

During the last 25 years no cheetah has been reported. It has certainly been exterminated from India.

The destruction of habitat and consequent decline of its prey species, such as, the blackbuck and gazelle, together with snaring of the animal for hunting purpose, high mortality among cubs, contributed to the factors depleting its number in the later part of the last century. At the turn of the century, overshooting of it in India finally exterminated it.

The One-horned Rhinoceros

Rhinoceros unicornis Linnaeus

The One-horned rhinoceros or Indian rhinoceros, *Rhinoceros unicornis*, is locally known as *Gairda* (Hindi, Nepali), *Gondar* (Bengali), *Gor* (Assamese). It is a huge ungainly ponderous hoofed creature with a horn on the snout and skin folded into shields and studded with wart like tubercles. It has hairs only on tails and ears. A mature male may reach 3.90 m from the snout to the tip of the tail, 1.80 m height at the shoulder and may weigh 1650 kg. The female is slightly smaller and lighter than the male. The newly born calf measures 120 cm in length and 55 cm in height and weighs 60 kg. Its horn on the snout is not a true horn but a mass of agglutinated or compressed hair made of keratin fibres forming a hard cemented mass. It is not connected with the skeleton. During fight or accidental hit the horn may be knocked off which is soon replaced by a new one. It rarely measures more than 30 cm (the longest measure 62 cm) and generally weighs about two and a half kg.

The one-horned rhinoceros has been known to have once been extremely common and wide spread throughout the Indo-Gangetic plains and its neighbouring countries (Rao 1957), but by the end of the 17th century it had completely disappeared from much of its range, except Nepal, Bengal and Assam.

Distribution : (Fig. 27) The present distribution is limited to some scattered patches of the Himalayan Terai (Chitwan-Rapti Valley) in Eastern Nepal, northern part of West Bengal (Jalpaiguri district), Brahmaputra valley of Assam (North Kamrup, Nowgaon, Sibsagar, and Darrang district).

Habits, habitat etc. : The one-horned rhinoceros inhabits low humid country. It is confined to the riverine grasslands in Nepal and eastern India. Mostly solitary individuals are met with but scattered parties may be seen grazing in close proximity. The calf keeps close to the cow walking ahead of it while grazing or fleeing. Wallowing in the marshy mud-holes is a must everyday. This practice is in order to protect itself from annoying flies and parasites. It is a good swimmer, during floods it may swim long distances for a safe landing and generally resorts to higher elevations when its, normal habitat

