

the stomach is simple, and the cæcum is large and complicated. It comprises the families of *Rhinocerotidae*, *Tapiridae*, *Hyrcidae*, and *Equidae*, or the Rhinoceroses, Tapirs, Coneyes, and Horses. Their molars are six or seven on each side, both above and below.

Fam. RHINOCEROTIDÆ.

Syn. *Nasicornia*, Illiger.

Incisors persistent in both jaws in some, in others disappearing with age; no canines; molars tuberculate, the crown marked by narrow eminences, usually $\frac{7-7}{7-7}$; feet with three hoofed toes; one or two horns, placed one behind the other on the median line of the muzzle; tail short; skin very thick, marked by deep folds.

Gen. RHINOCEROS, Linnæus.

Char.—Those of the family, of which it is the only genus.

The animals composing this genus are large, ungaily, and unwieldy-looking, with long heads and a short tail, and the hide very thick, with several folds. The incisors vary somewhat both in number and in size, and they are stated to bear an inverse ratio to the horns. Canines in a rudimentary state exist in the mature fœtus, but early disappear. The molars are implanted by distinct roots. The crowns of the upper molars are subquadrate, with two transverse eminences, joined by a crest to the outer margin; the crowns of the lower ones are longer, narrower, with two lunate lines, having the convexity outwards. The nasal bones are very strong and arched to support the horn, which is composed of longitudinal fibres, as if of hairs closely compacted together without any bony structure. The upper horn, when present, is fixed in the frontal bone. The upper lip is somewhat prolonged. The stomach is simple, and the cæcum large and sacculated. The intestines are about eight times longer than the body, and the villi are very large. The females have two inguinal mammæ. Rhinoceroses are found only in the tropical regions of the old world. Three species occur in India and Malayana, two of which are found within our limits; and four or five others inhabit Africa.

212. *Rhinoceros indicus*.

CUVIER.—BLYTH. Cat. p. 136.—*R. unicornis*, LINNÆUS.—*R. asia-*

ticus, BLUMENBACH.—*R. inermis*, LESSON.—Figured F. CUVIER, Ménag. de Museum d'Hist. Nat.—*Genda*, *Gonda*, *Ganda*, and *Genra*, II.

THE GREAT INDIAN RHINOCEROS.

Descr.—Of large size; only one horn; skin with a deep fold at the setting on of the head, another behind the shoulder, and another in front of the thighs; two large incisors in each jaw, with two other intermediate small ones below, and two still smaller outside the upper incisors, not always present. General colour dusky black.

Length, about 9 to 10 feet, occasionally it is said 12 feet; tail 2; height $4\frac{1}{2}$ to 5 feet; horn occasionally 2 feet.

Compared with the next species, this rhinoceros has the condyle of the lower jaw proportionally much more elevated, imparting a conspicuously greater altitude to the vertex when the lower jaw is *in situ*. The skull of one specimen was 2 feet long; the height of the condyle of the lower jaw one foot. The tubercles of the hide are also much larger than in *R. sondaicus*.

This huge rhinoceros is found in the Terai at the foot of the Himalayas, from Bhotan to Nepal. It is more common in the eastern portion of the Terai than the west, and is most abundant in Assam and the Bhotan Doars. I have heard from sportsmen of its occurrence as far west as Rohilcund, but it is certainly rare there now, and indeed along the greater part of the Nepal Terai; and although a few have been killed in the Sikim Terai, they are more abundant east of the Teesta river. As far as is at present known, this species does not extend to the south of the region adjoining the Himalayas, though it is possible that it may cross the Berrampooter river, and occur on the north of the range of hills that bound that valley to the south.

It frequents swampy ground in the forests, and dense jungles. The Rhinoceros is almost always hunted for on elephants, and a wounded one will occasionally charge and overthrow an elephant. The very thick hide of this animal requires a hard ball, and a steel-tipped bullet was frequently used before the introduction of the deadly shell, now in general use against large game. Jelpigoree, a small military station near the Teesta River, was a favourite locality whence to hunt the Rhinoceros and it was from that station Captain Fortescue, of the late 73rd N.I., got his skulls, which were, strange to say, the first that Mr. Blyth had

seen of this species, of which there were no specimens in the Museum of the Asiatic Society at the time when he wrote his Memoir on this group.

213. *Rhinoceros sondaicus*.

SOL. MULLER. — BLYTH, Cat. p. 137. — *R. javanicus*, F. CUVIER, Mammif., pl. 85-86. — HORSFIELD, Zool. Res. Java, pl.

THE LESSER INDIAN RHINOCEROS.

Descr.—Much smaller than the preceding; with one horn; two large incisors in each jaw; folds in the skin less prominent and fewer; hide covered with square angular tubercles, much smaller than those of *R. indicus*.

Length 7 to 8 feet; height $3\frac{1}{2}$ to $3\frac{3}{4}$.

As in the last, there is a short and broad type of skull, and a narrow type, the broad type being the kind found in our province. Length of the skull of one $1\frac{3}{4}$ foot; height of condyle of lower jaw 9 inches. The fold at the setting on of the head, so prominent in *Indicus*, is at most but indicated in *Sondaicus*.

