

CHECKLIST OF INSECTIVORES (MAMMALIA: INSECTIVORA) OF SOUTH ASIA

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Abstract

A checklist of 38 species of insectivores belonging to 12 genera under four subfamilies in three families, (namely, Erinaceidae Fischer, 1817; Talpidae Fischer, 1817 and Soricidae Fischer, 1817) known to occur in South Asia including Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka is provided.

Keywords

Checklist, Erinaceidae, Soricidae, Talpidae, Insectivora, Mammalia, South Asia

Introduction

Unlike Order Rodentia on which comprehensive works by Ellerman (1940, 1961) exist, the Order Insectivora has not been given much attention. Details of species diversity of the Order Insectivora is available in Blyth (1863), Jerdon (1874), Sterndale (1884), Blanford (1888), Lindsay (1929), Ellerman and Morrison-Scott (1951), and, Corbet and Hill (1992). Very recently IUCN (1995) has put together a comprehensive list of known insectivores of Eurasia. As is applicable to all other groups, the Order Insectivora too has witnessed numerous taxonomic changes since the aforementioned literature became available. Keeping this in view, an attempt has been made, here, to record an updated checklist of the insectivore species reported from this region. The checklist also provides information on their synonyms, subspecies and distribution.

Methods

The present work relies on Corbet and Hill (1992), Hutterer (1993), IUCN (1995) and a list prepared by Dr. Mike Jordan. We reviewed the major works by Ellerman and Morrison-Scott (1951, 1953), Phillips (1980), Corbet and Hill (1991, 1992), Hutterer (1993),

IUCN (1995), and, Roberts (1997) to gain insights on the current taxonomic status of insectivores occurring in the region. Besides these, we also referred to numerous sources for information including Sclater (1891), Cabrera (1925), Lindsay (1929), Allen (1938), Ellerman and Morrison-Scott (1951), Harrison (1958), Petter (1963), Biswas and Ghose (1970), Abe (1971, 1932), Niethammer (1973), Chakraborty (1975, 1983), Doglov and Hoffman (1977), Jameson and Jones (1977), Mitchell (1975), Corbet (1978, 1988), Hutterer (1979), Corbet and Hill (1980, 1986), Saha (1980), Hoffman (1986, 1987), Butler (1988), George (1988), Yates and Moore (1990), Abe *et al.* (1991), Frost *et al.* (1991), Agrawal (1993), Pradhan, *et al.* (1997), Nameer (1999), Nowak (1999), and Alfred *et al.* (2002).

This paper follows Srinivasulu and Pradhan (2003) for scientific names, synonyms and distribution information in South Asia.

Results

A total of 38 species of insectivores belonging to 12 genera under four subfamilies of three families have been recorded from South Asia. The family Erinaceidae Fischer, 1817 is represented by five species belonging to one genus, namely *Hemiechinus* Fitzinger, 1866. The family Talpidae Fischer, 1817 includes two species in two genera, and the family Soricidae Fischer, 1817 includes 31 species in two subfamilies, namely – Soricinae Fischer, 1817 and Crocidurinae Milne-Edwards, 1872. The former subfamily includes 11 species in five genera, while the latter includes 20 species in four genera (Table 1).

Of this diversity, 15 species (39%) are endemic to South Asia with four species being endemic to more than one country. Of the seven species endemic to India four are restricted to Andaman and Nicobar Islands, while four are endemic to Sri Lanka (Table 2). Generically the genus *Feroculus* Kelaart, 1850 is endemic to South Asia, and the genus *Solisorex* Thomas,

Table 1. Species diversity of Order Insectivora in South Asia

Scientific name	No. of species	Remarks
Erinaceidae		
Erinaceinae		
<i>Hemiechinus</i>	5	Endemics: 1 regional; 1 Indian
Talpidae		
Talpinae		
<i>Euroscaptor</i>	1	
<i>Parascaptor</i>	1	Monotypic
Soricidae		
Soricinae		
<i>Anourosorex</i>	1	Monotypic
<i>Chimmarogale</i>	1	
<i>Sorex</i>	4	
<i>Soriculus</i>	4	
<i>Nectogale</i>	1	Monotypic
Crocidurinae		
<i>Crocidura</i>	11	Endemic: 5 Indian; 1 Sri Lankan
<i>Solisorex</i>	1	Monotypic, Sri Lankan endemic
<i>Suncus</i>	7	Endemic: 2 regional; 1 Indian; 2 Sri Lankan
<i>Feroculus</i>	1	Monotypic, regional endemic

1924 is endemic to Sri Lanka.

The present known insectivore diversity on record from South Asia is listed below. The synonyms provided are those applicable for the South Asian region. We have not listed extra-limital synonyms that may be valid for some taxa elsewhere.

Family: Erinaceidae Fischer, 1817
Subfamily: Erinaceinae Fischer, 1817
Genus *Hemiechinus* Fitzinger, 1866

Hedgehogs

Corbet and Hill (1992) treated this genus under subfamily Erinaceinae Fischer, 1817 in family Erinaceidae Fischer, 1817. Originally regarded as a subgenus of *Erinaceus* Linnaeus, 1758, it was raised to generic status by Corbet (1978, 1988). Frost *et al.* (1991), IUCN (1995) and Nowak (1999) include two subgenus, namely, *Hemiechinus* Fitzinger, 1866 and *Paraechinus* Trouessart, 1879. Ellerman and Morrison-Scott (1951) and Corbet and Hill (1992) treat both these at the generic level. This genus is widespread from northern Africa through China and northern South Asia. This genus is represented by five species in two subgenera in the region.

1. *Hemiechinus auritus* (Gmelin, 1770)

1770. *Erinaceus auritus* Gmelin, Nov. Comm. Acad. Sci. Petrop., 14: 519.

Name: Long-eared Hedgehog

Type locality: Astrakhan, Southeastern Russia

Synonyms: *Erinaceus auritus* Gmelin, 1770
Erinaceus megalotis Blyth, 1845

Subspecies: *Hemiechinus auritus megalotis* (Blyth, 1845)

Distribution: Baluchistan in Pakistan.

Comments: Belongs to subgenus *Hemiechinus* Fitzinger, 1866. Ellerman and Morrison-Scott (1951) treated *Hemiechinus megalotis* Blyth, 1845 as a distinct species and included 16 subspecies of *Hemiechinus auritus* (Gmelin, 1770) of which only one subspecies, now a species, pertains to South Asia. This was also followed by Roberts (1997). Niethammer (1973) treated *Hemiechinus megalotis* Blyth, 1845 as a subspecies, followed by Corbet and Hill (1992), Hutterer (1993) and IUCN (1995).

Table 2. Insular endemic species of Order Insectivora in South Asia

Scientific Name	Distribution	Remarks
Crocidurinae		
<i>Crocidura andamanensis</i>	Andaman & Nicobar Islands	Only from South Andaman Isle
<i>Crocidura hispida</i>	Andaman & Nicobar Islands	Only from Middle Andaman Isle
<i>Crocidura jenkinsi</i>	Andaman & Nicobar Islands	Only from South Andaman Isle
<i>Crocidura miya</i>	Sri Lanka	
<i>Crocidura nicobarica</i>	Andaman & Nicobar Islands	Only from Great Nicobar Isle
<i>Solisorex pearsoni</i>	Sri Lanka	Only from C Highlands
<i>Suncus fellowes-gordoni</i>	Sri Lanka	
<i>Suncus zeylanicus</i>	Sri Lanka	

2. *Hemiechinus collaris* (Gray, 1830)

1830. *Erinaceus collaris* Gray in Hardwicke, Illust. Indian Zool., I pl. 8.