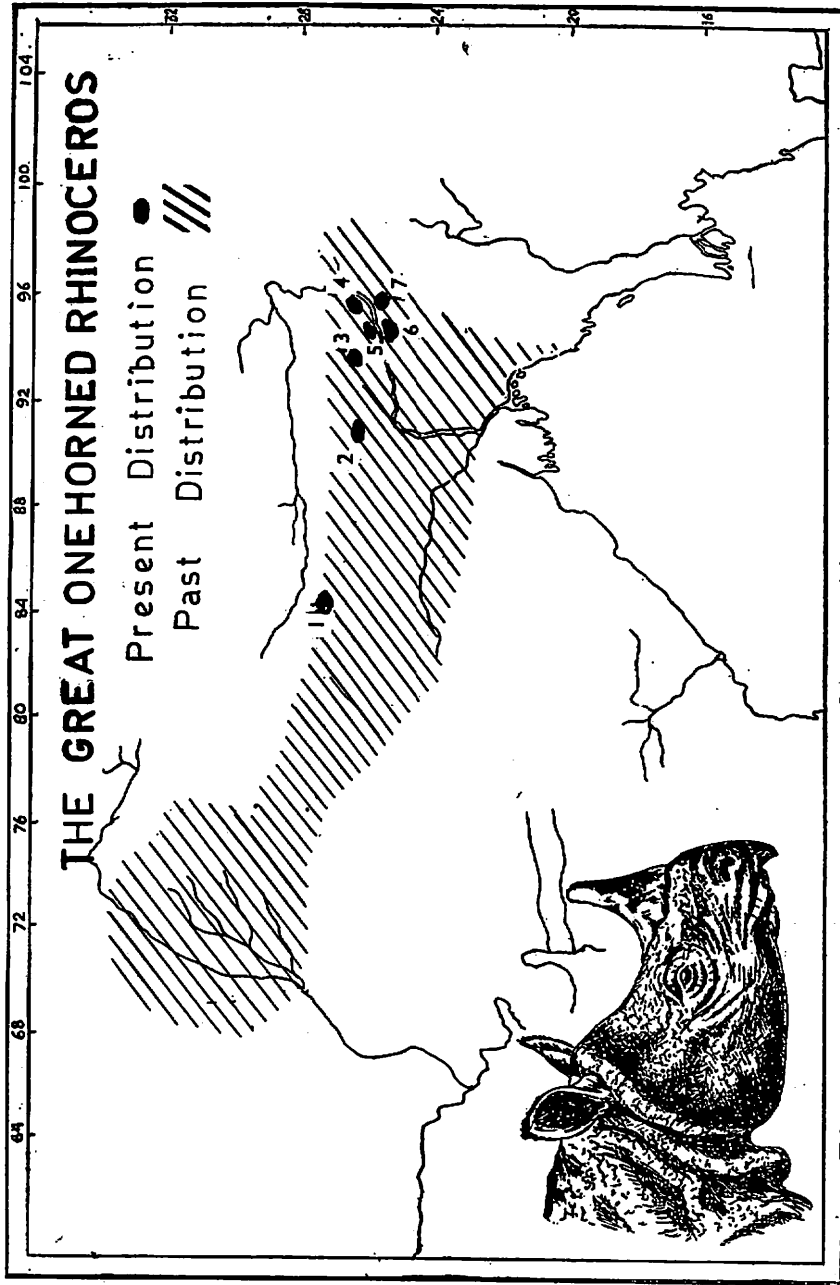
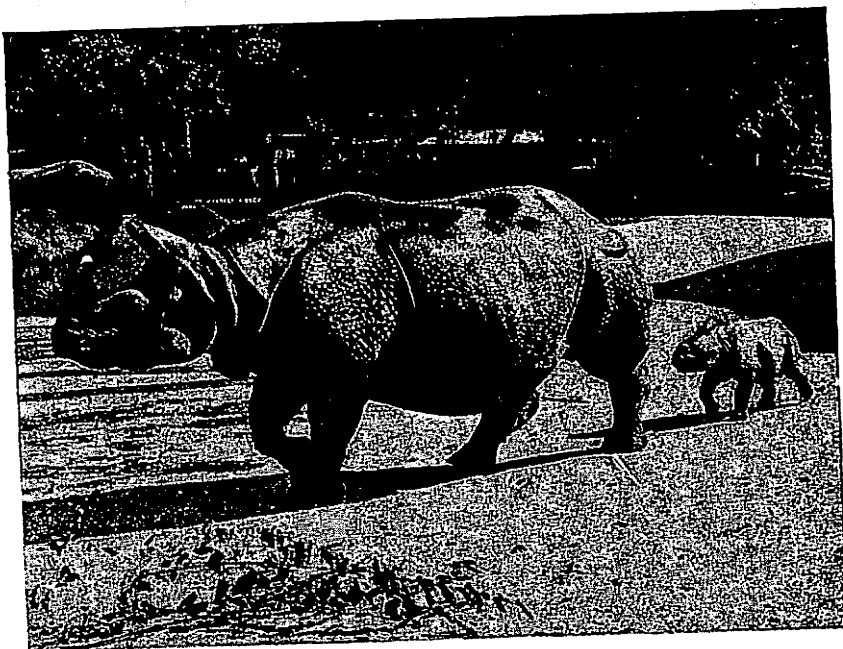


Fig. 27.: 1. Chitawan, 2. Jaldapara, 3. Manas, 4. Sonairupa, 5. Orang, 6. Kaziranga, 7. Laokhova.



Great Indian Onehorned Rhinoceros
(*Rhinoceros unicornis*)

is inundated. It grazes on tall elephant grasses *viz.*, *Saccharum* spp., *Arundo donax*, *Phragmites* sp., *Andropogon* sp., and other vegetation. Grazing starts generally during the late part of the day and is continued throughout the night. Elephants, buffaloes, deer are food competitors of the rhinos. The vision of the animal is poor and is limited to 100 metres or so but its senses of smell and hearing are well developed. In spite of its heavy gait it is quite agile and can run fast for a short distance. It may really be offensive when a male is in heat or a male who has lost in fight with another male finds an intruder in its territory. A mother with a calf is also enraged when she is suspicious. The charge is not by its horn but it uses the large incisor teeth in its upper and lower jaw and bites the victim with an upwards thrust of the head. All rhinos of a particular area defecate at a fixed place, as a result the dung heap goes on enlarging in a circle. Such dung piles are found all along the rhino-routes. Any rhino passing by the dung heap has an urge to defecate. It usually moves backwards and passes stool

