1	8.6	7	3.7	5.2	6.2	11.1	5	6

*Distribution* : Andaman and Nicobar Islands. Assam, Himachal Pradesh, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Sikkim, Uttrakhand, Uttar Pradesh and West Bengal within Indian limits (Bates and Harison, 1997).

*Elsewhere* : Afganistan, Pakistan, Nepal, Bangladesh, Myanmar (Das, 2003).

*Remarks* : Bates and Harrison (1997) referred *Pipistrellus babu* as a subspecies of *P. javanicus* from Indian mainland and *P. j. comortae* from Nicobar islands. However, Sinha (1999) does not agree with Corbet and Hill (1992) and Bates and Harrison (1997) and maintained *P. babu* as a distinct species from Indian mainland due to unavailability of *javanicus* from type locality. But, Simmons (2005) followed the view of Bates and Harrison (1997). Same view has been followed here.

## 72. *Pipistrellus kuhlii* (Kuhl, 1817)

1817. *Vespertilio kuhlii* Kuhl, *Die Deutschen Fledermäuse*, Hanau, p. 14.

2002. *Pipistrellus kuhlii*: Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 68.

*Common Names* : English : Kuhl's Pipistrelle; Hindi : Chamgadad; Bengal : Badur.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/638	1 F	Skin & Skull	Wet	Ferguson college, Pune, Maharashtra	V. S. Korad & K. D. Yardi	04 Feb. 2000	Donated

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/638	49	30	7.3	37.7	13.4	33.7	35.1	36	12	14	12.5	13.2	9.7	7.3	4.1	5.5	6.2	11.1	5.1	7

*Distribution* : Assam, Arunachal Pradesh, Jammu and Kashmir, Meghalaya, West Bengal within Indian limits (Bates and Harrison, 1997; Ghosh, 2008).

*Elsewhere* : C Europe, Near East through the Caucasus to Kazakhstan and Pakistan; SW Asia.

*Remarks* : Corbet and Hill (1992) synonymised *Pipistrellus lepidus* Blyth, 1845 under *P. kuhlii*. Sinha (1999) reported *Pipistrellus kuhlii* from Noth-East India and Korad and Yardi (2004) from Pune city, Maharashtra and gave the status up to species level only. Korad and Yardi's record (2004) of *P. kuhli* from Maharashtra State is a first collection locality record from the State and also reports extension of range of distribution further South to the state of Maharashtra. However, Bates and Harrison (1997) and Alfred *et al.* (2002) recognized *lepidus* as Indian subspecies of *Pipistrellus kuhli*. But the measurements of Forearm, 3<sup>rd</sup> and 4<sup>th</sup> metacarpals of specimen available in ZSI. WRS, Pune are little on higher side than ranges reported by Bates and Harrison (1997).

### 73. *Pipistrellus pipistrellus* (Schreber, 1774)

1774. *Vespertilio pipistrellus* Schreber, *Die Säugethiere*, 1 : 167.

2002. *Pipistrellus pipistrellus* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 69-70.

*Common Names* : English : Common Pipistrelle; Hindi : Chamgadad; Marathi : Watwaghul.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/631	1 ex.	Skin & Skull	Wet	Bharati Vidyapeeth, Pune, Maharashtra	V. S. Korad & K. D. Yardi	21 April 1999	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/631	35	25	5	29.2	11.7	28.2	28.1	28.2	6.7	12	10.2	10.7	6	5.3	3.6	4.1	4.6	7.4	3.5	5

*Distribution* : Assam, Jammu and Kashmir (Bates and Harrison, 1997) Maharashtra states within Indian limits (Korad *et al.*, 2004).

*Elsewhere* : British Isles, S Denmark, and W Europe to the Volga and Caucasus; Morocco; Greece, Turkey, Israel and Lebanon to Afghanistan, Kazakhstan, Pakistan, Myanmar, Sinkiang (China). Perhaps Korea, Japan and Taiwan.

*Remarks* : Corbet and Hill (1992) and Bates and Harrison (1997) provisionally referred specimens from India and Pakistan to the Iranian subspecies *Pipistrellus pipistrellus aladdin*. Same view was accepted by Korad and Yardi (2004) for the newly reported Pune population. Bates and Harrison (1997) referred *Pipistrellus pipistrellus bactrianus* to population from the region north of Hindu-Kush mountains in Afghanistan, while Topal (1974) collected *Pipistrellus pipistrellus bactrianus* specimens from Srinagar, Jammu and Kashmir. Further, Chakraborty (1983) also reported collection of *P. p. bactrianus* specimen from Kashmir. Alfred *et al.* (2002) reported *P. p. bactrianus* as Indian subspecies. In light of the above subspecific status of the discontinuous isolated collection record of a few specimens from Pune city reported by Korad and Yardi (2004) remains doubtful. Because of this dispute and due to meager collection of the species from the study area, it has become difficult to decide the taxonomic status upto subspecies level. It will require more specimens and locality records to decide whether these specimen are *bactrianus* or *aladdin*. Therefore, the taxonomic status of the Pune collection has been tentatively restricted to the species level for the present study.

#### 74. *Pipistrellus tenuis mimus* (Wroughton, 1899)

1899. *Pipistrellus mimus* Wroughton, *J. Bombay nat. Hist. Soc.*, **12** : 722.

1997. *Pipistrellus tenuis mimus* : Bates and Harrison, *Bats of Indian Subcontinent* : 174-177.

*Common Names* : English : Least Pipistrelle; Hindi : Chamgadad; Bengali : Badur; Gujarati : Vadvagol; Kannad : Sikatyelle; Malayalam : Borvalu; Marathi : Pakoli, Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/301	1 M	Skin & Skull	Wet	ZSI office building Shivajinagar, Pune, Maharashtra	M. Vasanth	10 Oct. 1979	
M/337	2 F	Skin & Skull	Wet	Around rest house compound Wai, Dist. Satara, Maharashtra	C. A. N. Rao	05 Mar. 1980	
M/338	1 M	Skin & Skull	Wet	Aundh camp, Pune, Maharashtra	A. D. Gambhir	13 Aug. 1984	Donated
M/501	1 M	Skin & Skull	Wet	Hivare tank, Dist. Satara, Maharashtra	P. P. Kulkarni	28 Nov. 1988	
M/632	1 F	Skin & Skull	Wet	Loyala school, Pune, Maharashtra	V. S. Korad & K. D. Yardi	23 April 1999	Donated
M/671	1 M	Skin & Skull	Wet	Mulshi-Jambe farm, Dist. Pune, Maharashtra	V. Gaour Brome & Sanjay Thakur	Sept. 2001	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/301	33	20	4.5	25.7	10	21.5	20.7	20.5	6.5	11.1	9.5	10.1	6.5	6	3.4	3.7	4	7.5	3.1	4.4
M/337	30-32.5	27-32	5-6.3	30	11.3	28.1-28.6	28.5-29.1	29-30	7.7-9	11.7	10.3	11.2	7.2	7.1	4.3	4.5	4.4	8.2	3.5	4.7
M/338	33.2	25	5.6	28	11.2	26.4	27	27.4	7.6	11.7	9.5	10.1	6.7	5.7	3.7	4.1	4.3	8.2	4	4.5

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/501	38	29	5.5	28.5	12.1	27.7	28.5	28.5	9.5	11.5	10.6	11.1	7.2	5.6	3.3	4	4	8.2	3.5	4.3
M/632	39	30	6.4	29.5	10.6	28.2	28.7	29	10	11.4	10.1	11.1	7	5.7	3.6	3.5	4.5	8.1	3.3	4.5
M/671	36.7	17.5	4.6	28.8	11.3	28.4	28.1	27.7	9.68	10.4	9.96	10.1	6.72	5.5	3.3	3.5	4	6.8	3.5	4.4

*Distribution* : Almost throughout the country.