Name: Collared Hedgehog

Type locality: Doab, between Yamuna and Ganges rivers, India

Synonyms: *Erinaceus collaris* Gray, 1830
Erinaceus spatangus Bennett, 1832
Erinaceus grayi Bennett, 1832
Erinaceus indicus Royle, 1833
Erinaceus blanfordi Anderson, 1878
Paraechinus hypomelas blanfordi (Anderson, 1878)

Subspecies: None.

Distribution: Endemic to the region. Delhi, Gujarat, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan and Uttar Pradesh in India; Sind in Pakistan. Maharashtra specimen in National Zoological Collection, Kolkata, India perhaps could be an 'introduced' or 'isolate' specimen.

Comments: Belongs to subgenus *Hemiechinus* Fitzinger, 1866. Ellerman and Morrison-Scott (1951), and Corbet (1978) included this as a subspecies under *Hemiechinus auritus* (Gmelin, 1770). It has been accorded specific status by Corbet and Hill (1992). The name *Erinaceus blanfordi* Anderson, 1878 erroneously included under the *Paraechinus hypomelas* Brandt, 1836 by Ellerman and Morrison-Scott (1951), and Corbet (1988) is in fact a *Hemiechinus* form as pointed out by Agrawal (1973). Hutterer (1993) and IUCN (1995) also synonymize *Erinaceus blanfordi* Anderson, 1878 with this taxon.

3. *Hemiechinus hypomelas* (Brandt, 1836)

1836. *Erinaceus hypomelas* Brandt, Bull. Sci. St. Petersb, I: 32.

Name: Brandt's Hedgehog

Type locality: Northern Persia.

Synonyms: *Erinaceus hypomelas* Brandt, 1836
Paraechinus hypomelas (Brandt, 1836)
Erinaceus jerdoni Anderson, 1878
Paraechinus amir Thomas, 1918

Subspecies: *Hemiechinus hypomelas hypomelas* (Brandt, 1836)
Hemiechinus hypomelas jerdoni (Anderson, 1878)

Distribution: Pakistan.

Comments: Belongs to subgenus *Paraechinus* Trouessart, 1879. Ellerman and Morrison-Scott (1951) erroneously synonymized *Erinaceus blanfordi* Anderson, 1878 with *Paraechinus hypomelas blanfordi* (Anderson, 1878) that Agrawal (1973) rectified and placed it under *Hemiechinus auritus* (Gray, 1830). The name *Erinaceus jerdoni* Anderson, 1878 too was synonymized with *Paraechinus hypomelas blanfordi* (Anderson, 1878) by Ellerman and Morrison-Scott (1951). Corbet and Hill (1992) treat this taxon as *Paraechinus hypomelas* (Brandt, 1836) and list two subspecies. Frost *et al.* (1991), and IUCN (1995) also list two valid subspecies from the region.

4. *Hemiechinus micropus* (Blyth, 1846)

1846. *Erinaceus micropus* Blyth, J. Asiatic Soc. Bengal, 15: 70.

Name: Indian Hedgehog

Type locality: Bhawalpur, Punjab, Pakistan.

Synonyms: *Erinaceus micropus* Blyth, 1846
Paraechinus micropus (Blyth, 1846)
Hemiechinus mentalis Fitzinger, 1867
Erinaceus pictus Stoliczka, 1872
Paraechinus intermedius Biswas and Ghose, 1970
Paraechinus intermedius kutchicus Biswas and

Ghose, 1970

Subspecies: *Hemiechinus micropus kutchicus* (Biswas & Ghose, 1970)

Distribution: Gujarat, Maharashtra, Punjab and Rajasthan in India; Pakistan.

Comments: Belongs to subgenus *Paraechinus* Trouessart, 1879. Ellerman and Morrison-Scott (1951) synonymized *Erinaceus nudiventris* Horsfield, 1851 with *Paraechinus micropus* (Blyth, 1846) with a doubtful status, a trend followed by Corbet and Hill (1992). Frost *et al.* (1991), Hutterer (1993) and IUCN (1995) treat *nudiventris* as a distinct species – *Hemiechinus nudiventris* (Horsfield, 1851) under subgenus *Paraechinus* Trouessart, 1879. Biswas and Ghose (1970) described new species and subspecies, *Paraechinus intermedius* and *Paraechinus intermedius kutchicus*.

5. *Hemiechinus nudiventris* (Horsfield, 1851)

1851. *Erinaceus nudiventris* Horsfield, Cat. Mamm. Mus. E. India Co., p 136.

Name: Madras Hedgehog

Type locality: Madras, India.

Synonyms: *Erinaceus nudiventris* Horsfield, 1851
Paraechinus micropus nudiventris (Horsfield, 1851)

Subspecies: None

Distribution: Endemic to India. ?Andhra Pradesh, Kerala and Tamil Nadu.

Comments: Belongs to subgenus *Paraechinus* Trouessart, 1879. Ellerman and Morrison-Scott (1951) synonymized *Erinaceus nudiventris* Horsfield, 1851 with *Paraechinus micropus* (Blyth, 1846), a trend followed by Corbet and Hill (1992). Frost *et al.* (1991), Hutterer (1993), and IUCN (1995) treat it as a distinct species. Srinivasulu and Nagulu (2002) doubtfully report the occurrence of this species in southern Nallamala Hills in Andhra Pradesh.

Family: Talpidae Fischer, 1817**Subfamily: Talpinae Fischer, 1817****Genus *Euroscaptor* Miller, 1940****South Asian Moles**

Genus *Euroscaptor* Miller, 1940 was considered either as a subgenus of or synonym of *Talpa* Linnaeus, 1758 by earlier authorities such as Ellerman and Morrison-Scott (1951). However, Yates and Moore (1990) established this taxon as generically distinct from *Talpa* Linnaeus, 1758. Corbet and Hill (1992) did not list *Euroscaptor* Miller, 1940 as a separate genus

but included forms under *Talpa* Linnaeus, 1758. We follow IUCN (1995) in recognising *Euroscaptor* Miller, 1940.

6. *Euroscaptor micrura* (Hodgson, 1841)

1841. *Talpa micrurus* Hodgson, Calcutta J. nat. Hist., 2: 221.

Name: Himalayan Mole

Type locality: Central and northern hills of Nepal

Synonyms: *Talpa micrurus* Hodgson, 1841

Talpa micrura Hodgson, 1841

Talpa cryptura Blyth, 1843

Talpa macrura Hodgson, 1858

Subspecies: None.

Distribution: Arunachal Pradesh, Assam, Sikkim and West Bengal in India; Nepal.

Comments: The genus *Euroscaptor* Miller, 1940 had been earlier synonymized or treated as sub genus of the genus *Talpa* Linnaeus, 1758 by various authors. Ellerman and Morrison-Scott (1951) treated it as *Talpa micrura* Hodgson, 1841 also followed by Corbet and Hill (1992). Yates and Moore (1990) and Hutterer (1993), based on distinct characters, recognized it as a distinct genus.

Genus *Parascaptor* Gill, 1875

Indian Mole

Genus *Parascaptor* Gill, 1875 was considered either as a subgenus of or synonym of *Talpa* Linnaeus, 1758 by earlier authorities like Ellerman and Morrison-Scott (1951). However, later authorities treated it as generically distinct from *Talpa* Linnaeus, 1758. See comments under *Parascaptor leucura* (Blyth, 1850). Monospecific genus restricted to Oriental region from northeastern India to southern China (Allen, 1938).

