

CHECKLIST OF DIPODIDS, MYOXIDS AND HYSTRICIDS (MAMMALIA: RODENTIA: DIPODIDAE, MYOXIDAE AND HYSTRICIDAE) OF SOUTH ASIA

C. Srinivasulu ¹ and Mike J.R. Jordan ²

¹ Wildlife Biology Section, Department of Zoology, Osmania University, Hyderabad, Andhra Pradesh 500007, India

² Chester Zoological Gardens, Upton-by-Chetser, Chester CH2 1LH, United Kingdom
Email: ¹ hyd2_masawa@sancharnet.in, ² m.jordan@chesterzoo.co.uk

Abstract

A checklist of nine species of rodents belonging to families Dipodidae Fischer, 1817, Myoxidae Gray, 1821 and Hystricidae Fischer, 1817 known to occur in South Asia including India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka is provided. The family Dipodidae Fischer, 1817 is represented by five species in four genera in four subfamilies. The family Myoxidae Gray, 1821 is represented by one species in one genera. The family Hystricidae Fischer, 1817 is represented by three species in two genera.

Keywords

Checklist, Dipodidae, Hystricidae, Myoxidae, Rodentia, Mammalia, South Asia

Introduction

In South Asia among the rodents, unlike murids and sciurids, the dipodids, the myoxids and the hystricids are limited in species numbers and also distribution range excepting for one taxon. These are the least-known groups of rodents. Ellerman's (1961) account of 260 subspecies of rodents from the region remains the only comprehensive taxonomic work till date. Considering the paucity of information on the diversity of these groups in South Asia, we present an updated checklist with information on their synonyms, subspecies and distribution.

Methods

The present work heavily relies on Corbet and Hill (1992), Holden (1993a,b), Woods (1993) and a list prepared by one of us (MJRJ). We reviewed the major works on these rodent families including Jerdon (1874), Sterndale (1884), Blanford (1891), Ellerman (1940, 1947a,b; 1961), Simpson (1945), Ellerman and Morrison-Scott (1951); Corbet (1978), Phillips (1981), Corbet and Hill (1991, 1992), Holden (1993a,b), Woods (1993), Roberts (1997), Nameer (1998),

Nowak (1999), Agrawal (2000), and Alfred *et al.* (2002). Many relevant literature on these taxa listed in bibliography have also been referred.

Information gathered and presented here with regards to taxonomy, synonyms and distribution is as per earlier checklist on murids of South Asia (Srinivasulu & Pradhan, 2003).

Results

A total of five species of dipodids belonging to four genera in four subfamilies, one species of myoxid, and three species of hystricids belonging to two genera are recorded from South Asia (Table 1). None of the species are endemic to the region as almost all are either Palearctic or Indo-Malayan in distribution.

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: *Dipodidae* Fischer, 1817

Taxa belonging to this family have been either classified under single family Dipodidae Fischer, 1817 or in two families, namely, Dipodidae Fischer, 1817 and Zapodidae Coues, 1876 (Ellerman, 1940; Corbet & Hill, 1992). Sometimes as many as four families, namely, Allactaginidae Vinogradov, 1925, Dipodidae Fischer, 1817, Sicistidae Allen, 1901 (= Sminthidae Brandt, 1855) and Zapodidae Coues, 1876 are recognized (Shenbrot, 1992). Holden (1993a) deals in detail the synthesis of classification and taxonomy of known dipodids retaining a single family Dipodidae Fischer, 1817 pending further study. For subfamilial level listings Holden (1993a) follows Stein (1990) and Shenbrot (1992). Taxa belonging to four subfamilies, namely, Allactaginae Vinogradov, 1925, Cardiocraniinae Vinogradov, 1925, Dipodinae Fischer, 1817 and Sicistinae Allen, 1901 are recognized in South Asia.