*Elsewhere* : Afghanistan, Pakistan, Nepal, Sri Lanka, possibly Bangladesh, Myanmar, Vietnam, Thailand (Das, 2003).

*Remarks* : Corbet and Hill (1992) synonymised Indian species *Pipistrellus mimus* Wroughton, 1899 with Sumatran species *P. tenuis* Temminck, 1840. However, Bates and Harrison (1997) referred Indian specimens as *Pipistrellus tenuis mimus*. Same view was followed by Simmons (2005).

Genus *Scotozous* Dobson, 1875

75. *Scotozous dormeri* Dobson, 1875

1875. *Scotozous dormeri* Dobson, *Proc. Zool. Soc. Lond.*, 1875 : 373.

2003. *Scotozous dormeri* : Das, P. K., *Rec. zool. Surv. India, Occ. Paper No. 217* : 110-111.

*Common Names* : English : Dormer's Pipistrelle; Hindi : Chamgadad; Bengali : Badur; Gujarati : Vadvagol; Kannad : Sikatyelle; Malayalam : Borvalu; Marathi : Pakoli, Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/448	1 M	Skin & Skull	Wet	Rest house Mandangadh, Dist. Ratnagiri, Maharashtra	R. M. Sharma	13 Aug. 1987	
M/451	1 F	Skin & Skull	Wet	Rest house, Gangakhed, Dist. Nanded, Maharashtra	K. R. Rao	25 Aug. 1971	
M/634	1 F	Skin & Skull	Wet	St. Hilda School, Pune, Maharashtra	V. S. Korad & K. D. Yardi	04 June 1999	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/448	47	42	8.1	37.1	14.4	34	36.1	36.2	11	15.2	13.7	14.4	9.2	7.5	4.7	5.3	5.7	11.5	5.1	6.6
M/451	31.1	30	6	28.3	9.7	26.5	26.3	26.2	6.6	12.7	11.4	12.1	8.1	6.7	4.4	4.8	5.3	9.6	3.7	4.4
M/634	46	35	7.2	36.3	12.6	33.2	34.2	34.6	7.3	15.1	13.5	14.3	9.7	7.4	5	5.4	5.7	11	5.1	6.8

*Distribution* : Widely distributed in the Indian Mainland, from Jammu and Kashmir in the north to at least Karnataka in south, Punjab in the west to West Bengal, Mizoram, Nagaland, Manipur in the east within Indian limits (Alfred *et al*, 2002. Das, 2003).

*Elsewhere* : Pakistan.

*Remarks* : Thomas (1915) recognized two subspecies, namely, *P. dormeri dormeri* and *P. dormeri caurinus* on the basis of colour of the fur. Agrawal (1973) reported individual pelage colour variations and treated *caurinus* as a synonym of the nominate subspecies. Ellerman and Morrison-Scott (1951) have accommodated *dormeri* under the subgenus *Scotozous* of the genus *Pipistrellus*. Most of the recent workers follows the same view (Brosset, 1962, Agrawal, 1973, Chakraborty, 1983, Sinha, 1999, Bates and Harrison, 1997, and many others). However, Khajuria (1965, 1980), Corbet and Hill (1992), Agrawal *et al* (1992) thought that *dormeri* should have its own genus and kept under genus *Scotozous*. Das (2003) and Simmons (2005) followed the same.

Tribe VESPERTILIONINI Gray, 1821

Genus *Falsistrellus* Troughton, 1943

76. *Falsistrellus affinis* (Dobson, 1871)

1871. *Vesperugo (Pipistrellus) affinis* Dobson, *Proc. Asiat. Soc. Bengal*, p. 213.

2005. *Falsistrellus affinis* : Simmons, N. In Wilson and Reeder, *Mammal Species of the World*, 3<sup>rd</sup> ed., Vol. I : 485

*Common Names* : English : Chocolate Pipistrelle; Hindi : Chamgadad; Marathi : Watwaghul; Bengali : Badur; Malyalam : Borvalu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/636	1 F	Skin & Skull	Wet	Wadia college, Pune, Maharashtra	V. S. Korad & K. D. Yardi	10 April 2000	Donated



*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/636	48	35	7.6	38.1	13.6	35.5	36.5	36.7	12	15.2	14.2	14.7	10.1	7.1	4.5	5.5	5.6	11.5	5.1	6.7

*Distribution* : Kerala, Maharashtra, Tamil Nadu, Uttarakhand and West Bengal (Bates and Harrison, 1997).

*Elsewhere* : Sri Lanka, Nepal, Northeast Myanmar, China (Yunnan, SE Tibet) (Corbet and Hill, 1992).

*Remarks* : Corbet and Hill (1992) merged all formerly labled Indian *mordex* population in *P. affinis*. Same view was accepted by Bates and Harrison (1997) and Das (2003). Corbet and Hill (1992) also suggest that *affinis* and *mordax* may prove to be conspecific. Basically specimens from the Indian Subcontinent should have been included in *mordax* as this is the earliest name according to law of priority. Furthermore, Pathak and Sharma (1969) have reported that both *Pipistrellus affinis* (2n = 36, FN = 48) and *Pipistrellus mordax* (2n = 34, FN = 46) collected from the same locality from Nanded region, Maharashtra, possessed karyotypes apparently identical, but differed by a pair of small subtelocentric chromosomes and hence resulting in the difference in the total chromosome numbers. Simmons (2005) recognized both the species *mordax* and *affinis* under the genus *Falsistrellus*.

Genus *Hypsugo* Kolenati, 185677. *Hypsugo savii austenianus* Dobson, 1871

1871. *Pipistrellus austenianus* Dobson, *Proc. Asiat. Soc. Bengal* : 213.

2005. *Hypsugo savii austenianus* : Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. I : 491.

*Common Names* : English : Savi's Pipistrelle; Hindi : Chamgadad; Bengali : Badur; Marathi : Watwaghul.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/633	1 F	Skin & Skull	Wet	St. Hilda School, Pune, Maharashtra	V. S. Korad & K. D. Yardi	04 June 1999	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/633	45	29.5	7	37.3	14.5	34.2	35.7	36.6	11.5	14.7	13	13.5	8.7	7.2	4.4	5.2	5.6	9.1	5	6.4

*Distribution* : Meghalaya (Bates and Harrison, 1997) and Maharashtra states within Indian limits (Korad and Yardi, 2004).