7. *Parascaptor leucura* (Blyth, 1850)

1850. *Talpa leucura* Blyth, J. Asiat. Soc. Bengal, 19: 215, pl 4, fig. 1.

Name: Indian Mole

Type locality: Cherrapunji in Khasi Hills, Assam (now Meghalaya), India

Synonyms: *Talpa leucura* Blyth, 1850

Talpa micrura leucura (Blyth, 1850)

Subspecies: None.

Distribution: Meghalaya in India.

Comments: The genus *Parascaptor* Gill, 1875 had been earlier synonymized or treated as sub genus of the genus *Talpa* Linnaeus, 1758 by authors like Corbet and Hill (1991). Corbet (1978), Abe *et al.* (1991) and Hutterer (1993) recognized it as a distinct genus. See comments under genus *Euroscaptor* Miller, 1940. Ellerman and Morrison-Scott (1951) treated it as *Talpa micrura leucura* (Blyth, 1850), also followed by Corbet and Hill (1992) who remarked that it could be a separate species but doubted that it warranted generic separation.

Family: Soricidae Fischer, 1817

The family Soricidae Fischer, 1817 includes two subfamilies, namely, Soricinae Fischer, 1817 and Crocidurinae Milne-Edwards, 1872.

Subfamily: Soricinae Fischer, 1817

Genus *Anourosorex* Milne-Edwards, 1870

Mole-Shrew

This genus belongs to subfamily *Soricinae* Fischer, 1817. This monospecific genus is restricted to Oriental region.

8. *Anourosorex squamipes* Milne-Edwards, 1872

1872. *Anourosorex squamipes* Milne-Edwards, Rech. Hist. Nat. Mamm., 264. pl. 38, fig. 1, pl 38A, figs I-Ij.

Name: Mole-Shrew

Type locality: Sichuan Prov., Moupin, China

Synonyms: *Anourosorex assamensis* Anderson, 1875

Subspecies: None for the region.

Distribution: Arunachal Pradesh, Assam, Meghalaya and Mizoram in India; Bhutan.

Comments: Corbet and Hill (1992) doubt the status of the mainland subspecies – *Anourosorex squamipes capinas* Allen, 1923, *Anourosorex assamensis capito* Allen, 1923; and *Anourosorex squamipes schmidi* Petter, 1963, but further maintain that the insular form *Anourosorex squamipes yamashinai* Kuroda, 1935 could possibly be accepted as a distinct subspecies. IUCN (1995) retains this arrangement. However, Hutterer (1993) retains *Anourosorex squamipes schmidi* Petter, 1963 along with *Anourosorex squamipes yamashinai* Kuorda, 1935 as subspecies under this species following Petter (1963) and Jameson and Jones (1977).

Genus *Chimmarogale* Anderson, 1877

Water Shrew

This genus belongs to subfamily *Soricinae* Fischer, 1817. This genus is restricted to South, Southeast and East Asia and is represented by one species in the region (Hoffman, 1987).

9. *Chimmarogale himalayica* (Gray, 1842)

1842. *Crossopus himalayicus* Gray, Ann. Mag. Nat. Hist., [1]10: 261.

Name: Himalayan Water Shrew

Type locality: Chamba, NE Punjab (now Himachal Pradesh), India

Synonyms: *Crossopus himalayicus* Gray, 1842

Subspecies: None for the region.

Distribution: Himachal Pradesh, Jammu and Kashmir, Sikkim and West Bengal in India; Nepal.

Comments: Ellerman and Morrison-Scott (1951) and Harrison (1958) included *Chimmarogale himalayica* (Gray, 1842) as subspecies of *Chimmarogale platycephala* (Temminck, 1842). Jones and Mumford (1971) did not consider *Chimmarogale platycephala* (Temminck, 1842) distinct from *Chimmarogale himalayica* (Gray, 1842). Later, Hoffman (1987) showed it to be distinct species based on detailed taxonomic

study. Corbet and Hill (1992) and IUCN (1995) retained it as distinct species. Hutterer (1993) misinterpreted *Chimmarogale platycephala* (Temminck, 1842) to be listed by Ellerman and Morrison-Scott (1951) as subspecies of *Chimmarogale himalayica* (Gray, 1842).

Genus *Sorex* Linnaeus, 1758

Long-tailed Shrews

This genus is represented by four species belonging to subgenus *Sorex* Linnaeus, 1758.

10. *Sorex bedfordiae* Thomas, 1911

1911. *Sorex bedfordiae* Thomas, Abstr. Proc. Zool. Soc., Lond., 1911(90): 3.

Name: Lesser Stripe-backed Shrew

Type locality: Omisan, Sichuan, China

Synonyms: *Sorex cylindricauda bedfordiae* Thomas, 1911

Subspecies: *Sorex bedfordiae nepalensis* Weigel, 1969

Distribution: Nepal.

Comments: Ellerman and Morrison-Scott (1951) treated *Sorex bedfordiae* Thomas, 1911 as synonym of *Sorex cylindricauda* Milne-Edwards, 1872. Corbet (1978), Hoffman (1987), Corbet and Hill (1992), Hutterer (1993) and IUCN (1995) treated this species specifically different than *Sorex cylindricauda* Milne-Edwards, 1872.

11. *Sorex excelsus* Allen, 1923

1923. *Sorex excelsus* Allen, Am. Mus. Novit., 100: 4.

Name:

Type locality: Summit of Hoshan, Peitai, South of Chungtein, Yunnan, China

Synonyms: *Sorex araneus excelsus* (Allen, 1923)

Subspecies: None.

Distribution: Nepal.

Comments: Ellerman and Morrison-Scott (1951) treated *excelsus* Allen, 1923 as a subspecies of *Sorex araneus* Linnaeus, 1758. Corbet (1978) treated it as a possible subspecies of *Sorex asper* Thomas, 1914. Hutterer (1993) following Hoffman (1987) treated *Sorex excelsus* Allen, 1923 as a distinct species and further remarked that the specimen from Nepal reported by Agrawal and Chakraborty (1971) possibly belonged to this species.

12. *Sorex minutus* Linnaeus, 1766

1766. *Sorex minutus* Linnaeus, Syst. Nat. 12th ed., I: 73.

Name: Lesser Shrew

Type locality: Bernaul, Western Siberia

Synonyms: *Sorex thibetanus* Kastschenko, 1905 (*nom. dub.*)

Subspecies: *Sorex minutus minutus* Linnaeus, 1766

Distribution: Jammu and Kashmir, and Pakistan-occupied-Kashmir in India; Nepal.

Comments: Ellerman and Morrison-Scott (1951) doubtfully treated *planiceps* Miller, 1911 as subspecies of *Sorex minutus*

Linnaeus, 1766. Corbet and Hill (1992) following Hoffman (1987) included *planiceps* under *Sorex thibetanus* Kastschenko, 1905. The specimen described as *Sorex thibetanus* was found to be those akin to *Sorex minutus* thus invalidating the former name and being considered as *nomen dubium* (Hutterer, 1979). Hutterer (1993) and IUCN (1995) treated *Sorex minutus* Linnaeus, 1766 and *Sorex planiceps* Miller, 1911 as distinct species based on the latter's distinctly larger cranial measurements.

