



LITTLE-KNOWN MAMMALS

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The number of mammalian species described in South Asia is 590 species in 53 families and 14 orders (Johnsingh and Nameer, Vol. 1). This book carries exacting accounts on 57 species, but due to want of information, many other species are not covered in detail. Detailed accounts of groups with two or more species are provided in the chapters on tree shrews, insectivores, bats, otters, mustelids, viverrids and herpestids, small cats, marine mammals, wild asses, wild goats and sheep, other sciurids and murids.

This chapter includes information on two orders that have been neglected in South Asia: Pholidota and Lagomorpha. It also deals with species of concern whose distributions barely extend into South Asia (e.g., Sumatran rhino, Malayan sun bear). Nevertheless, many of these species, because of their rarity (e.g., Malayan sun bear, Sumatran rhino, Chinese pangolin) or occurrence in areas where they are difficult to study—either because of political unrest (e.g., Hangul or Kashmir stag) or difficult habitat conditions (e.g., Banteng)—are going to remain little known for years to come. Meanwhile, our efforts should focus on their conservation so that these fascinating species do not disappear from South Asia.

Order PRIMATES

Family Cercopithecidae

Subfamily Cercopithecinae

Macaca arctoides (Stump-tailed or bear macaque)

This species is listed by the synonym *Macaca speciosa* in older literature.

1987–88—one individual was briefly tracked by telemetry—and observation suggested that the genus might be more common there than previously thought (Dinerstein and Mehta 1989, Mehta and Dhewaju 1990). Other records from Nepal include one animal killed at Jongim (2500 m) in the Kangchenjunga Conservation Area (BB Dahal pers. comm.) and a skin reported from near the Makalu–Barun National Park (Y Ghimire pers. comm.). Choudhury (1993, 1997a) has examined skins and skulls from different locations in Assam, Manipur and Nagaland. Shifting cultivation and poaching of clouded leopard and its prey are the main threats (Nowell and Jackson 1996). The IUCN places the clouded leopard in the Vulnerable C1+2a(i) category (Sanderson *et al.*, 2008), and CITES in Appendix I; the species is listed in Schedule I of the Indian Wildlife (Protection) Act 1972.

Order PERISSODACTYLA

Family Rhinocerotidae

Dicerorhinus sumatrensis (Sumatran rhino, Hairy rhino, Asiatic two-horned rhino)

This is the smallest living rhinoceros. The head and body is 2.3–3.2 m and shoulder height is 1.1–1.5 m. The skin is grey-brown in colour. This species is quite hairy, especially young individuals. The hair is a reddish brown. Two horns develop as the animal matures, but the one on the frontal bones is often inconspicuous. A single pair of upper incisors is retained as well as the lower canines (i1/0, c 0/1, pm 3/3, m 3/3). Adults may weigh up to 1000 kg (van Strien 1986).

The Sumatran rhino formerly ranged from Assam and Bangladesh east to Vietnam, and south through Myanmar and Malaya, to Sumatra and Borneo (Groves and Kurt 1972, Rookmaaker 1977, 1983 Lekagul and McNeely 1988). Three subspecies are recognised (*Dicerorhinus sumatrensis sumatrensis* in Sumatra, peninsular Malaysia and Thailand; *Dicerorhinus sumatrensis harrissoni* on Borneo; *Dicerorhinus sumatrensis lasiotis* in Myanmar). *D.s. sumatrensis* and *D.s. harrissoni* persist in small, fragmented populations on Sumatra and Borneo, while no concrete evidence has surfaced in the last five years of the existence of this species in continental Asia (Alfred and Payne 2005, Talukdar *et al.* 2009, Clements *et al.* 2010). The last known location of a Sumatran rhinoceros specimen within South Asia was reported from Anko range in Manipur, and Tuensang district in Nagaland by Choudhury (1997b).

This species is usually associated with moist, forested habitats. It tolerates hill country, and now survives only in such habitats. Van Strien (1986) conducted a long-term field study in Sumatra, and found the species to use a variety of habitats, from sea level to high elevations in Gunung Leuser National Park.