The one-horned rhinoceros lives for about 70 years. Its breeding rate is slow. Both male and female have to be in heat for mating to take place. Breeding takes place all the times of the year. A female rhino comes into season every 45 to 48 days throughout the year. Generally mating takes place between February and April. The act of copulation is as in buffaloes, the male riding on the female and may last about an hour or longer. During courting the pair runs and plays about together, the female passing urine frequently and producing a whistling sound. The male snorts. Period of gestation is 18-19 months, in Nepal it is believed to be 16 months. Generally one calf is born about October.

Economics : Rhinoceros is commercially a very valuable animal. Its horn is highly prized because of its supposed aphrodisiac and magical properties. A cup made of horn is believed to be a poison detector as well as it renders poison innocuous, the cup may crack or split into two as an effect of the poison. This has been on high demand in eastern Asia, specially by kings and nobles. It is believed to help in delivery of a child when it is placed under the bed. Pieces of horn is used as talisman which makes the wearers invulnerable to enemies. Pounded horn is used in pharmaceutical trades in southeast Asia. The horn therefore fetches fabulous amount and today it is worth its weight in gold. Calcutta was the market for trade in horns, the ultimate destination of these were said to be China, Hongkong and southeast Asia. Besides the horn almost any part of the rhino body has a good market. Hide, tail hair, hooves, and bones are used as charms, medicines and rejuvenator. Flesh is sold as invigorating tonic, urine is used for the cure of rheumatic gout and skin diseases, and blood is offered in religious ceremonies.

Status : In the Pre- and Protohistoric periods, the one-horned rhinoceros had a wide distribution throughout the western and eastern India. Its presence in northwestern India is evidenced by the recovery of a seal bearing the figure of a one-horned rhino from Mohenjodaro excavation. In the Harappa remains, believed to be contemporaneous with Mohenjodaro civilization in Punjab (Pakistan), rhino bones have been found. Several rhinos were killed by Taimur Bec in 1398 on the frontier of Kashmir in the late 14th century (Ettinghausen 1950). Babur in 1519 hunted them in Peshawar (North West Frontier, Pakistan) and in the bank of Sarju (Ghagra) in North India (Leyden 1921). Sidi Ali stated that rhinos were seen near Kotal Pass, West of Peshawar in 1554. Abul Fazl mentions the presence of rhinoceros in Sambal Sarkar of Delhi Suba during the reign of Akbar. It was not uncommon in the Gangetic plains during the medieval period but became alarmingly rare everywhere by the end of the 19th century chiefly due to mass onslaught for its horn. The Rajmahal Hills (Bihar) were inhabited by the species till 1850 (Lydekker 1900) and in Malda district (West Bengal) till 1876. By the close of the 19th century a very few numbers existed in some pockets in northern Bengal, Assam and eastern Nepal. To save the animal from extinction rhinos were officially closed to sportsmen in Bengal and Assam. In 1932 the Bengal Rhinoceros Act was passed and in 1954 the Assam Rhinoceros Bill became a law. Today rhinos have been officially protected in seven sanctuaries, viz., Kaziranga, Manas, Sonairupa, Orang, Laokkowa in Assam, Jaldapara in Bengal and Chitawan-Rapti Valley in Nepal. Seshadri (1969) thought that there were 745 one-horned rhinoceros left in the world. Waller (1971) estimated 630 and Lahan and Soonwal (1973) gave the census count of 658 rhinos in Kaziranga National Park in 1972. There had been a substantial increase in the number since 1972 and at present (1978) there are 900+ in the National Park.

In order to conserve the species that is limited to India and Nepal only, it is essential to have strict vigilance to stop poaching. Livestock should in no case be allowed in rhino territory to avoid deadly diseases as foot and mouth and other viral infections. Habitat modification should be avoided.