13. *Sorex planiceps* Miller, 1911

1911. *Sorex planiceps* Miller, Proc. Biol. Soc. Wash., 24: 242.

Name: Kashmir Shrew

Type locality: Dachin, Khistwar, Kashmir, India

Synonyms: None.

Subspecies: None.

Distribution: Jammu and Kashmir, and Pakistan-occupied-Kashmir in India; northern Pakistan.

Comments: Ellerman and Morrison-Scott (1951) treated it under *Sorex minutus* Linnaeus, 1766, while Doglov and Hoffman (1977) and Hoffman (1987) listed it as a subspecies of *Sorex thibetanus* Kastschenko, 1905, also followed by Corbet and Hill (1992). Hutterer (1979) retained it as a distinct species from either *Sorex minutus* Linnaeus, 1766 or *Sorex thibetanus* Kastschenko, 1905 (now considered a *nomen dubium*) based on larger skull measurements, a trend followed by Hutterer (1993) and IUCN (1995).

Genus *Soriculus* Blyth, 1854

Brown-toothed (or Asiatic) Shrews

Corbet and Hill (1992) kept this genus under subfamily *Soricinae* Fischer, 1817. It is represented by four species in two subgenera – *Soriculus* Blyth, 1854 and *Episoriculus* Ellerman and Morrison-Scott (1951) in the region. Van Valen (1967) and Repenning (1967) treated the latter subgenus as a genus, while Hoffman (1986) considered the differences between them to be too small to separate them generically.

14. *Soriculus caudatus* (Horsfield, 1851)

1851. *Sorex caudatus* Horsfield, Cat. Mamm. Mus. E. India Co., 135.

Name: Hodgson's Brown-toothed Shrew

Type locality: Darjeeling, West Bengal, India

Synonyms: *Sorex caudatus* Horsfield, 1851

Episoriculus caudatus (Horsfield, 1851)

Sorex gracilicauda Anderson, 1877

Subspecies: *Soriculus caudatus caudatus* (Horsfield, 1851)

Soriculus caudatus soluensis Gruber, 1969

Distribution: Jammu and Kashmir, Sikkim, Uttranchal and West Bengal in India; Nepal.

Comments: This species belongs to subgenus *Episoriculus* Ellerman and Morrison-Scott, 1951. Van Valen (1967) and Repenning (1967) treated this taxon as *Episoriculus caudatus* (Horsfield, 1851).

15. *Soriculus leucops* (Hodgson, 1855)

1855. *Sorex leucops* Hodgson in Horsfield, Ann. Mag. Nat. Hist., [2]16: 111.

Name: Indian Long-tailed Shrew

Type locality: Nepal

Synonyms: *Sorex leucops* Hodgson, 1855
Episoriculus leucops (Hodgson, 1855)
Sorex nivicola Gray, 1863 (*nom. nud.*)
Sorex minor Dobson, 1890
Sorex baileyi Thomas, 1914
Soriculus caudatus baileyi (Thomas, 1914)
Soriculus gruberi Weigel, 1969

Subspecies: None.

Distribution: Assam, Manipur, Sikkim and West Bengal in India; Nepal.

Comments: This species belongs to subgenus *Episoriculus* Ellerman and Morrison-Scott, 1951. Van Valen (1967) and Repenning (1967) treated this taxon as *Episoriculus leucops* (Hodgson, 1855). Sometimes the names *baileyi* and *gruberi* are considered valid species (IUCN, 1995). However, according to Corbet and Hill (1992) the forms representing *Sorex baileyi* Thomas, 1914 are confused with *Soriculus macrurus* Blanford, 1888. Hutterer (1993) includes *Sorex baileyi* as subspecies of *Soriculus leucops* (Hodgson, 1855) following Hoffman (1986).

16. *Soriculus macrurus* Blanford, 1888

1888. *Soriculus macrurus* Blanford, Fauna Brit. India Mamm. I: 231.

Name: Arboreal Brown-toothed Shrew

Type locality: Darjeeling, West Bengal, India

Synonyms: *Sorex macrurus* Hodgson, 1863 (*nom. nud.*)
Episoriculus macrurus (Blanford, 1888)

Subspecies: None

Distribution: Sikkim in India; Nepal.

Comments: This species belongs to subgenus *Episoriculus* Ellerman and Morrison-Scott, 1951. Ellerman and Morrison-Scott (1951) synonymized it with *Soriculus leucops* (Hodgson, 1855) following Osgood (1932). Van Valen (1967) and Repenning (1967) treated this taxon as *Episoriculus macrurus* (Blanford, 1888). Corbet and Hill (1992), Hutterer (1993), and IUCN (1995) treat it as distinct species following Hoffman (1986).

17. *Soriculus nigriscens* (Gray, 1842)

1842. *Corsira nigriscens* Gray, Ann. Mag. Nat. Hist., [Ser]10: 261.

Name: Sikkim Large-clawed Shrew

Type locality: Darjeeling, West Bengal, India

Synonyms: *Corsira nigriscens* Gray, 1842
Sorex aterrimus Blyth, 1842 (*nom. nud.*)
Sorex sikimensis Hodgson, 1849 (*nom. nud.*)

Subspecies: *Soriculus nigriscens nigriscens* (Gray, 1842)

Soriculus nigriscens caurinus Hinton, 1922

Soriculus nigriscens pahari Hinton, 1922

Soriculus nigriscens centralis Hinton, 1922

Distribution: Assam, Sikkim, Uttranchal and West Bengal in

India; Bhutan; Nepal.

Comments: This species belongs to subgenus *Soriculus* Blyth, 1854. Myanmar specimens belong to *Soriculus nigriscens radulus* Thomas, 1922.

Genus *Nectogale* Milne-Edwards, 1870**Web-footed (or Elegant) Water Shrew**

This genus belongs to subfamily *Soricinae* Fischer, 1817. It is monospecific genus represented by a species that is restricted to Oriental region and shows affinity to high altitude mountain streams (Mitchell, 1975).

18. *Nectogale elegans* (Milne-Edwards, 1870)

1870. *Nectogale elegans* Milne-Edwards, C.R. Acad. Sci. Paris, 70: 341.

Name: Web-footed/Elegant Water Shrew

Type locality: Moupin, Sichuan, China

Synonyms: *Nectogale sikhimensis* de Winton and Styan, 1899

Subspecies: *Nectogale elegans elegans* Milne-Edwards, 1870
Nectogale elegans sikhimensis de Winton and Styan, 1899

Distribution: Sikkim in India; Bhutan; Nepal.

Comments: Monospecific, distributed in the Himalaya from Nepal to Sichuan in China. See Hoffman (1987) for comments on status of *Nectogale sikhimensis* deWinton and Styan, 1899 based on which Corbet and Hill (1992), Hutterer (1993) and IUCN (1995) treated it as a distinct subspecies.

Subfamily Crocidurinae Milne-Edwards, 1872**Genus *Crociodura* Wagler, 1832****White-toothed Shrews**

This genus belongs to subfamily *Crociodurinae* Milne-Edwards, 1872. This genus is widespread ranging from Africa to Europe and South East Asia and includes many forms in four subgenera. It is represented by 11 species belonging to subgenus *Crociodura* Wagler, 1832 in the region.

19. *Crociodura andamanensis* Miller, 1902

1902. *Crociodura andamanensis* Miller, Proc. U. S. Natl. Mus., 24: 777.

Name: Andaman White-toothed Shrew

Type locality: MacPherson Strait, South Andaman Isle, Andaman and Nicobar Islands, India

Synonyms: None.