It uses rainwater ponds as wallows. It is a browser, feeding on a variety of plants. They are dependent on salt licks, and social contacts are maintained at such places. Except for the mother–young bond, the animals are solitary in their movements. There is considerable overlap of individual home ranges. Cincinnati Zoological Gardens has successfully bred Sumatran rhinos, and the gestation period was about 15.5 months.

As with other species of rhinoceros, it has been hunted for its body parts, especially the horn, which is thought to have medicinal value. Groves and Kurt (1972) summarise the biology and decline of the species. An update by Khan *et al.* (1996) indicated fewer than 400 in the wild and 21 in captivity. The IUCN places the Sumatran rhino in the Critically Endangered A2abd; C1+2a(i) category (van Strien *et al.* 2008a) and CITES in Appendix I.

Rhinoceros sondaicus (Javan rhino)

This species is only slightly smaller than the Asian one-horned rhino (*R. unicornis*). It retains the upper and lower incisors, as well as the lower canine, and has a single horn as in *R. unicornis*. It differs from *unicornis* in that the skinfold anterior to the shoulder continues across the back connecting to the fold on the opposite side. Head and body length is 300–320 cm, tail length is about 70 cm, shoulder height is 160–175 cm and weight is 1500–2000 kg (Lekagul and McNeely 1988).

In the nineteenth century, the Javan rhinoceros was distributed from northeastern India, across Myanmar to Vietnam, and south through Malaya, to Sumatra and Java (Rookmaaker 1983). It inhabits lowland, tropical forest. It is usually found near water, and feeds on a variety of browse and fallen fruits. There are two known surviving populations: 8–12 animals in Cat Tien NP, Vietnam (Polet *et al.* 1999) and 26–58 animals in Ujung Kulon National Park, Java.

There are proposals to establish a second population in Halimun-Salak NP, Banten province, west Java (A Yahya, WWF-Indonesia pers. comm.). Estimates of distribution and abundance are given in Schenkel and Schenkel-Hulliger (1969), Santiapillai and Ramono (1990) and Santiapillai *et al.* (1993), Talukdar *et al.* (2009). IUCN places the Javan rhino in the Critically Endangered C2a(i); D category (van Strien *et al.* 2008b) category and CITES in Appendix I.

Family Tapiridae

Tapirus indicus (Malayan tapir)

The Malayan tapir (Figure 67.1) is distinctive, with its short proboscis and black-and-white pattern—the head and shoulders as well as the hind quarters are black, and the mid-section is white. The young, until about the age of six months, is brown with contrasting horizontal bands and spots of yellow. The



Figure 67.1. Malayan tapir

dental formula is $i\ 3/3, c\ 1/1, pm\ 4/3-4, m\ 3/3$. This species is the largest of the four living species of tapirs. The female is larger than the male. Head and body length is 180–250 cm, tail 5–13 cm, shoulder height 73–120 cm and weight 150–320 kg. The gestation period is 390–395 days, and typically a single young is produced (Nowak 1999).

The Malayan tapir inhabits tropical wet forests. Lowland forests and hill country are suitable habitats. Eyesight is poor but their sense of smell is excellent. The vegetarian tapir feeds on a wide variety of plant species, browse and fallen fruits. Breeding occurs in April or May, and a single young weighing about 6–7 kg is born after 13 months. The young stays with its mother for at least 6–8 months, by which time it attains adult size. A female in her prime probably produces one young every second year (Lekagul and McNeely 1988). In the Pleistocene, they ranged into eastern India and Borneo. Through hunting and shifting cultivation, the range has constricted, and today the species is found in Myanmar and Thailand, south of 18°N latitude through Malaya to Sumatra (Lekagul and McNeely 1988). The status according to the IUCN is Endangered A2cd (Lynam *et al.* 2008), and it is listed in Appendix I of CITES.

Family Equidae

Equus asinus (Domestic ass or donkey)

The name is usually applied to the domestic ass, with *E. africanus* applied

to the wild progenitor (Clutton-Brock 1981). Grubb (1993) includes *E. africanus* under *asinus*. The domestication of the ass probably occurred in North Africa, and it appears in Egyptian art from 2500 BC onwards. Feral populations of the domestic ass occur in various parts of arid South Asia. The species can become a serious pest in island environments. A feral population exists in the arid dry zone of northern Sri Lanka (Phillips 1980).