Subfamily: Allactaginae Vinogradov, 1925
Genus *Allactaga* (F. Cuvier, 1837)
Four- and five-toed Jerboas

Ellerman (1940) and Ellerman and Morrison-Scott (1951) treat this genus under subfamily Dipodinae Fischer, 1817, while Corbet and Hill (1992) listed it under family Dipodidae Fischer, 1817. Vinogradov (1925) erected subfamily Allactaginae to accommodate taxon belonging to *Allactaga* (F. Cuvier, 1837), *Alactagulus* (Nehring, 1897) and *Pygeretmus* (Gloger, 1841) (Ellerman & Morrison-Scott, 1951). For further details refer Vinogradov (1937), Shenbrot (1984) and Pavlinov and Rossolimo (1987). This genus is represented by two species in the region.

1. *Allactaga elater* (Lichtenstein, 1828)

1828. *Dipus elater* Lichtenstein, Abh. König. Akad. Wiss., Berlin, 1825 [1828]: 155.

Name: Small Five-toed Jerboa

Type locality: Kirgiz steppe, W. Kazakhstan

Synonyms: *Dipus elater* Lichtenstein, 1825
Alactaga [sic] indica Gray, 1842
Allactaga bactriana Blyth, 1863

Subspecies: *Allactaga elater indica* (Gray, 1842)

Distribution: Baluchistan in Pakistan.

Comments: Ellerman (1961) details on *Allactaga elater indica* (Gray, 1842). Holden (1993a) opines that the type locality given by Lichtenstein is in West Kazhakstan not in East Kazhakstan as reported by Ellerman and Morrison-Scott (1951), Corbet (1978) and Corbet and Hill (1992). Refer Roberts (1997) for further details.

2. *Allactaga hotsoni* Thomas, 1920

1920. *Allactaga hotsoni* Thomas, Jour. Bombay nat. Hist. Soc., 26(4): 936.

Name: Hotson's Five-toed Jerboa

Type locality: Kant (=Kont), 20 miles SW of Sib, Persian Baluchistan Iran

Synonyms: None.

Subspecies: None.

Distribution: Baluchistan in Pakistan.

Comments: Ellerman (1961) provides a brief note on this taxon. Refer Roberts (1997) for further morphological and ecological details.

Subfamily: Cardiocraniinae Vinogradov, 1925
Genus *Salpingotus* Vinogradov, 1922
Pygmy Jerboas

The genus *Salpingotus* Vinogradov, 1922 is represented by one species in the region that had been sometimes treated under genus *Salpingotulus* Pavlinov, 1980. The latter name is treated by recent authors as subgenus of the former.

Table 1. Species diversity of families Dipodidae, Myoxidae and Hystricidae in South Asia

Family Subfamily	Genus	No. of species
<u>Dipodidae</u>		
Allactaginae	<i>Allactaga</i>	2
Cardiocraniinae	<i>Salpingotus</i>	1
Dipodine	<i>Jaculus</i>	1
Sicistinae	<i>Sicista</i>	1
<u>Myoxidae</u>		
Leithiinae	<i>Dryomys</i>	1
<u>Hystricidae</u>		
	<i>Atherurus</i>	1
	<i>Hystrix</i>	2

3. *Salpingotus michaelis* Fitzgibbon, 1966

1966. *Salpingotus michaelis* Fitzgibbon, Mammalia, 30(3): 431.

Name: Baluchistan Pygmy Jerboa

Type locality: Nuskh Plateau, NW Baluchistan, Pakistan

Synonyms: None.

Subspecies: None.

Distribution: Baluchistan in Pakistan.

Comments: Pavlinov (1980) placed this taxon under genus *Salpingotulus*, later Pavlinov and Rossolimo (1987) included it under *Salpingotus* Vinogradov, 1922; a trend that was also followed by Corbet and Hill (1992), and Holden (1993a). Refer Roberts (1997) for further details.

Subfamily: Dipodinae G. Fischer, 1817

Ellerman and Morrison-Scott (1951) included species belonging to genus *Allactaga* Cuvier, 1837 and *Jaculus* Erxleben, 1777 under subfamily Dipodinae G. Fischer, 1817, while Corbet & Hill (1992) included them under family Dipodidae Gray, 1821. Holden (1993a) treated *Allactaga* F. Cuvier, 1837 under subfamily Allactaginae Vinogradov, 1925 and *Jaculus* Erxleben, 1777 under Dipodinae G. Fischer, 1817. We follow Holden (1993a) in treating them in two separate subfamilies.