The Smaller One-horned or the Javan Rhinoceros

Rhinoceros sondaicus (Desmarest)

The smaller one-horned rhinoceros, *Rhinoceros sondaicus*, is locally known as *Gondar* (Bengali), *Kyeng*, *Kyantsheng* (Burmese), *Badak* (Malay). It is more or less like the great Indian rhinoceros but smaller, attaining a total length of 300-350 cm and height of 150-175 cm, the horn grows to 20-26 cm. Its skin is dusky grey and naked, there are no tubercles in the skin but is divided by cracks into small polygonal, scale like disc throughout. The

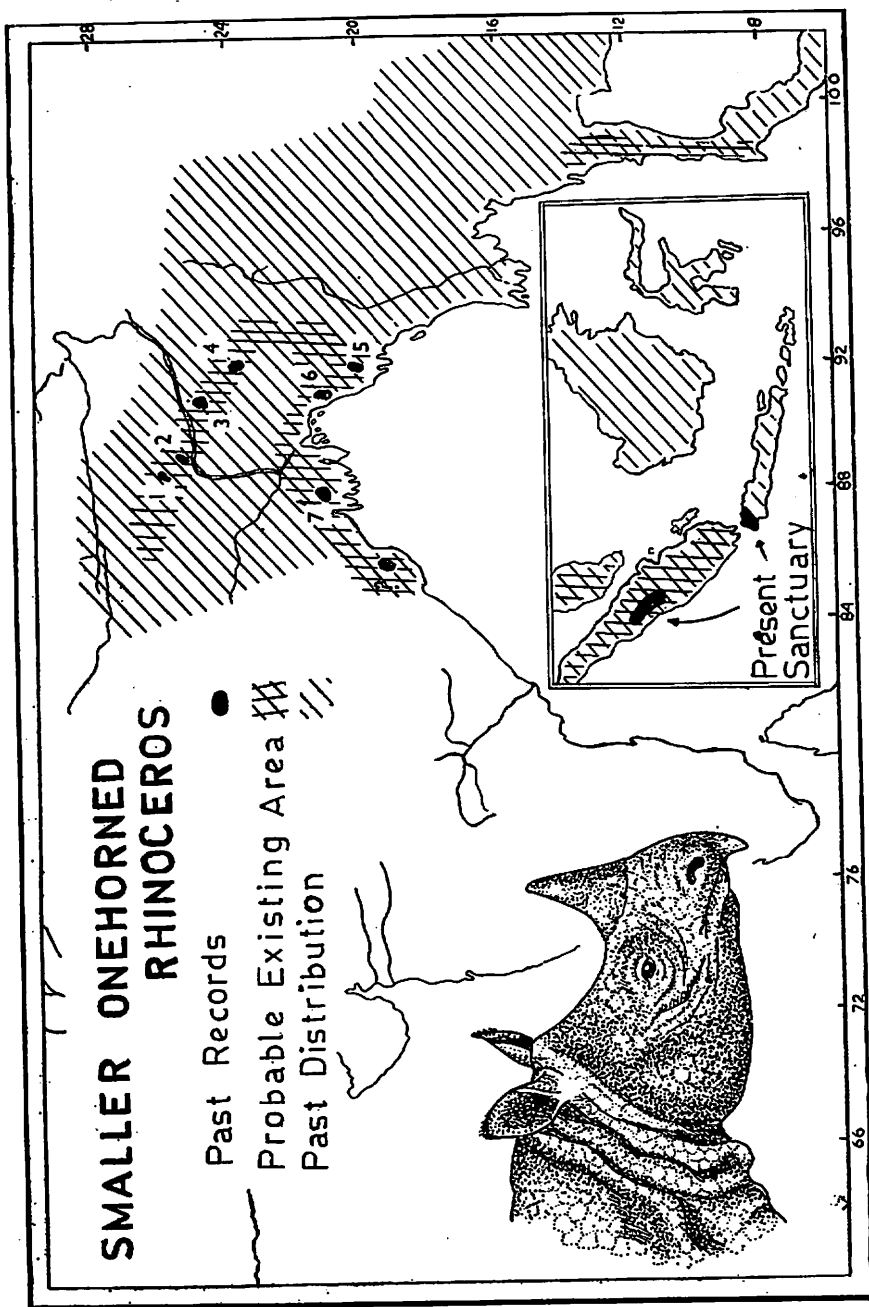


Fig. 26.: 1. Toras R. 2. Goalpara, 3. Sibsagar, 4. Manipur, 5. North Lushai Hills, 6. Chittagong, 7. Sunderban.

skinfold in front of the shoulder continues right across the back. Horn on the snout is present only in males.

Distribution : (Fig. 28) Originally this species was widely distributed from eastern India, Bangladesh, Burma (once abundant in the forests along the large rivers of Tenasserim), southern China through southeast Asia to Sumatra and Java. Today it is confined to Java and in Sumatra. In Malay Peninsula and Tenasserim its existence needs confirmation.