*Elsewhere* : Myanmar.

*Remarks* : Chakraborty (1983) mentioned *P. savii tamerlani* for Gilgit, Kashmir collection. Neuhauser (1970) reported *P. savii* from Ambala, Punjab, but did not determine its subspecific category. However, he has suggested possible similarity with *P. savii caucasicus*. Corbet and Hill (1992) synonymised both *tamerlani* and *caucasicus* under *P. savii* and provisionally referred specimens from India and Myanmar as *Pipistrellus savii austenianus*. Same view was followed by Bates and Harrison (1997). Record of *Pipistrellus savii austenianus* from Maharashtra State reported by Korad and Yardi (2004) is an isolated collection record outside the distributional range. However, it shows discontinuous distribution. Das *et al.* (1995) treated *austenianus* as a distinct species closely related to *P. savii* and suggested further studies on taxonomic status of this taxon. Simmons (2005) recognized this taxa under the genus *Hypsugo*.

Subfamily MYOTINAE Tate, 1942

Genus *Myotis* Kaup, 1829

78. *Myotis horsfieldii peshwa* (Thomas, 1915)

1915. *Leuconoe peshwa* Thomas, *J. Bombay nat. Hist. Soc.*, **23** : 610.

2005. *Myotis horsfieldii peshwa* : Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. I : 508.

*Common Names* : English : Horsfield's Myotis, Peshwa Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Pakoli, Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/751	1 M	Skin & Skull	Wet	Lonawala, Dist. Pune, Maharashtra	V. S. Korad	26 May 2003	Donated
M/752	1 M	Skin & Skull	Wet	Saralgaon, Tal. Shirur, Dist. Pune, Maharashtra	V. S. Korad	19 Nov. 2003	Donated

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/751	52	33	9.3	37.3	16.5	36.6	37	38.1	14	16.8	14.6	15.7	10.1	7.9	3.8	6.1	6.5	12.1	4.7	6.7
M/752	47.4	37	10.3	37.7	15.3	35.7	36.8	37.8	14.5	16.5	14.1	15.1	9.1	8.1	3.8	5.8	6.1	11.6	4.3	6.2

*Distribution* : Goa, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Tamil Nadu.

*Elsewhere* : Endemic subspecies to Peninsular India (Bates and Harrison, 1997).

*Remarks* : Ellerman and Morrison-Scott (1951) kept *peshwa* as subspecies under *Myotis adversus* (Horsfield); Brosset (1962), Khajuria (1980) and Das (1986) maintained it as a distinct species *Myotis peshwa* (Thomas). However, Hill (1983) recognized it as a subspecies of *Myotis horsfieldii* and same view has been adopted by Koopman (1993), Bates and Harrison (1997), Alfred *et al.* (2002) and Simmons (2005).

79. *Myotis montivagus peytoni* (Wroughton and Ryley, 1913)

1913. *Myotis peytoni* Wroughton and Ryley, *J. Bombay nat. Hist. Soc.*, **22** : 13.

2005. *Myotis montivagus peytoni* : Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. **I** : 511.

*Common Names* : English : Burmese Whiskered Myotis; Hindi : Chamgadad; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Pakoli, Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/653	1 M	Skin & Skull	Wet	Linghamala, Mahabaleshwar, Dist. Satara, Maharashtra	M. C. Gaikawad	27 Oct. 2002	Donated by V. S. Korad

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/653	55	35	11.4	46.2	18.4	41.3	43	44	16.4	17.7	16.6		12	8.1	4.6	6.5	7.3	13.1	5.1	7.2

*Distribution* : Andhra Pradesh, Karnataka, Kerala, Maharashtra (Korad *et al.*, 2005).

*Elsewhere* : Endemic subspecies to India (Bates and Harrison, 1997).

*Remarks* : Ellerman and Morrison-Scott (1951) considered *peytoni* as a distinct species allied to *Montivagus emarginatus* Geoffroy. However, Hill (1962) treated the Burmese population as belonging to the nominate subspecies *Myotis montivagus montivagus* and the Western Indian population to *Myotis montivagus peytoni*. Same was referred by Corbet and Hill (1992), Koopman (1993), Bates and Harrison (1997), Alfred *et al.* (2002) and Simmons (2005).

Subfamily MINIOPTERINAE Dobson, 1875

Genus *Miniopterus* Bonaparte, 1837

80. *Miniopterus schreibersi fuliginosus* (Hodgson, 1835)

1835. *Vespertilio fuliginosa* Hodgson *J. Asiat. Soc. Bengal*, 4 : 700.

2005. *Miniopterus schreibersi fuliginosus* : Simmons, N. B. In *Mammal Species of the World*, 3<sup>rd</sup> Ed. Vol. I : 522.

*Common Names* : English : Schreibers's Long-fingered Bat; Hindi : Chamgadad; Bengali : Badur; Kannad : Sikatyelle; Malyalam : Borvalu; Marathi : Pakoli, Watwaghul; Telugu : Gabbilam, Aata vastvu; Tamil : Sikuyari.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/407	1 M 5 F	Skin & Skull	Wet	Mahabaleshwar, Dist. Satara, Maharashtra	G. Topal	10 Aug. 1967	One skull not extracted
M/408	1F	Skin & Skull	Wet	Mahabaleshwar, Dist. Satara, Maharashtra	Prof. Nalawade	28 Nov. 1984	Skull not extracted
M/696	2 M 3 F	Skin & Skull	Wet	New Karanje, Dist. Kolhapur, Maharashtra	Seema Bidari	23 Jan. 1997	Skull not traciabile

*External & Cranial Measurements* :

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/407	50-57	55-62	8.4-10.4	45.3-47.7	19.1-20.5	38.1-40.6	41.7-43.5	43.5-46	10-11.2	15.7-16.3	14.2-14.6	15.2-15.7	9.1-10	8.1-8.5	4.1-5	6-6.2	6.2-7.1	11.3-12	4.2-5.2	5.6-7.1

ZSI, WRC,	HB	TL	HF	FA	TIB	5mt	4mt	3mt	E	GTL	CCL	CBL	ZB	BB	PC	CM <sup>3</sup>	CM <sub>3</sub>	ML	C <sup>1</sup> -C <sup>1</sup>	M <sup>3</sup> -M <sup>3</sup>
M/408	55	52	9.4	46.2	18.3	38.4	42.1	44.1	11											
M/696	43- 55	49- 61	8.5- 10.5	45.2- 47.5	18- 19.7	37.1- 40.5	40.3- 43.6	43.3- 45.6	9.1- 11.6											

*Distribution* : Arunachal Pradesh, Himachal Pradesh, Karnataka, Maharashtra, Meghalaya, Uttarakhand, Sikkim, Tamil Nadu, and West Bengal (Bates and Harrison, 1997; Saikia *et al.*, 2004).

*Elsewhere* : Eastern Afghanistan; Myanmar; Nepal; possibly Pakistan; Sri Lanka (Das, 2003).