Subspecies: None.

Distribution: Endemic to India, known only from type locality.

Comments: According to Ellerman and Morrison-Scott (1951) this taxon is probably closely allied to *Crociodura nicobarica* Miller, 1902.

20. *Crociodura attenuata* Milne-Edwards, 1872

1872. *Crociodura attenuata* Milne-Edwards, Rech. Hist. Nat. Mamm., pp. 263.

Name: Grey Shrew

Type locality: Moupin, Sichuan Province, China
Synonyms: *Crocidura rubricosa* Anderson, 1877
Crocidura attenuata rubricosa Anderson, 1877
Crocidura kingiana Anderson, 1877
Crocidura attenuata kingiana Anderson, 1877
Subspecies: None.
Distribution: Assam, Jammu and Kashmir, Sikkim and Uttaranachal, in India; Nepal; Bhutan.
Comments: Ellerman and Morrison-Scott (1951) included four subspecies under this taxon. However, Corbet and Hill (1992), Hutterer (1993) and IUCN (1995) maintain that there are no subspecies of this taxon.

21. *Crocidura gueldenstaedtii* (Pallas, 1811)

1811. *Sorex gueldenstaedtii* Pallas, Zoogr. Ross. Asiat., I: 132. pl. 9, fig. 1.

Name: Gueldenstaedt's White-toothed Shrew

Type locality: Near Dushet, Georgia

Synonyms: *Sorex gueldenstaedtii* Pallas, 1811
Crocidura russula gueldenstaedtii (Pallas, 1811)
Crocidura pullata Miller, 1911
Crocidura russula pullata (Miller, 1911)

Subspecies: None.

Distribution: Jammu and Kashmir, and Pakistan-occupied-Kashmir in India; North West Frontier Province in Pakistan.

Comments: Ellerman and Morrison-Scott (1951) and Jenkins (1976) included *Crocidura gueldenstaedtii* Pallas, 1811 and *Crocidura pullata* Miller, 1911 as subspecies of *Crocidura russula* Hermann, 1780. These have been treated as distinct species by Corbet and Hill (1992), Hutterer (1993), and IUCN (1995). Furthermore, Hutterer (1993) referring to Catzeflis *et al.* (1985) opines that *Crocidura gueldenstaedtii* Pallas, 1811, *Crocidura pullata* Miller, 1911 and *Crocidura russula* Hermann, 1780 could be conspecific with *Crocidura suaveolens* Pallas, 1811.

22. *Crocidura hispida* Thomas, 1913

1913. *Crocidura hispida* Thomas, Ann. Mag. Nat. Hist., [8]11: 468.

Name: Andaman Shrew

Type locality: North End, Middle Andaman Isle, Andaman and Nicobar Islands, India

Synonyms: None.

Subspecies: None.

Distribution: Endemic to India, known only from Andaman Isles, Andaman and Nicobar Islands.

Comments: None.

23. *Crocidura horsfieldi* (Tomes, 1856)

1856. *Sorex horsfieldi* Tomes, Ann. Mag. Nat. Hist., [2]17: 23.

Name: Horsfield's Shrew

Type locality: Sri Lanka

Synonyms: *Sorex horsfieldi* Tomes, 1856
Crocidura retusa Peters, 1870

Sorex (Crocidura) myoides Blanford, 1875

Subspecies: *Crocidura horsfieldi horsfieldi* (Tomes, 1856)
Crocidura horsfieldi myoides (Blanford, 1875)

Distribution: Jammu and Kashmir in India; Nepal; Sri Lanka.

Comments: Refer Jenkins (1976) and Jameson and Jones (1977) for further details. Variations between insular (Sri Lankan) and Himalayan forms require further taxonomic studies.

24. *Crocidura jenkinsi* Chakraborty, 1978

1978. *Crocidura jenkinsi* Chakraborty, Bull. Zool. Surv. India, 1: 303.

Name: Jenkin's Andaman Spiny Shrew

Type locality: Wright Myo, South Andaman Isle, Andaman and Nicobar Islands, India

Synonyms: None.

Subspecies: None.

Distribution: Endemic to India, known only from type locality and Mount Harriet.

Comments: None.

25. *Crocidura leucodon* (Hermann, 1780)

1780. *Sorex leucodon* Hermann in Zimmerman, Geogr. Gesch. Mensch. Vierf. Thiere, 2: 382.

Name: Bicoloured White-toothed Shrew

Type locality: Bashkin, Strasburg, France

Synonyms: *Sorex leucodon* Hermann, 1780

Subspecies: None for the region.

Distribution: Jammu and Kashmir, and Pakistan-occupied-Kashmir in India; probably also in Pakistan.

Comments: Chakraborty (1983) reports its occurrence in India based on a male specimen collected in 1974 from Daksum, Jammu and Kashmir.

26. *Crocidura miya* Phillips, 1929

1929. *Crocidura miya* Phillips, Spolia Zeylan., 15: 113.

Name: Sri Lankan Long-tailed Shrew

Type locality: Moolgama, Kandiyani Hills, Nilambe dt., Sri Lanka

Synonyms: None.

Subspecies: None.

Distribution: Endemic to Sri Lanka.

Comments: Refer Phillips (1980) for further details.

27. *Crocidura nicobarica* Miller, 1902

1902. *Crocidura nicobarica* Miller, Proc. U. S. Natl. Mus., 24: 776.

Name: Nicobar Shrew

Type locality: Greater Nicobar Isle, Andaman and Nicobar Islands, India

Synonyms: None.

Subspecies: None.

Distribution: Endemic to India, known only from type locality.

Comments: None.

28. *Crocidura pergrisea* Miller, 19131913. *Crocidura pergrisea* Miller, Proc. Biol. Soc. Washington, 26: 113.Name: Pale Grey ShrewType locality: Skoro Loomba, Shigar, Baltistan, Jammu and Kashmir, IndiaSynonyms: None.Subspecies: None.Distribution: Endemic to India, known only from type locality in Pakistan-occupied-Kashmir.Comments: Ellerman and Morrison-Scott (1951) included *zarudnyi* Ognev, 1928 as subspecies of this taxon. Hassinger (1973) treated *zarudnyi* Ognev, 1928 as a distinct species, a trend that was followed by Corbet and Hill (1992), Hutterer (1993) and IUCN (1995).**29. *Crocidura zarudnyi* Ognev, 1928**1928. *Crocidura zarudnyi* Ognev, Mamm. E. Europe, N. Asia, I: 341.Name: Zarudny's ShrewType locality: Near Baluchistan border, eastern Iran.Synonyms: *Crocidura pergrisea zarudnyi* Ognev, 1928.Subspecies: None.Distribution: Baluchistan in Pakistan.Comments: Earlier named as *Crocidura tatianae* Ognev, 1921, the name that was preoccupied by *Crocidura nyansae tatianae* Dollman, 1915 a taxon from Africa. Thus, the current name *Crocidura zarudnyi* Ognev, 1928 is valid.**Genus *Solisorex* Thomas, 1924****Sri Lankan Long-clawed Shrew**

This monospecific Sri Lankan endemic genus belongs to subfamily Crocidurinae Milne-Edwards, 1872.