Habits, habitat, etc. : It is an animal of low, open vegetation and tropical forest. It ascends hill tracts up to an elevation of 2330 m and also swampy areas. Since it is a browser on leaves of all kinds of forest trees and shrubs, it had a wide distribution in the past.

Status : In the Indian subcontinent about a century ago it occurred in eastern India, the Sundarban in lower West Bengal and Bangladesh, northern Bengal and Assam and then *via* Burma and Malay Peninsula to Indonesia. The last specimen was reported from the swamps of the Sundarban in 1870 and tracks were seen about 1887. By 1890 it had probably died out (Loch 1937). The last record from Manipur was in 1874 and Chittagong in 1864. It was not uncommon, existing side by side with the large one-horned in the eastern Himalayan areas in North Bengal and Assam till the middle of the 19th century but were hunted beyond its thriving limits. Pollok (1900) stated that he found it fairly plentiful on the left bank of the Brahmaputra, south of Goalpara, where he killed it. Shebbeare (1935) stated that it occurred along the Torsa river, north Bengal and one was shot some 30 years ago. At present it is practically exterminated from Indian region. Report of its presence in the North Lushai Hills and in Manipur needs confirmation.

Attempts to preserve the animal were made since 1921 in the Ujung Kulon peninsula, West Java. This area was declared a natural monument and protection was continued of the animal in 360 km² of the reserve which helped in the increase of the rhino population range from 40-48. In the Leuser Reserve (6000 km²) in North Sumatra the present number is estimated at 20-25 (Kurt 1971).

The Asiatic Two-horned or Sumatran Rhinoceros

Didermocerus sumatrensis (Fischer)

The Asiatic two-horned rhinoceros, *Didermocerus sumatrensis*, is locally known as *Garh* (Assamese), *Keyeng*, *keyentsheng* (Burmese), *Badak* (Malay). It is smaller than the other living rhinoceros species and attains a length of about 250 cm, height 135 cm and the front horn above the nostril 80 cm high along the curve, the second horn above the eye being quite short. Its coat colour is earthy brown and is thinly covered with short black or brown hairs,