#### Order PHOLIDOTA

Family MANIDAE Gray, 1821

Genus *Manis* Linnaeus, 1758

#### 81. *Manis crassicaudata* E. Geoffroy, 1803

1803. *Manis crassicaudata* E. Geoffroy, *Cat. Mamm. Mus. H. N. Paris.* page 213.

2006. *Manis crassicaudata* : Alfred, Ramakrishna & Pradhan (Eds.) In *Validation of Threatened Mammals of India* : 500-502, Publ : ZSI, Kolkata.

*Common Names* : English : Indian Pangolin; Hindi : Bajra Kit, Bajra Kapt, Suraj mukhi, Silu, Sal Sala, Marathi : Thirya, Khauli Mah, Khavalya manjar, Kassoli Manjar; Kannada : Chippu Handhi, Bengali : Bonrui, Keyot Mach; Telugu : Alawa; Tamil and Malayalam : Alongu, Alugu.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/56	1 M	Skin & Skull	Dry	B.E.G. Kharkee, Pune, Pune Dist., Maharashtra	M.M. Chaterjee	13 July 1964	Sent to National Museum Delhi vide Museum Reg. Page No. 12

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/57	I unsexed	Mounted-specimen	Dry	Kolkata, West Bengal	—	—	Received from H.Q. Kolkata exhibited in museum

*Distribution* : India.

*Elsewhere* : Bangladesh, Sri Lanka, Pakistan and Nepal.

Order CARNIVORA

Suborder FELIFORMIA

Family FELIDAE Fischer de Waldheim, 1817

Subfamily FELINAE Fischer de Waldheim, 1817

Genus *Felis* Linnaeus, 1758

82. *Felis chaus* Schreber, 1777

1777. *Felis chaus* Schreber, *Die Säugethiere* : 2 (13) : pl. 110B; text : 3(24) : 414 (1777).

2006. *Felis chaus* : Alfred, Ramakrishna & Pradhan (Eds.) In *Validation of Threatend Mammals of India* : pp : 298-301, Publ : ZSI, Kolkata.

*Common Names* : English : Jungle Cat; Regional : Hindi : Jangli Billi, Khatas; Bengali : Ban Biral; Gujarathi : Jnagli Biladi; Oriya : Bana Bhua; Marathi : Baul, Baoga; Kannad : Kada-bekku; Malyalam : Martu-poocha; Telugu : Junka Pilli; Tamil : Kartu-ponnay.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/15	1 M	Skin only	Dry	Bhimashankar, Pune Dist., Maharashtra	B. S. Lamba	06 May 1965	Skin damaged, Ear pinna cut

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/16	1 M	Skin only	Dry	Bhimashankar, Pune Dist., Maharashtra	B. S. Lamba	03 May 1965	Skin damaged, Ear pinna cut
M/17	1 M	Skin & Skull	Dry	Shira, Kamshet, Pune Dist., Maharashtra	B. S. Lamba	22 May 1966	Skin damaged
M/18	1 unsexed	Skin & Skull	Dry	Ambenali, Satara Dist., Maharashtra	B. S. Lamba	19 Feb. 1966	Skin damaged
M/19	1 F	Skin only	Dry	Shere, Pune Dist., Maharashtra	B. S. Lamba	10 Mar 1967	Skin fully damaged
M/20	1 M	Skin only	Dry	Pimpoli, Pune Dist., Maharashtra	B. S. Lamba	12 Feb. 1967	Skin damaged
M/169	1 M	Skin & Skull	Dry	Mahabaleshwar, Satara Dist., Maharashtra	S. K. Ghosh	27 April 1977	
M/170	1 M	Skin & Skull	Dry	Bhiramani Forest, Ambenally Ghat, Satara Dist., Maharashtra	M. S. Pradhan	07 April 1980	Skin displayed in museum; skull damaged
M/651	1 unsexed	Skin only	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe Park	Not mentioned	Skin fully damaged; Donated
M/652	1 unsexed	Skin only	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe Park	Not mentioned	Skin fully damaged; Donated

*External & Cranial Measurements :*

ZSI,WRC,	HB	TL	HF	E	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/15	710	220	31.5	55+										
M/16	560	160		41+										
M/17	620	210+			92.7	87.2	26.4	35.6	39.3	19.9		64.3	16.4	63.5
M/18	450	230	34.0		80	77.9	23.5	32.9	34.1	17.5	4.5	58.5	16.3	54.9
M/169	560	160	35	35	91.2	86.3	25.5	34.7	36.9	19.7	4	62	15.1	59.2
M/170					110.1		30.5	39.5	39.1		4.3	67.3+	18.9	68.4

*Distribution* : Through out India excluding the cold desert regions (Alfred *et al.*, 2006).

*Elsewhere* : Afghanistan, Bangladesh, Bhutan, Cambodia, China, Egypt, Iran, Iraq, Israel, Jordan, Kazakhstan, Laos, Mongolia, Myanmar, Nepal, Pakistan, Russia, Sri Lanka, Syrian Arab Republic, Tajikistan, Thailand, Turkey, Turkmenistan, Uzbekistan, Vietnam.

Remarks : Above mentioned specimens identified and labeled upto species level.

83. *Felis chaus prateri* Pocock, 1939

1939. *Felis chaus prateri* Pocock, *Fauna of British India, Including Ceylon and Burma. Mammalia*. Vol. I : 298-300.

2002. *Felis chaus prateri* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 98.

*Common Names* : English : Jungle Cat; Regional : Hindi : Jangli Billi, Khatas; Bengali : Ban Biral; Gujarathi : Jnagli Biladi; Oriya : Bana Bhua; Marathi : Baul, Baoga; Kannad : Kada-bekku; Malyalam : Martu-poocha; Telugu : Junka Pilli; Tamil : Kartu-ponay.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/21	1 unsexed	Skin only	Dry	Shere, Pune Dist., Maharashtra	B. S. Lamba	20 Feb. 1967	Skin damaged

*Distribution* : Western India.

*Elsewhere* : Pakistan.



Remarks : Length of the skin preserved in the collection is about 540 mm.

84. *Felis silvestris ornata* Gray, 1832

1832. *Felis ornata* Gray, *Illustr. Ind. Zool.* I, pl. 2.

2002. *Felis chaus prateri* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 98-99.

Common Names : English : Wild Cat, Desert Cat.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/22	1 M	Skin & Skull	Dry	Shere, Pune Dist., Maharashtra	B. S. Lamba	22 May 1966	Skin displayed in museum
M/23	1 M	Skin & Skull	Dry	Shere, Pune Dist., Maharashtra	B. S. Lamba	12 Feb. 1967	Skin damaged

External & Cranial Measurements :

ZSI, WRC,	HB	TL	E	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/22				94.5	89.8	24.2	37.7	37.4	20	4.9	71.7	19.6	64.5
M/23	620	230	30+	115.8	111.5	24.8	40.5	40.6	22.5	5.5	75.1	20	73.5

Distribution : North-western and Central India (Alfred *et al.*, 2002).