Equus caballus (Domestic horse)

The name is usually applied to domestic horse breeds, derived from *Equus ferus* of southern Russia and Central Asia. The horse was domesticated in Europe and Central Asia between 2000 and 3000 BC. It was subsequently transported to North and South America and Australia, and suitable habitats in Africa. Feral horse populations occur in various parts of the world, most notably in North America and Australia. A small feral population is known to exist in the Isle of Delft and the adjacent mainland of Sri Lanka (Phillips 1980) and in India in Dibru-Saikhowa National Park, Assam (Figure 67.2, K Kakati pers. comm.).

Equus (ferus) przewalskii (Przewalski's horse)

This was the last wild horse that roamed the steppes of Central Asia. Presumed to have gone extinct in the wild in the mid 1900s, it is being re-introduced in Mongolia since the 1990s. (Boyd and King 2011).



Figure 67.2. Feral horse in Dibru Saikhowa National Park, Assam

Nepal at an altitude of 3500 to 4500 m. This species is usually found on talus slopes where it may reach densities of 6–18/ha. Each adult female produces two litters per breeding season. A litter size of two has been recorded (Smith *et al.* 1990, Smith and Wang 1991). The IUCN status is Least Concern (Smith and Boyer 2008b).

Ochotona rufescens (Afghan pika)

The pelage is pale reddish-sandy, with a distinctive sandy-buff collar. The head and body length is 17.0–22.5 cm, and the hind foot length 3.2 to 3.7 cm.

It inhabits hills with rocky outcrops and meadows, from southern Turkmania, east through Iran to Afghanistan and western Pakistan at an elevation of 1200 to 3600 m. It is gregarious, forming large colonies, but each family maintains a separate territory. Two or three litters may be born in a year. Litter size averages 5.2 (Fulk and Khokhar 1980, Smith and Gao Wang Xue 1991). The IUCN status is Least Concern (Smith and Boyer 2008c).

Ochotona thibetana (Moupin pika)

In summer, the dorsal pelage is dark brown to sandy brown, a well marked buff coloured collar is distinctive, the ventral pelage is dull grey to white, ear are dark brown, edges narrowly bordered white. The head and body length is 14.0–18.0 cm, and the hind foot length 2.4 to 3.2 cm.

This species is distributed in the mountains of central and western China, north Myanmar, Sikkim, Bhutan and adjacent India. It mainly inhabits in rhododendron and bamboo forests at moderate elevations, as low as 1800 m, but can be seen in high elevation subalpine forests too. Its taxonomic status is still under review. This species is often found on forest edges in montane habitats. It may use hollow logs as shelters. The IUCN places this species in the Least Concern (Smith and Boyer 2008d) category.

Conclusion

This overview calls attention to gaps in our current knowledge, and shows that there is great latitude for further research on the habits and biology of many of the mammal species native to Southern Asia. Even reasonably widespread species such as the Indian hare and wild pig remain little studied. Many species with restricted distributions and elusive habits are very poorly studied, and could disappear entirely before their habitats are evaluated and behaviour studied. The once-widespread species of pangolins, for example, are now threatened with extinction risks and little is known of the most important aspects of their biology and natural history. The time remaining for undertaking critical research on many species of mammals may be very short, given current trends in habitat loss and over-exploitation of mammals

for meat, hides, trophies and products for the Chinese traditional medicine trade (bone, horn, glands, testes, etc.). Conservation efforts, especially on islands or in fragile ecosystems, must recognise the potential importance of problems caused by feral mammal populations, which are often ignored as subjects of scientific study by wildlife ecologists because they originate from domesticated species.

Nonetheless, feral populations of animals can be and are key and dominant components of the mammal fauna both inside and outside many of the most important national parks and reserve areas in Asia and Africa. Feral water buffalo, pig, mithun, ass and dromedary are important and, in some instances, dominant components of many ecosystems in South Asia and Australia. Due to attrition and loss of native ungulate populations, feral and domesticated mammals now constitute a component of the primary prey base for predators such as dholes (*Cuon alpinus*), wolves (*Canis lupus*), leopards (*Panthera pardus*), tigers (*P. tigris*), black bear (*Ursus thibetanus*) and brown bear (*arctos*) in many parts of the region. Research should focus on feral and domestic ungulate populations too.

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