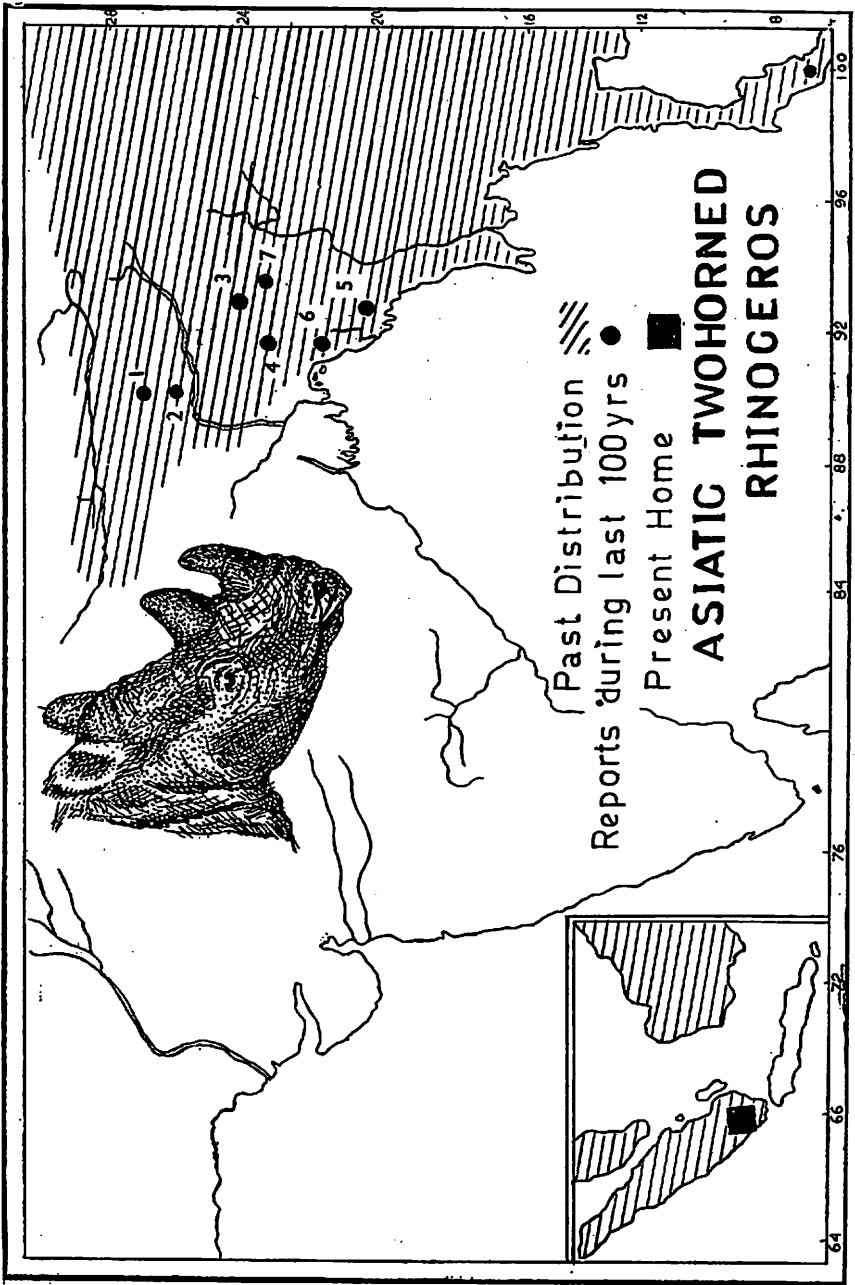


Fig. 29. : 1. Bhutan, 2. Bengal Duars, 3. North Cachat, 4. Coomilla, 5. Lushai Hills, 6. Chittagong Hill Tract, 7. Manipur.

ears are small and pointed, edged with short black thick hair and the tail is covered with long hair. The skin is granular, with folds present behind the shoulder, front of thigh and round the neck. It has a single pair of lower frontal teeth instead of two pairs as in the other Asiatic species.

Distribution : (Fig. 29) The former distribution of the species was wide, extending from eastern India (Assam) through Burma to Indochina and Indonesia. At present it is restricted to a few widely separated localities in Burma, Thailand, Malaya, Sumatra, Cambodia, Laos, Vietnam and Kalimantan.

Habits, habitat, etc. : The Asiatic two-horned rhinoceros prefers well wooded wet tropical green forests, ascending up to an elevation of 1100 m in summer and descending to lower country during monsoon and in winter. It prefers shade and water and wallows in mud tracts leading off from the wallows which appear like large tunnels hollowed out through forests. The wallows are generally visited singly or sometimes in pairs. It is a browser and includes in its diet variety of vegetation types characteristic of secondary forest areas. It is usually shy and timid. Breeding season is not precisely known. Gestation period is about seven months, and usually a calf is born.

Status : About a century back, in the Indian subcontinent, it was known to occur in Bhutan, Bengal, Duars, Tripura, Chittagong hill tracts (Lydekker 1900). It was also reported from Brahmaputra Valley, Comilla district, Bangladesh (Harper 1945). It was common in the Lushai and Manipur hills and was occasionally found in North Cachar (Milroy 1934). At present it doubtfully exists in the Indo-Burma border. In some national parks and reserves *viz.*, Khao Salob, Khao Luang, Phu Kheo (Thailand), Taman Negera, Sungei Bernam (Malaya), Leuser Reserve (Sumatra), Kinabalu (Sabah), the animal exists in small numbers which has been provided with legal protection. Precise estimate of the total world population is about a hundred, the highest concentration (45-48) being in Leuser Reserve in Sumatra. Decline in the population is due to overhunting throughout its range, chiefly for its invaluable horns and parts of carcass which are supposed to have much medicinal value that fetch highprice in southeast Asian countries.

• The Indian Wild Ass

Equus hemionus khur (Lesson)

The Indian wild ass, *Equus hemionus khur*, is locally known as *Ghor-Khar* (Hindi), *Ghour*, *Kerdecht* (Persian). It is sandy grey to chestnut coloured, sides of the rump fawn, the muzzle, legs and underparts are white. It is robust build and larger than the domestic ass or donkey and stands at 110 to 120 mm at shoulder. Its ears are shorter than donkeys and the short erect mane continues as a dark brown stripe along the back to the root

ENDANGERED ANIMALS
OF INDIA

By

A. K. MUKHERJEE
Zoological Survey of India, Calcutta

pp. 1-2, 1-122, (1)

*Edited by the Director, Zoological Survey of India,
Calcutta*

1982