Elsewhere : Pakistan.

Remarks : It is under Schedule I Part I of Indian Wildlife (Protection) Act, 1972 (amended upto 2006) and CITES Appendix : II. The material in the collection is labeled as *Felis lybica ornata*. However, Wozencraft in Wilson and Reeder (2005) recognized subspecies of *Felis silvestris*. The same view followed here.

## Subfamily PANTHERINAE Pocock, 1917

85. *Panthera leo persica* (Meyer, 1826)1826. *Felis leo persicus* Meyer, *Dissert. Inaug. de Genera Felium*, 6. [N.V.]2002. *Felis leo persica* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 103-104.

*Common Names* : English : Asiatic Lion, Lion; Regional : Hindi : Sher, Babbar Sher; Gujarathi : Untia-bagh; Bengali : Shinga; Kashmiri : Siih or Sinh (Male), Siming (Female); Marathi : Simh; Kathiawari : Sawachh.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/646	1 unsexed	Skin & Skull	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe park	Not mentioned	Donated; Skin fully damaged

*External & Cranial Measurements* :

ZSI, WRC,	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/646	370	345	87	165	140	52.8	17.7	265	83	235

*Distribution* : Gir Forest in Kathiawar region, Gujarat.

86. *Panthera pardus fusca* (Meyer, 1794)1794. *Felis fusca* Meyer, *Zool. Ann.* 1 : 394.2006. *Panthera pardus fusca* : Alfred, Ramakrishna & Pradhan (Eds.) In : *Validation of Threatened Mammals of India* : 323-326, Publ: ZSI, Kolkata.

*Common Names* : English : Leopard, Panther; Regional : Hindi : Tendua, Tendua Chita, Chita Bagh; Gujarathi : Dipdo; Bengali : Chita Bagh; Kashmiri : Khare-suh; Marathi : Bibtya Vaagh, Karda, Asnea, Singhal; Kannad : Chirthe, Chirchu, Chitrata, Siwangi, Keeraba; Tamil : Chiruthai; Malyalam : Palli-Poolee; Oriya : Pendra; Mizo : Kelal.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/24	1 M	Skin & Skull	Dry	Mahabaleshwar, Satara Dist., Maharashtra	B. S. Lamba	19 Feb. 1966	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	E	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/24	1340	800		210	200	65.8	96.2	85.4	34	20.3	122.7+	37.6	143

*Distribution* : Practically whole India in suitable pockets and excluding extreme high altitudes, hot and cold desert regions (Alfred *et al.*, 2002, 2006).

*Elsewhere* : Sri Lanka, Bangladesh, Myanmar, China (Das *et al.*, 1995).

#### 87. *Panthera tigris* (Linnaeus, 1758)

1758. *Felis tigris* Linnaeus, *Syst. Nat.*, 10<sup>th</sup> edn., 1 : 41.

2002. *Panthera tigris* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 104-105.

*Common Names* : English : Tiger, Indian Tiger, Royal Bengal Tiger; Regional : Hindi : Sher, Baagh; Gujarathi : Sher; Assamese/Bengali : Bagh, Go-vagh; Marathi : Vaagh, Dhanya Vaagh, Pateri Vaagh; Kannad : Hulee; Telugu : Pedda puli; Tamil : Vengai puli; Malayalam : Kaduwra, Naaree; Oriya : Bagha.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/561	2 unsexed	Mounted specimen	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe park, Pune		Donated; Mounted Cubs, exhibited in museum

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/562	1 unsexed	Mounted specimen	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe park, Pune		Donated; Mounted Cub (Albino), exhibited in museum

*Distribution* : Practically whole India in suitable pockets and excluding north eastern, hot and cold desert regions (Alfred *et al.*, 2002, 2006).

*Elsewhere* : Bangladesh, Bhutan, Cambodia, China, Indonesia (Sumatra only), Laos, Malaysia, Myanmar, Nepal, Russia, Vietnam. Recently extinct in: Afghanistan, Georgia, Bali, Java, Iran, Iraq, Kazakhstan, North Korea, Kyrgyzstan, Pakistan, Singapore, Tajikistan, Thailand, Turkmenistan, Uzbekistan.

Family VIVERRIDAE Gray, 1821

Subfamily PARADOXURINAE Gray, 1864-1865

Genus *Paradoxurus* Cuvier, 1832

88. *Paradoxurus hermaphroditus hermaphroditus* (Pallas, 1777)

1777. *Viverra hermaphroditus* In Schreber, *Die Säugethiere* : 3 (25) : 426.

2006. *Paradoxurus hermaphroditus hermaphroditus* : Alfred, Ramakrishna & Pradhan (Eds.) In : *Validation of Threatened Mammals of India* : 261-264, Publ : ZSI, Kolkata.

*Common Names* : English : Common palm civet, Toddy cat; Regional : Hindi : Lakati, Khatas; Bengali : Bhondar; Marathi : Ud Manjar, Masanya Ud; Kannad : Mara Bekku, Manta; Telugu : Manu Pilli; Tamil and Malayalam : Mara Nai, Mara Meru.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/27	1 unsexed	Mounted	Dry	Laxman Sminti, Pune Dist., Maharashtra	M. M. Chaterji	27 Aug 1960	Displayed in Museum
M/28	1 unsexed	Mounted	Dry	Laxman Sminti, Pune Dist., Maharashtra	M. M. Chaterji	27 Aug. 1960	Kept in Museum
M/29	1 unsexed	Skin & Skull	Dry	Malavli Fort, Pune Dist., Maharashtra	B. S. Lamba	23 April 1966	
M/30	1 F	Skin only	Dry	Sandhewadi, Pune, Pune Dist., Maharashtra	B. S. Lamba	14 Aug. 1965	
M/31	1 M	Skin & Skull	Dry	Pimpoli, Pune Dist., Maharashtra	B. S. Lamba	12 Feb. 1967	
M/32	1 M	Skin & Skull	Dry	Arvi, Pune, Pune Dist., Maharashtra	B. S. Lamba	30 Nov. 1965	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/29	510	410	48	30	89.2	91.7	23.6	44.4	35	14.3	6.1	47.7	55.3	65.5
M/30	540	440	52	36.2										
M/31	600	320	46	30	85.7	90.7	21.2	43.3	38.5	21.2	5.7	43.7	12.6	58.4
M/32	690	470	66.5		105	112.8	27.1	52.1	48.1	16.9	5.7	65.2	22	82.8

*Distribution* : Almost throughout India except desert parts in Rajasthan and Gujrath states within Indian limits (Alfred *et al.*, 2002).

*Elsewhere* : Bhutan, Myanmar, Cambodia, China, Indonesia, Laos, Malaysia, Nepal, New Guinea, Philippine Isls, Singapore, Sri Lanka, Thailand, Vietnam; scattered records in Sulawesi, Moluccas, and Aru Isls, probably resulting from introductions.