The Lesser Rhinoceros is found at present in the Bengal Sunderbuns, and a very few individuals are stated to occur in the forest tract along the Mahanuddy river, and extending northwards towards Midnapore; and also on the northern edge of the Rajmahal hills near the Ganges. It occurs also more abundantly in Burmah, and thence through the Malayan peninsula to Java and Borneo. Several have been killed quite recently within a few miles of Calcutta.

One of these species formerly existed on the banks of the Indus, where it was hunted by the Emperor Baber. Individuals of this species are not unfrequently taken about the country as a show.

The only other Asiatic rhinoceros is the two-horned one, *Rhinoceros sumatranus*, which has been shot as high as north latitude 23° or so, near Sandoway, and is suspected by Blyth to extend as far north as Assam. Though with two horns, it is quite of the same type as the one-horned species, having strong incisors, and not like the African two-horned species, which have deciduous incisors. It is the most common rhinoceros in the Indo-Chinese territories, extending to Sumatra only among the islands. It appears from information received by Blyth, that the horns

of this species are sometimes much longer than such as are usually met with, and he suspects that *R. Crossii*, Gray, is this species.

Africa possesses four or five species of rhinoceros, all of them double-horned, and without incisors.

The curious genus *HYRAX* is usually placed near the Rhinoceros family. It forms the family *Hyracidae*, and the tribe *Lamunguia*, Wagner. They are animals of small size, about that of a rabbit, and have quite similar molars to the Rhinoceroses; the upper jaw has two stout incisors curved downwards, and during youth two very small canines; the lower jaw has four incisors and no canines. The fore-feet have 4 toes; the hind-feet 3, all furnished with flat hoof-like nails; they have no tail, have a short muzzle, and they are covered by hair. Several species are known from Africa, and one from Arabia and Palestine, supposed to be the coney of our version of the Scriptures, *Hyrax syriacus*. It was considered by the Jews one of the animals that chew the cud.

The Tapirs, *TAPIRIDÆ*, have six incisors and two canines in each jaw, separated from the molars by a wide interval. The fore-feet have 4 toes, and the hind-feet 3. The snout is prolonged into a short fleshy trunk, and the skin is covered with short close hair. The tail is very short, and the ears are small and upright. They are animals not unlike pigs in their general form; frequent damp forests, and are fond of the water.

One species is found in the Malayan peninsula and islands, *Tapirus malayanus*, and it has been killed in Southern Tenasserim. The only other two species are inhabitants of South America, *Tapirus americanus* and *T. villosus*, of the Andes.

The remarkable fossil genus *Dinotherium* was at first described as a tapir. It is now considered to have been an aquatic animal, like the dugongs; and this would perhaps be the best place to intercalate the family of *Sirenia*, or herbivorous *Cetacea*, but I will describe them at the end of the next tribe.

Fam. EQUIDÆ, Horses.

Syn. *Solidungula* and *Solipedes*, Auct.

Incisors $\frac{6}{6}$; canines $\frac{1-1}{1-1}$; molars $\frac{6-6}{6-6}$ or $\frac{7-7}{6-6}$. The two anterior toes are soldered together, forming a single perfect toe, covered by a broad undivided hoof.

The molars are complex, with square crowns marked by laminæ of

enamel; and, in young individuals, there is often a small anterior molar which is deciduous. The incisors have their crowns furrowed by a groove. The canines are only present in males. The tail is moderately long, with long hair, the ears rather large and pointed, and there is a mane. The female has two inguinal mammæ.

The skull is elongated, and the lower jaw is of great size and strength. The humerus and femur are short, the fore-arm and shank are long and partially anchylosed, and there is only one metacarpal and metatarsal bone, the others, however, being represented by small bones called the splint bones. Three phalanges complete the foot, the last of which bears the hoof. The stomach is simple, the intestinal canal long and capacious, and the cæcum enormous.

The animals of this family are peculiar to the old world. They comprise horses, asses, and zebras, which are usually placed in one genus.

Gen. *Equus*, Linnæus.

Char.—Those of the family, of which it is the only genus.

It subdivides into Horses properly so called, *Equus*; Asses, *Asinus*, Gray; and Zebras, *Hippotigris*, Hamilton Smith. Wild horses of a truly feral type are at present unknown, but they have become almost wild in the Pampas of South America.

Gen. *Asinus*, Gray. Asses.

Asses are distinguished from horses by their longer head and ears, by the tail being covered with short hairs at the base, and furnished with a tuft of long hairs towards the tip and on the sides only, not throughout, as in horses. They also want the peculiar hard horny excrescences found on the legs of horses, and have almost invariably a dark longitudinal dorsal stripe. Several species of wild ass are now known to exist, one of which is a native of the western parts of India.

214. *Equus onager*.

PALLAS.—BLYTH. Cat. p. 135.—Figd. F. CUVIER, Mammif. II., pl. 92.—*E. hemionus* of India, Auct.—*Asinus indicus*, SCLATER.—*Ghor khur*, H.—*Ghour*, of Persians.—*Koulan*, of the Kirghiz.

THE WILD ASS OF CUTCH.

Descr.—Of a pale isabella or sandy colour above, with a slight but

H. Keppelton.
3rd Feb. 1894.

THE
MAMMALS OF INDIA;

A
Natural History

OF ALL THE
ANIMALS KNOWN TO INHABIT CONTINENTAL INDIA.

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