Genus *Jaculus* Erxleben, 1777
Desert Jerboas

The genus *Jaculus* Erxleben, 1777 is represented by one species in the region.

4. *Jaculus blanfordi* (Murray, 1884)

1884. *Dipus blanfordi* Murray, Ann. Mag. Nat. Hist., [5]14: 98.

Name: Blandford's Jerboa

Type locality: Bushire, Iran

Synonyms: *Dipus blanfordi* Murray, 1884
Subspecies: None.
Distribution: Baluchistan in Pakistan.
Comments: Refer Roberts (1997) for further details.

Subfamily: Sicistinae Allen, 1901

Ellerman (1940) and, Ellerman and Morrison-Scott (1951) included the taxon belonging to subfamily Sicistinae Allen, 1901 under family Dipodidae Fischer, 1817 and subfamily Sicistinae Allen, 1901, a trend followed by Holden (1993a) and the present review. Corbet and Hill (1992) included it under family Zapodidae Coues, 1876. Some authors (Pavalinov & Rossolimo, 1987; Shenbrot, 1982) use the name Sminthidae (= Sminthi Brandt, 1855) as it predates Sicistinae Allen, 1901. Holden (1993a) opines that according to International Code of Zoological Nomenclature Sicistinae Allen, 1901 is the valid family name. Refer Holden (1993a) for details.

Genus *Sicista* Gray, 1827

Birch Mice

The genus *Sicista* Gray, 1827 is represented by one species in the region.

5. *Sicista concolor* (Büchner, 1892)

1892. *Sminthus concolor* Büchner, Bull. Sci. Acad. Imp. Sci. St. Petersburg, 35(3): 107. [Mel. Biol. Acad. St. Petersb., 13: 267]

Name: Chinese Birch Mouse
Type locality: Guiduisha, N slope of Xining (=Sining) mtns., Gansu, China
Synonyms: *Sminthus concolor* Büchner, 1892
Sminthus leathemi Thomas, 1893
Sicista concolor leathemi (Thomas, 1893)
Sminthus flavus True, 1894
Sicista concolor flavus (True, 1894)

Subspecies: None.
Distribution: Jammu & Kashmir and Pakistan-occupied-Kashmir in India; North West Frontier Province in Pakistan.
Comments: Ellerman (1961) details about two subspecies, namely, *Sicista concolor leathemi* (Thomas, 1893) and *Sicista concolor flavus* (True, 1894) from the region. We follow Holden (1993a) in synonymizing these names. Refer Roberts (1997) for further details.

Family: Myoxidae Gray, 1821

Taxon belonging to this family have been listed under many different family names by different authors as in Muscaridinidae Palmer, 1899 (Ellerman, 1940; Ellerman & Morrison-Scott, 1951); Gliridae Thomas, 1897 (Simpson, 1945; Corbet & Hill, 1992) and Myoxidae Gray, 1821 (Holden, 1993b). We follow Holden (1993b) in retaining the family Myoxidae Gray, 1821.

Subfamily: Leithiinae Lydekker, 1896

Genus *Dryomys* Thomas, 1906

Dormice

The genus *Dryomys* Thomas, 1906 is represented by one species in the region.

6. *Dryomys nitedula* (Pallas, 1778)

1778. *Mus nitedula* Pallas, Nov. Spec. Quad. Glir. Ord.: 88.

Name: Forest Dormouse
Type locality: Lower Volga river region, Russia
Synonyms: *Mus nitedula* Pallas, 1778
Myoxus pictus Blanford, 1875
Dryomys nitedula picta (Blanford, 1875)
Subspecies: *Dryomys nitedula pictus* (Blanford, 1875)
Distribution: Baluchistan and North West Frontier Province in Pakistan.

Comments: Ellerman (1961) provides a brief account on *Dryomys nitedula picta* (Blanford, 1875). Holden (1993b) provided comments on the status of subfamily Leithiinae Lydekker, 1896. Refer Roberts (1997) for further details on its distribution in the region.