ZSI, WRC,	HB	TL	E	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/35	600	390		88.3	96.9	20.2	48.7	43.5	20.2	6.2	48.1	13.4	68.3
M/269	630	245+		88.5	9.301	20.3	45.6	41.4	20	6.5	41.6	12.6	60
M/270	550												

*Distribution* : Throughout India in suitable habitats (Alfred *et al.*, 2006).

*Elsewhere* : Afghanistan, Bangladesh, Myanmar, Cambodia, China, Hong Kong, Indonesia (Borneo, Sumatra, Java, Kangean Isl, Sumbawa, Bali), Laos, Malaysia, Nepal, Pakistan, Sri Lanka, Taiwan, Thailand, Vietnam. Introduced to Yemen, Zanzibar and Pemba Isl, Socotra Isl, Madagascar, the Comoro Isls, and the Philippines; scattered distribution on many SE Asian islands due to introductions (Alfred *et al.*, 2002).

*Remarks* : In register M/269 reported as *Paradoxurus h. hermaphrodites* (Schreber) but actually specimen (skin & skull) is and labeled as *Viverricula indica*. Hindfoot length was not recorded due to all the skins without paws; possibly cuted during preservation.

Family HERPESTIDAE Bonaparte, 1845

Genus *Herpestes* Illiger, 1824

90. *Herpestes edwardsii edwardsii* (E. Geoffroy Saint-Hilaire, 1818)

1818. *Ichneumon edwardsii* E. Geoffroy Saint-Hilaire, *Descrip. De L'Egypte* : 2 : 139.

2002. *Herpestes edwardsii edwardsii* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 107-108.

*Common Names* : English : Indian Gray Mongoose; Regional : Hindi : Mungus, Newal, Newra; Marathi : Mungoos; Gujrathi : Nurulia; Kannad, Tamil and Malyalam : Keeree; Telugu : Yentawa Mangisa.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/135	1 F	Skin & Skull	Dry	Doulatpura, Bhusawal, Jalgaon Dist., Maharashtra	R. H. Kamble	23 Jan. 1979	

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/137	1 M	Skin only	Dry	Hervad, Kurundwad, Kolhapur Dist., Maharashtra	M. S. Pradhan	07 June 1978	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/135	410	370	74.5	22.7	72.5	74.6	18.4	40.5	35.3	15	3.5	34.5	11.9	43.9
M/137	470	360	76.5	24										

*Distribution* : Throughout India in suitable habitats (Alfred *et al.*, 2002).

*Elsewhere* : Afghanistan, Bahrain, Indonesia, Iran, Japan, Kuwait, Nepal, Pakistan, Saudia Arabia, Sri Lanka (Alfred *et al.*, 2002).

Family HYAENIDAE Gray, 1821

Genus *Hyaena* Brisson, 1762

91. *Hyaena hyaena* (Linnaeus, 1758)

1758. *Canis hyaena* Linnaeus, *Syst. Nat.* 10<sup>th</sup> ed., : 1 : 40.

2008. *Hyaena hyaena* : Nameer, *ZOOS' PRINT*, **XXIII** (8) : 9.

*Common Names* : English : Stripe Hyena, Hyena; Regional : Hindi : Lakkar Bagha, Hunder; Gujarathi : Traraj; Marathi : Taras; Telugu : Dumul Gundu, Korna Gundu; Kannad : Kathe Keeruba, Kathe Kuruba, Nai Hooli; Tamil : Koratu, Kaluthai Puli.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/25	1 F	Skull only	Dry	Shere, Pune Dist., Maharashtra	B. S. Lamba	27 Oct. 1965	

*External & Cranial Measurements :*

ZSI, WRC,	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/25	225	212	65	110.5	107.5	40.5	—	150.7	44.6	172



*Distribution* : West to Gujarath, South to Nilgiri Hills north to lowland of Jammu and Kashmir and Kumaon and east to West Bengal in India (Alfred *et al.*, 2002).

*Elsewhere* : Afghanistan, Algeria, Armenia, Azerbaijan, Egypt, Ethiopia, Iran, Iraq, Israel, Kenya, Libya, Mali, Morocco, Nepal, Nigeria, Pakistan, Saudia Arabia, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, Turkmenistan, Uzbekistan, Yemen.

*Remarks* : Due to covered by skin, unable to record measurement of Anterior palatal foramina (apf).

Suborder CANIFORMIA

Family CANIDAE Fischer, 1817

Genus *Canis* Linnaeus, 1758

92. *Canis aureus naria* (Wroughton, 1916)

1916. *Canis naria* Wroughton, *J. Bombay nat. Hist. Soc.*, **24**(4) : 651-652.

2002. *Canis aureus naria* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 91.

*Common Names* : English : Golden Jackal, Asiatic Jackal; Regional : Hindi : Gidar, Sial, Phial; Marathi : Kolha; Telugu : Nakka; Kannad : Kalla Nari; Tamil : Kalla Nari; Malyalam : Karaken Nari; Assamese : Hiyali; Bengali : Shiyal, Srigal.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/11	1 M	Skin & Skull	Dry	Chamboli, Pune Dist., Maharashtra	B. S. Lamba	27 Sept. 1965	Skin damaged, cut into pieces
M/12	1 unsexed	Skin & Skull	Dry	Bhivri, Pune Dist., Maharashtra	B. S. Lamba	05 Nov. 1967	Tail cut
M/13	1 F	Skin & Skull	Dry	Arvi, Pune Dist., Maharashtra	B. S. Lamba	16 Dec. 1965	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/11	—	260	61.5		142	140	50.5	66.9	72	22.7	7.7	85.5	27.2	112
M/12	580	110+	50	70	116	115	39.4	59.3	58.6	20	9.8	62.7	20.6	84.2
M/13	700	230	70	50	160	150	57	73.5	77.5	22.7	9.9	81.2	27.9	107

*Distribution* : West Coast of Peninsular India, from Bombay southwards (Wroughton, 1916).

*Remarks* : Wroughton (1916) studied Asiatic jackal and separate *Canis aureus naria* on the basis of black and White grizzled colour pattern. Wozencraft in Wilson and Reeder (2005) recognized three subspecies from India including *naria*. Species protected under Indian Wildlife (Protection) Act 1972 (Amended up to 2006) : Schedule : II Part : II.

Genus *Vulpes* Frisch, 1775

93. *Vulpes bengalensis* (Shaw, 1800)

1800. *Canis bengalensis* Shaw, *Gen. Zool. Syst. Nat. Hist.* : 1(2) : Mammalia p. 330.

2006. *Vulpes bengalensis* : Alfred, Ramakrishna & Pradhan (Eds.) In : *Validation of Threatened Mammals of India* : 174-177, Publ : ZSI, Kolkata.