30. *Solisorex pearsoni* Thomas, 19241924. *Solisorex pearsoni* Thomas, Spolia Zeylan., 13: 94.Name: Pearson's Long-clawed ShrewType locality: Hakgala, Nuwara Eliya, Central Highlands, Sri LankaSynonyms: None.Subspecies: None.Distribution: Endemic to Central Highlands of Sri Lanka.Comments: None.**Genus *Suncus* Erhenberg, 1833****Musk Shrews**This genus belongs to subfamily Crocidurinae Milne-Edwards, 1872. Ellerman and Morrison-Scott (1951) and Harrison and Bates (1991) suggested that this genus was not more than a subgenus of *Crocidura* Wagler, 1832. It is represented by seven species in the region.**31. *Suncus dayi* (Dobson, 1888)**1888. *Crocidura dayi* Dobson, Ann. Mag. Nat. Hist., [6]1: 428.Name: Day's ShrewType locality: Trichur (now Thrissur), Cochin (now Kochi) in Kerala, IndiaSynonyms: *Crocidura dayi* Dobson, 1888Subspecies: None for the regionDistribution: Endemic to India, known only from a few localities in southern IndiaComments: None.**32. *Suncus etruscus* (Savi, 1822)**1822. *Sorex etruscus* Savi, Nuovo Giorn. De Litterati, Pisa, 1: 60.Name: Savi's Pygmy ShrewType locality: Pisa, ItalySynonyms: *Sorex etruscus* Savi, 1822*Sorex perrotteti* Duvernoy, 1842*Sorex micronyx* Blyth, 1855*Sorex hodgsoni* Blyth, 1855*Sorex atratus* Blyth, 1855*Sorex nudipes* Blyth, 1855*Pachyura assamensis* Anderson, 1873*Crocidura (Pachyura) nilagirica* Anderson, 1877*Crocidura (Pachyura) pygmaeoides* Anderson, 1877*Crocidura (Pachyura) travancorensis*

Anderson, 1877

Crocidura (Pachyura) nitidofulva Anderson, 1877Subspecies: *Suncus etruscus perrotteti* (Duvernoy, 1842)*Suncus etruscus nudipes* (Blyth, 1855)*Suncus etruscus micronyx* (Blyth, 1855)*Suncus etruscus pygmaeoides* (Anderson, 1877)*Suncus etruscus nitidofulva* (Anderson, 1877)Distribution: Andhra Pradesh, Assam, Bihar, Chattisgarh, Gujarat, Harayana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Maharashtra, Manipur, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttaranchal, Uttar Pradesh and West Bengal in India; Nepal; Bhutan; Pakistan; Sri Lanka.Comments: Ellerman and Morrison-Scott (1951) listed *Suncus fellowes-gordoni* Phillips, 1932 under this taxon as a subspecies, while Corbet and Hill (1991, 1992) synonymized it with this taxon. However, Hutterer (1993) and IUCN (1995) treated it as distinct species. Eisenberg and McKay (1970) did not treat *Podihik kura* Deraniyagala, 1958 being distinct from *Suncus etruscus* (Savi, 1822), as followed by Hutterer (1993).**33. *Suncus fellowes-gordoni* Phillips, 1932**1932. *Suncus fellowes-gordoni* Phillips, Spolia Zeylan., 17: 124.Name: Ceylon Pygmy ShrewType locality: West Haputale Estate, Ohiya, C Province, Sri LankaSynonyms: *Suncus fellowes-gordoni* Phillips, 1932*Podihik kura* Deraniyagala, 1958Subspecies: None.Distribution: Endemic to Sri LankaComments: Ellerman and Morrison-Scott (1951) treated this

taxon as a subspecies of *Suncus etruscus* (Savi, 1822). Corbet (1978) and Corbet and Hill (1991, 1992) synonymized *Suncus fellowes-gordoni* Phillips, 1932 and *Podihik kura* Deraniyagala, 1958 with *Suncus etruscus* (Savi, 1832). Hutterer (1993) opines that the *Podihik kura* is more similar to *Suncus etruscus* (Savi, 1822) than to *Suncus fellowes-gordoni* Phillips, 1932. Hutterer (1993) and IUCN (1995) treated *Suncus fellowes-gordoni* Phillips, 1932 as a distinct species.

34. *Suncus montanus* (Kelaart, 1850)

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

Name: Hill Shrew

Type locality: Pidurutalagala, Nuwara Eliya, Sri Lanka

Synonyms: *Sorex montanus* Kelaart, 1850
Suncus murinus montanus (Kelaart, 1850)
Sorex feruginea Kelaart, 1850
Sorex ferugeneus Kelaart, 1850
 ? *Sorex niger* Horsfield, 1851
Suncus niger malabaricus Lindsay, 1929

Subspecies: None.

Distribution: Endemic to the region. Karnataka, Kerala and Tamil Nadu in India; Sri Lanka.

Comments: Lindsay (1929) described darker forms akin to this species from southern India as *Suncus niger malabaricus* that has been considered as possible subspecies of the *Suncus murinus* (Linnaeus, 1766) by Ellerman and Morrison-Scott (1951). However, Corbet (1992) proposed it to be a valid subspecies of *Suncus montanus* (Kelaart, 1850) and accepted by Corbet and Hill, 1992, Hutterer, 1993 and IUCN, 1995.

35. *Suncus murinus* (Linnaeus, 1766)

1766. *Sorex murinus* Linnaeus, Syst. Nat. 12th ed., I: 74.

Name: House Shrew

Type locality: Java, Indonesia

Synonyms: *Sorex murinus* Linnaeus, 1766
Sorex indicus Geoffroy, I., 1811
Sorex sonerratii Geoffroy, I., 1827
Sorex giganteus Geoffroy, I., 1831
Sorex serpentarius Geoffroy, I., 1831
Sorex nemorivagus Hodgson, 1845
Sorex soccatus Hodgson, 1845
Suncus murinus soccatus (Hodgson, 1845)
Sorex griffithi Horsfield, 1851
Suncus murinus griffithi (Horsfield, 1851)
Sorex kandianus Kelaart, 1852
Suncus murinus kandianus (Kelaart, 1852)
Sorex heterodon Blyth, 1855
Sorex kelaarti Blyth, 1855
Sorex saturator Hodgson, 1855
Suncus murinus saturator (Hodgson, 1855)
Sorex viridiscens Blyth, 1859
Sorex tytleri Blyth, 1859
Suncus murinus tytleri (Blyth, 1859)

Crocidura (Pachyura) waldemarii Peters, 1870
Crocidura (Pachyura) ceylanica Peters, 1870
Crocidura (Pachyura) media Peters, 1870
Crocidura (Pachyura) fulvocinerea Anderson, 1877
Suncus murinus fulvocinereus (Anderson, 1877)
Crocidura (Pachyura) blythii Anderson, 1877
Crocidura (Pachyura) sindensis Anderson, 1877
Crocidura (Pachyura) pealana Anderson, 1877
Crocidura (Pachyura) blanfordii Anderson, 1877
Suncus murinus blanfordii (Anderson, 1877)
Crocidura (Pachyura) rubicunda Anderson, 1877
Crocidura andersoni Trouessart, 1879
Crocidura beddomei Anderson, 1881
Sorex beddomei (Anderson, 1881)

Subspecies: *Suncus murinus murinus* (Linnaeus, 1766)
Suncus murinus caeruleus Shaw, 1800
Suncus murinus sindensis Anderson, 1877
Suncus murinus nemorivagus Hodgson, 1845
Suncus murinus viridescens Blyth, 1859

Distribution: Andhra Pradesh, Assam, Bihar, Chattisgarh, Gujarat, Harayan, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Maharashtra, Manipur, Meghalaya, Mizoram, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh and West Bengal in India; Pakistan; Bangladesh; Nepal; probably in Bhutan.