Family: Hystricidae G. Fischer, 1817

Ellerman (1940), and Ellerman and Morrison-Scott (1951) includes taxa belonging to this family under two genera, namely *Atherurus* Cuvier, 1829 and *Hystrix* Linnaeus, 1758. Sometimes, two subfamilies, namely Hystricinae Fischer, 1817 and Atherurinae Lyon, 1907 are recognized (Ellerman, 1940; Ellerman & Morrison-Scott, 1951; Woods, 1993). Includes three species in two genera from the region.

Genus *Atherurus* Cuvier, 1829

Brush-tailed Porcupines

Characterised by unique beaded structure of the tail quills (Corbet & Hill, 1992). It is represented by one species in the region (van Weers, 1977).

7. *Atherurus macrourus* (Linnaeus, 1758)

1758. *Hystrix macrourus* Linnaeus, Syst. Nat. 10th ed., 1: 57.

Name: Asiatic Brush-tailed Porcupine
Type locality: Malacca, Malaya (=Malaysia)
Synonyms: *Hystrix macrourus* Linnaeus, 1758
Hystrix macroura Linnaeus, 1758
Atherurus assamensis Thomas, 1921
Atherurus macrourus macrourus (Linnaeus, 1758)
Atherurus macrourus assamensis (Thomas, 1921)

Subspecies: None.
Distribution: Arunachal Pradesh and Meghalaya in India.
Comments: Agrawal (2000) basing on the overlap of characters and measurements opined that categorization of subspecies within *Atherurus macrourus* (Linnaeus, 1758) is not possible and hence maintains that only the nominate species is valid in its range.

Genus *Hystrix* Linnaeus, 1758
Old World Porcupines

The genus *Hystrix* Linnaeus, 1758 (including two subgenera, namely *Hystrix* Linnaeus, 1758 and *Acanthion*, Cuvier, 1823) is represented by two species in the region.

8. *Hystrix brachyura* Linnaeus, 1758

1758. *Hystrix brachyura* Linnaeus, Syst. Nat. 10th ed., 1: 57.

Name: Himalayan Crestless Porcupine

Type locality: Malacca, Malaya (=Malaysia)

Synonyms: *Acanthion hodgsoni* Gray, 1847

Hystrix hodgsoni (Gray, 1847)

Hystrix hodgsoni hodgsoni (Gray, 1847)

Hystrix alopheus Hodgson, 1847

Hystrix bengalensis Blyth, 1851

Hystrix subcristata Swinehoe, 1870

Acanthion millsii Thomas, 1922

Subspecies: *Hystrix brachyura hodgsoni* (Gray, 1847)

Hystrix brachyura subcristata (Swinehoe, 1870)

Distribution: Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and West Bengal in India; Nepal; Bhutan; probably also in Bangladesh.

Comments: Ellerman and Morrison-Scott (1951), and Ellerman (1961) list *Hystrix hodgsoni* (Gray, 1847) and includes details on *Hystrix hodgsoni hodgsoni* (Gray, 1847) and *Hystrix hodgsoni subcristata* (Swinehoe, 1870). Corbet and Hill (1992) following van Weers (1979) synonymized *Acanthion hodgsoni* Gray, 1847 with *Hystrix brachyura* Linnaeus, 1758.

9. *Hystrix indica* (Kerr, 1792)

1792. *Hystrix cristata* var. *indica* Kerr, Anim. Kingdom : 23.

Name: Indian Crested Porcupine

Type locality: India

Synonyms: *Hystrix cristata* var. *indica* Kerr, 1792

Hystrix leucurus Sykes, 1831

Hystrix zeylonensis Blyth, 1851

Hystrix malabarica Scletter, 1865

Hystrix hirstirostris blanfordi Muller, 1911

Hystrix cuneiceps Wroughton, 1912

Subspecies: None.

Distribution: Andhra Pradesh, Bihar, Chattisgarh, Gujarat, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Uttaranchal, Uttar Pradesh and West Bengal in India; Pakistan; Nepal; Bangladesh.

Comments: Agrawal (2000) opines that there are no recognized subspecies of this taxon.

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