*Common Names* : English : Indian Fox, Bengal Fox; Regional : Hindi : Lomri, Lokri, Lokeria, Lom; Marathi : Khokkad; Telugu : Konka nakka, Gunta Nakka, Pali-nare; Kannad : Sanna Nari; Tamil : Kulla Nuree; Bengali : Khak-siyal; Oriya : Kodisilai; Assamese : Hiyaal.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/14	1 F	Skin & Skull	Dry	Khed, Pune Dist., Maharashtra	B. S. Lamba	21 Jan. 1967	Skin displayed in museum; measurements not taken

*External & Cranial Measurements :*

ZSI, WRC,	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/14	140.5	101.1	40.2	53.7	58	17.2	5.5	60.5	19.8	81.7

*Distribution* : Practically whole of India south of Himalayan foothills to Kanyakumari in suitable habitats excepting northeastern India (Alfred *et al.*, 2006).

*Elsewhere* : Southern Nepal and Pakistan.

*Remarks* : Size smaller than red fox species. Tail bushy, grey with black tipped.

94. *Vulpes vulpes* (Linnaeus, 1758)

1758. *Canis vulpes* Linnaeus, *Syst. Nat.*, 10<sup>th</sup> ed. : 1 : 40.

2002. *Vulpes vulpes* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 95.

Common Names : English : Common Red Fox, Red Fox; Regional : Hindi : Lomri; Sindhi : Lokri; Kashmiri : Loh.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/136	1 unsexed	Skin & Skull	Dry	Ambenally Ghat, Satara Dist., Maharashtra	T. Roy-Choudhari	05 Sept. 1978	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	HF	E	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/136	780	160	70	60	141.7	160	55	80.2	82.7	25.5	9.7	87.7	26.6	115

*Distribution* : Gujarat, Himachal Pradesh, Kashmir, Punjab, Rajasthan, Utaar Pradesh and Sikkim in India (Alfred *et al.*, 2002).

*Elsewhere* : Throughout Palaeartic region, North America, Australia, Continental Asia, Europe, Indo-China, Japan, Palaeartic Africa (Alfred *et al.*, 2002).

*Remarks* : Wozencraft in Wilson and Reeder (2005) recognized two subspecies from India viz., *Vulpes vulpes pusilla* Blyth, 1854 (Gujarat, Rajasthan, Punjab and Haryana) and *Vulpes vulpes montana* (Pearson, 1836) (Kashmir, Himachal Pradesh, Utaar Pradesh and Sikkim). Record from Maharashtra State is unusual and possibly of isolated collection record of *V.V. pusilla*.

## Order ARTIODACTYLA

## Family TRAGULIDAE

Genus *Moschiola* Gray, 185295. *Moschiola meminna* (Erxleben, 1777)

1777. *Moschus meminna* Erxleben, *Syst. Regn. Anim.* : 1 : 322.

2006. *Moschiola meminna* : Alfred, Ramakrishna & Pradhan (Eds.) In : *Validation of Threatened Mammals of India* : 420-422, Publ : ZSI, Kolkata.

*Common Names* : English : Indian Spotted Chevrotain, Indian Cherotain, Mouse Deer; Regional : Hindi : Pisura, Pisora, Marathi : Pisori, Kannad : Koorandi, Kooray, Telugu : Sarugu Marn, Tamil : Kooran Panni.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/9	1 unsexed	Skin & Skull	Dry	Malvali Fort, Pune Dist., Maharashtra	B. S. Lamba	23 April 1966	Tail cut; Skull damaged
M/10	1 M	Skin & Skull	Dry	Pimpoli, Kamshet, Pune Dist., Maharashtra	B. S. Lamba	11 May 1966	Tail cut
M/93	1 unsexed	Skin only	Dry	Dahalli, Ganeshgudi, Pune Dist., Maharashtra	B. S. Lamba	28 Jan. 1972	Skin displayed in museum
M/268	1 unsexed	Skin & Skull	Dry	Molem, Goa State	B. S. Lamba	17 Dec. 1973	

*External & Cranial Measurements* :

ZSI, WRC,	HB	HF	E	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/9	550	45	32	112.8	111+	37	57.4+	39.2	15.7	15	49.3	25.1	77
M/10	545	50	32	100	98	35.1	63.9	37.9	13.5		51.4	29.2	80
M/268	500			95	89.2	26	58.5	30.9	15	13.6	43.1	22.9	70.6

*Distribution* : From Tamil Nadu to Madhya Pradesh in North in India.

*Elsewhere* : Sri Lanka.

*Remarks* : Toothrow (utr) includes cheekteeth excluding canines.

Family CERVIDAE Goldfuss, 1820

Subfamily CERVINAE Goldfuss, 1820

Genus *Axis* C. H. Smith, 1827

96. *Axis axis* (Erxleben, 1777)

1777. *Cervus axis* Erxleben, *Syst. Regn. Anim.*, **1** : 312.

2002. *Axis axis* : Alfred, Sinha and Chakraborty, *Rec. zool. Surv. India, Occ. Paper No. 199* : 153.

*Common Names* : English : Spotted Deer, Axis Deer, Chital; Regional : Hindi : Chital, Chitra, Jhank; Assamese : Phutuki Horin; Bengali : Chital Horin; Kannad : Saranga Jinke; Telugu : Duppi; Tamil and Malyalam : Pulli Maan Marathi : Chital.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/647	1 unsexed	Skin & Skull	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe Park, Pune	Date not mentioned	Donated; youngone mounded specimen, displayed in museum
M/648	1 M	Mounted Head	Dry	No History		Date not mentioned	Head with skull mounted on wooden shield, exhibit in museum

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/649	1 unsexed	Skin only	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe Park, Pune	Date not mentioned	Donated; Skin damaged
M/650	1 unsexed	Skin only	Dry	Peshwe Park, Pune, Maharashtra	Garden Supdt., Peshwe Park, Pune	Date not mentioned	Donated; Skin damaged

*External & Cranial Measurements :*

ZSI, WRC,	on	cb	nas	pal	utr	bl	apf	zw	iw	ml
M/647	147	141	40	78	38.8	20.5	17.5	65.6	38.2	113.9

*Distribution* : India (incl. Sikkim). Introduced in Andaman Isls.

*Elsewhere* : Pakistan, Nepal and Sri Lanka. Introduced in many parts of the world (Alfred *et al.*,2002).

Genus *Muntiacus* Rafinesque, 1815

97. *Muntiacus muntjak* (Zimmermann, 1780)

1780. *Cervus muntjak* Zimmermann, *Geogr. Gesch. Mensch. Vierf. Thiere*, 2 : 131.

2008. *Muntiacus muntjak* : Nameer, *ZOOS' PRINT*, XXIII (8) : 10.