Comments: Ellerman and Morrison-Scott (1951) listed more than 15 subspecies under this taxon, including Sri Lankan forms *Suncus montanus* Kelaart, 1850 and *Suncus zeylanicus* Phillips, 1928 which are now treated as distinct species (Phillips, 1980; Corbet & Hill, 1992; Hutterer, 1993). Phillips (1980) treated *Sorex murinus kandianus* (Kelaart, 1852) as a valid subspecies from Sri Lanka. This species has been synonymized with *Suncus murinus* (Linnaeus, 1766) by Corbet and Hill (1992). According to Corbet and Hill (1992) *Suncus murinus nemorivagus* Hodgson, 1845 possibly includes *Suncus murinus soccatus* (Hodgson, 1845), *Suncus murinus griffithi* (Horsfield, 1851), *Suncus murinus saturator* (Hodgson, 1855) and *Suncus murinus tytleri* (Blyth, 1859); and *Suncus murinus viridescens* Blyth, 1859 possibly includes *Crocidura (Pachyura) blanfordii* Anderson, 1877.

36. *Suncus stoliczkanus* (Anderson, 1877)

1877. *Crocidura (Pachyura) stoliczkanus* Anderson, J. Asiat. Soc. Bengal, 46: 270.

Name: Anderson's Shrew

Type locality: Bombay, Maharashtra, India

Synonyms: *Crocidura (Pachyura) stoliczkanus* Anderson, 1877
Crocidura (Pachyura) subfulva Anderson, 1877
Crocidura (Pachyura) bidiana Anderson, 1877
Crocidura leucogenys Dobson, 1888
Suncus stoliczkanus leucogenys (Dobson, 1888)

Subspecies: None for the region

Distribution: Endemic to the region. Gujarat, Madhya

Pradesh, Maharashtra, Uttar Pradesh, Rajasthan and Tamil Nadu in India; Pakistan.

Comments: Ellerman and Morrison-Scott (1951) listed three subspecies under this taxon, that were synonymized by Corbet and Hill (1992), and Hutterer (1993).

37. *Suncus zeylanicus* Phillips, 1928

1928. *Suncus zeylanicus* Phillips, *Spolia Zeylan.*, 14: 313.

Name: Ceylon Jungle Shrew, Sri Lankan Shrew

Type locality: Gonagama Estate, Kitulgala, Sri Lanka

Synonyms: *Suncus murinus zeylanicus* Phillips, 1928

Subspecies: None.

Distribution: Endemic to Sri Lanka.

Comments: Ellerman and Morrison-Scott (1951) included it under *Suncus murinus* (Linnaeus, 1766), but it has been treated as distinct species basing on major morphological differences by Phillips (1980) and McKay (1984), a trend followed by Corbet and Hill (1992), Hutterer (1993), and IUCN (1995).

Genus *Feroculus* Kelaart, 1850

Long-clawed Shrew

This genus belongs to subfamily *Crocidae* Milne-Edwards, 1872. It is represented by an endemic species in the region.

38. *Feroculus feroculus* (Kelaart, 1850)

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

Name: Kelaart's Long-clawed Shrew

Type locality: Central Mountains at ca. 828m, Nuwara Eliya, Sri Lanka

Synonyms: *Sorex feroculus* Kelaart, 1850
Sorex macropus Blyth, 1851
Sorex nuwara-ellia Kelaart, 1851
Sorex newara Wagner, 1855
Crocidae macropus Blyth, 1888

Subspecies: None for the region.

Distribution: Endemic to South Asia. Kerala and Tamil Nadu in India; Sri Lanka

Comments: For details refer Phillips (1980). Corbet and Hill (1992) indicated that there is an old unconfirmed report of this taxon from Palni Hills, Tamil Nadu in India. However, Pradhan *et al.* (1997) have confirmed its occurrence and distribution in southern India.

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References

- Abe, H., S. Shiraishi and S. Arai (1991).** A new mole from Uotsurijima, the Ryukyu Islands. *Journal of the Mammalogical Society of Japan* 15: 47-60.
- Abe, H. (1971).** Small mammals of Central Nepal. *Journal of the Faculty of Agriculture, Hokkaido University, Japan* 56: 367-423.
- Abe, H. (1982).** Ecological distribution and faunal structure of small mammals in central Nepal. *Mammalia* 46: 477-503.
- Agrawal, V.C. (1973).** A note on the taxonomic status of *Erinaceus blanfordi* Anderson and *Erinaceus jerdoni* Anderson (Mammalia: Insectivora). *Journal of the Zoological Society of India* 25: 158-159.
- Agrawal, V.C. and S. Chakraborty (1971).** Notes on a collection of small mammals from Nepal, with the description of a new mouse-hare (Lagomorpha: Ochotonidae). *Proceedings of the Zoological Society of Calcutta* 24: 41-46.
- Alfred, J.R.B., N.K. Sinha and S. Chakraborty (2002).** Checklist of Mammals of India. *Records of the Zoological Survey of India, Occasional Paper* 199: 1-289. Zoological Survey of India, Kolkata.
- Allen, G.M. (1938).** The mammals of China and Mongolia. In: Granger, W. (editor). *Natural History of Central Asia*. Central Asiatic Expeditions of the American Museum of Natural History, New York, 11, Part 1: 1-620.
- Biswas, B. and R.K. Ghose (1970).** Taxonomic notes on the Indian pale hedgehogs of the genus *Paraechinus* Trouessart, with descriptions of a new species and subspecies. *Mammalia* 36: 467-477.
- Blanford, W.T. (1888).** *The Fauna of British India. Mammalia, Part 1*. Taylor and Francis, London, 250pp+xii.
- Blyth, E. (1863).** *Catalogue of the Mammalia in the Museum of Asiatic Society*. Calcutta. 187+xiii pp.
- Butler, P.M. (1988).** Phylogeny of the Insectivores. pp. 117-141. In: M.J. Benton (editor). *The Phylogeny and Classification of the Tetrapods, 2 (Mammals)*. Clarendon Press, Oxford.
- Cabrera, A. (1925).** *Genera mammalium: Insectivora, Galaeopithecina*. Museo Nacional de Ciencias Naturales, Madrid, 232pp.
- Catzeffli, F.M., T. Maddalena, S. Hellwing, and P. Vogel (1985).** Unexpected findings on the taxonomic status of East Mediterranean *Crocidae russula* auct. (Mammalia, Insectivora). *Zeitschrift für Säugetierkunde* 50: 185-201.
- Chakraborty, S. (1975).** On a collection of mammals from Bhutan. *Records of the Zoological Survey of India* 68: 1-20.
- Chakraborty, S. (1983).** Contribution to the knowledge of the mammalian fauna of Jammu and Kashmir, India. *Records of the Zoological Survey of India* 38: 1-129.
- Corbet, G.B. (1978).** *The Mammals of the Palaearctic Region: A Taxonomic Review*. British Museum (Natural History), London, 314pp.
- Corbet, G.B. (1988).** The family *Erinaceidae*: a synthesis of its taxonomy, phylogeny, ecology and zoogeography. *Mammal Review* 18: 117-172.
- Corbet, G.B. and J.E. Hill (1980).** *A World List of Mammalian Species*. British Museum (Natural History), London, 226pp.
- Corbet, G.B. and J.E. Hill (1986).** *A World List of Mammalian Species*. Second ed. British Museum (Natural History), London, 254pp.
- Corbet, G.B. and J.E. Hill (1991).** *A World List of Mammalian*

- Species*. 3rd edition. British Museum (Natural History) Publications, London, 243pp.
- Corbet, G.B. and J.E. Hill (1992).** *Mammals of the Indomalayan Region: A Systematic Review*. Oxford University Press, Oxford, 488pp.
- Dolgov, V.A. and R.S. Hoffmann (1977).** Tibetskaya burozubka - *Sorex thibetanus* Kastchenko, 1905 (Soricidae, Mammalia). *Zoological Zhurnal* 46: 1687-1692. [In Russian, Original not seen]
- Eisenberg, J.F. and G.M. McKay (1970).** An annotated checklist of the recent mammals of Ceylon with keys to the species. *Ceylon Journal of Science, Biological Science* 8: 69-99.
- Ellerman, J.R. and T.C.S. Morrison-Scott (1951).** *Checklist of Palaearctic and Indian Mammals 1758 to 1946*. Trustees of the British Museum (Natural History), London, 810pp.
- Ellerman, J.R. and T.C.S. Morrison-Scott (1953).** Checklist of Palaearctic and Indian Mammals - amendments. *Journal of Mammalogy* 34: 516-518.
- Frost, D.R., W.C. Wozencraft and R.S. Hoffmann (1991).** Phylogenetic relationships of hedgehogs and gymnures (Mammalia: Insectivora: Erinaceidae). *Smithsonian Contributions to Zoology* 518. Smithsonian Institution Press, Washington, pp.1-69.
- George, S.B. (1988).** Systematics, historical biogeography and evolution of the genus *Sorex*. *Journal of Mammalogy* 69: 443-461.
- Harrison, J. L. (1958).** *Chimarrogale hantu* a new water shrew from the Malay Peninsula, with a note on the genera *Chimarrogale* and *Crossogale* (Insectivora, Soricidae). *Annals and Magazine of Natural History* [13]1: 282-290.
- Hassinger, J.D. (1973).** A survey of the mammals of Afghanistan resulting from the 1965 Street Expedition (excluding bats). *Fieldiana Zoology* 60: 1-195.
- Hoffmann, R.S. (1986).** A review of the genus *Soriculus* (Mammalia: Insectivora). *Journal of the Bombay Natural History Society* 82: 459-481.
- Hoffmann, R.S. (1987).** A review of the systematics and distribution of Chinese red-toothed shrews (Mammalia: Soricinae). *Acta Theriologica Sinica* 7: 100-139.
- Hutterer, R. (1979).** Verbreitung und systematik von *Sorex minutus* Linnaeus, 1766 (Insectivora: Soricidae) im Nepal-Himalaya und angrenzenden gebieten. *Zeitschrift für Säugetierkunde* 44: 65-80.
- Hutterer, R. (1993).** Order Insectivora, pp. 69-130. In: Wilson, D.E. and D.M. Reeder (editors) *Mammal Species of the World: A Taxonomic and Geographic Reference*. 2nd edition, Smithsonian Institution Press, Washington, D.C., 1206pp.
- IUCN (1995).** *Eurasian Insectivores and Tree Shrews - Status Survey and Conservation Action Plan*. (Compiled by Stone, R.D., IUCN/SSC Insectivore, Tree Shrew and Elephant Shrew Specialist Group). IUCN, Gland, Switzerland, vii+164 pp.
- Jameson, E.W. and G.S. Jones (1977).** The Soricidae of Taiwan. *Proceedings of the Biological Society of Washington*, 90: 459-482.
- Jenkins, P.D. (1976).** Variation in Eurasian shrews of the genus *Crociodura* (Insectivora: Soricidae). *Bulletin of the British Museum (Natural History), Zoology Series* 30: 271-309.
- Jerdon, T.C. (1874).** *The Mammals of India: Natural History*. John Wheldon, London, 335pp.
- Jones, G.S. and R.E. Mumford (1971).** *Chimarrogale* from Taiwan. *Journal of Mammalogy* 52: 228-232.
- Lindsay, H.M. (1929).** Indian shrews. *Journal of the Bombay Natural History Society* 33: 326-340.
- Mitchell, R.M. (1975).** A checklist of Nepalese mammals (excluding bats). *Säugetierkundliche Mitteilungen* 23: 152-157.
- Nameer, P.O. (1998).** *Checklist of Indian Mammals*. Kerala Forest Department (Wildlife Wing) and Kerala Agriculture University, 90+ xxv pp.
- Niethammer, J. (1973).** Zur Kenntnis der Igel (Erinaceidae) Afghanistans. *Zeitschrift für Säugetierkunde* 38: 271-276 [Original not seen].
- Nowak, R.M. (1999).** *Walker's Mammals of the World*. 6th ed. Vol. I and II. The John Hopkins University Press, Baltimore and London, Vol. I: lxx+1-836 and Vol. II: xii+837-1936.
- Osgood, W.H. (1932).** Mammals of the Kelley-Roosevelts and Delacour Asiatic expeditions. *Field Museum of Natural History, Zoological Series* 18: 193-339.
- Petter, F. (1963).** Un nouvel insectivore du nord de l'Assam: *Anourosorex squamipes schmidi* nov. sbsp. *Mammalia* 27: 444-445.
- Phillips, W.W.A. (1980).** *Manual of the Mammals of Sri Lanka*. 2nd revised edition. Wildlife and Nature Protection Society of Sri Lanka, Vol. 1: 1-116.
- Pradhan, M.S., R.M. Sharma and K. Shanker (1997).** First record of Kelaart's Long-clawed Shrew, *Feroculus feroculus* (Kelaart) from peninsular India. *Mammalia* 61: 448-450.
- Repenning, C.A. (1967).** Subfamilies and genera of the Soricidae. *Geological Survey Professional Paper* 565: 1-74.
- Roberts, T.J. (1997).** *The Mammals of Pakistan*. Oxford University Press, Karachi, 525pp.
- Saha, S.S. (1980).** Notes on some mammals recently collected from Andaman and Nicobar Islands. *Records of the Zoological Survey of India* 77: 119-126.
- Sclater, W.L. (1891).** *Catalogue of the Mammalia in the Museum of Asiatic Society*. Part II. Calcutta.
- Simpson, G.G. (1945).** The principles of classification and a classification of mammals. *Bulletin of the American Museum of Natural History* 85: 1-350.
- Srinivasulu, C. and M.S. Pradhan (2003).** Checklist of murids (Mammalia: Rodentia: Muridae) of South Asia. *Zoos' Print Journal* 18(12): 1286-1310.
- Srinivasulu, C. and V. Nagulu (2002).** Mammalian and avian diversity of the Nallamala Hills, Andhra Pradesh. *Zoos' Print Journal* 17(1): 675-684.
- Sterndale, R.A. (1884).** *Natural History of Mammalia of India and Ceylon*. Thacker, Spink & Co., Calcutta, 263pp.
- van Valen, L. (1967).** New Paleocene insectivores and insectivore classification. *Bulletin of the American Museum of Natural History* 135: 217-284.
- Yates, T.L. and D.W. Moore (1990).** Speciation and evolution in the family Talpidae (Mammalia: Insectivora), pp.1-22. In: Nevo, E. and O.A. Reig (editors). *Evolution of subterranean mammals at the organismal and molecular levels*. Wiley-Liss, New York.