*Common Names* : English : Barking Deer, Indian Muntjak, Red Muntjak, Rib-faced Deer; Regional : Hindi : Kakar; Kannad : Kard, Koorie; Tamil and Malyalam : Kart; Marathi : Bhekar.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/7	2 F	Skin & Skull	Dry	Bhimashankar, Pune Dist., Maharashtra	B.S. Lamba	06 May 1965	Only one skin preserved

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/8	1 M	Skin & Skull	Dry	Bhimashankar, Pune Dist., Maharashtra	B.S. Lamba	04 May 1965	
M/172	1 M	Skin & Skull	Dry	Shiroli, Ambenally Ghat, Satara Dist., Maharashtra	M. S. Pradhan	06 April 1980	

*External & Cranial Measurements :*

ZSI, WRC,	HB	TL	E	on	cb	nas	pal	gtl	bl	apf	zw	iw	ml
M/7	930		77.5	205	170	38	16.1	48.4	14	24.7	74	42.5	140
M/7				175	150	34.2	86	37.2	10.4	17.2	67.7	33.6	115
M/8	930			185	165	45	99.2	53	12.1	20.1	74.5	40.1	133.6
M/172	750	700		170	140	30.5	83.1	38.4	14		64.9	34	142

*Distribution* : Almost throughout India except Jammu and Kashmir and desert region (Alfred *et al.*, 2002).

*Elsewhere* : Bangladesh, Bhutan, Myanmar, Cambodia, S China (S Tibet and Yunnan to Guangdong), Laos, peninsular Malaya, Nepal, NE Pakistan, Sri Lanka, Vietnam, and Sunda Isls (Sumatra, Borneo, Java, Bali, Lombok, and many smaller Indonesian islands).

*Remarks* : Genus *Muntiacus* was kept in subfamily *Muntiacinae* by Wilson and Reeder (1993). However, Grubb in Wilson and Reeder (2005) in the revised edition retained this genus under the subfamily *Cervinae* and recognized three subspecies viz. *Muntiacus muntjak aureus* (H. Smith, 1826), *Muntiacus muntjak malabaricus* Lydekker, 1915 and *Muntiacus muntjak vaginalis* (Boddaert, 1785) from Indian region.

## Family BOVIDAE

## Subfamily ANTILOPINAE

Genus *Antilope* Pallas, 176698. *Antilope cervicapra* (Linnaeus, 1758)

1758. *Capra cervicapra* Linnaeus, *Syst. Nat. 10<sup>th</sup> ed.*, 1 : 69.

2006. *Antilope cervicapra* : Alfred, Ramakrishna & Pradhan (Eds.) In : *Validation of Threatened Mammals of India* : 436-439, Publ : ZSI, Kolkata.

*Common Names* : English : Blackbuck, Indian Antelope; Regional : Hindi : Harna (male), Hiran (Female), Kalvit Mrig; Marathi : Kalvit (Male), Harin (Female), Bengali : Krishnasar, Krishna Mrig, Kannad : Chigri, Hoola Kerra, Telugu : Jinka, Tamil : Moorukoo Marn, Veliman.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/1	1 M	Skin only	Dry	Gangakhed, Parbhani Dist., Maharashtra	B.S. Lamba	21 Feb. 1970	
M/2	1 F	Skin only	Dry	Gangakhed, Parbhani Dist., Maharashtra	B.S. Lamba	22 Nov. 1971	
M/3	1 M	Skin only	Dry	Sailee, Parbhani Dist., Maharashtra	B.S. Lamba	22 Feb. 1970	
M/4	1 M	Skin only	Dry	Sailee, Parbhani Dist., Maharashtra	B.S. Lamba	06 Mar. 1970	
M/5	1 M	Skin only	Dry	Sailee, Parbhani Dist., Maharashtra	B.S. Lamba	07 Mar. 1970	

*External & Cranial Measurements* :

ZSI, WRC,	HB	HF	E
M/1	1700		
M/2	1800	53.5	117
M/3	1150		
M/4	1200		
M/5	1200		

*Distribution* : From Punjab south to Kanya Kumari, West to Rajasthan and east to Bihar (Formerly up to Assam; now localized) in India (Alfred *et al.*, 2006).

*Elsewhere* : Bangladesh (extinct), Nepal (Terai; now very localized), and Pakistan (extinct but vagrants occur); introduced to Texas (USA), and Argentina Grubb in Wilson and Reeder (2005).



Genus *Gazella* de Blainville, 181699. *Gazella bennettii* (Sykes, 1830-31)1830-31. *Antilope bennettii* Sykes, *Proc. Zool. Soc. London*, **1830-31** : 104 (1831).2006. *Gazella bennettii* : Alfred, Ramakrishna & Pradhan (Eds.) In *Validation of Threaten Mammals of India* : 440-443, Publ : ZSI, Kolkata.

*Common Names* : English : Indian Gazelle, Chinkara; Regional : Chinkara, Kal Punch; Marathi : Chinkara, Kalsipi Harin, Kannad : Tiska, Budari, Mudari, Telugu : Burudu Junka, Burra Jinka.

Material available in the National Zoological Collection, ZSI, WRC, Pune :

ZSI, WRC, Regd. No.	Sex	Nature of Collection	Nature of Preservation	Locality	Name of Collector	Date of collection	Remarks
M/6	1 F	Skin & Skull	Dry	Chamboli, Pune Dist., Maharashtra	B.S. Lamba	25 Aug. 1965	
M/524	1 M	Horns only	Dry	Raymonds sheep farm, Laling Range, Dhulia Dist., Maharashtra	M. S. Pradhan	03 Dec., 1985	

*External & Cranial Measurements* :

ZSI,WRC,	HB	TL	HF	E	on	cb	nas	pal	gtl	bl	apf	zw	iw	ml	Horn
M/6	980		36.3	86	205	170	50+	84.4	55.7	25	23.7	72.5	46	126	85
M/524															240

*Distribution* : North Western and Central India extending southwards to a little south of Krishna river (Alfred *et al.* 2006).*Elsewhere* : S Afghanistan, Iran and Pakistan (Alfred *et al.*, 2002).**IV. SUMMARY**

The present work was done on the basis of the registered specimens (both dry and wet) belonging to the mammalian orders Scandentia, Primates, Rodentia, Lagomorpha, Soricomorpha, Chiroptera, Pholidota, Carnivora and Artiodactyla available in the National zoological Collection of Zoological Survey of India, Western Regional Centre, Pune. The study includes systematic account of altogether 99 species/subspecies of 9 orders available in the centre collected and or donated from different parts of India.

### V. ACKNOWLEDGEMENTS

The author is grateful to Dr. K. Venkataraman, Director, Zoological Survey of India for allowing him to undertake this assignment. The author is also very much thankful to the Officers-in-Charge, Western Regional Centre and Central Zone Regional Centre, Zoological Survey of India, Pune and Jabalpur respectively for providing facilities. His sincere thanks are due to Dr. M. S. Pradhan, Scientist-E (Retired) for providing necessary guidance during study as well as preparation of the manuscript.

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PLATE-1



Skins of *Ratufa indica indica* (Erxleben) showing Dorsum and Tail (Arrow marked) colour variation :

**A.** *Ratufa indica elphinstoni* (Sykes) from Bhimashankar, Pune Dist., Maharashtra.



**B.** *Ratufa indica bengalensis* (Blanford) from Danoli, Ratnagiri Dist., Maharashtra.



**C.** *Ratufa indica indica* (Erxleben) from Molem, Goa State



PLATE-1



Skins of *Ratufa indica indica* (Erxleben) showing Dorsum and Tail (Arrow marked) colour variation :

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