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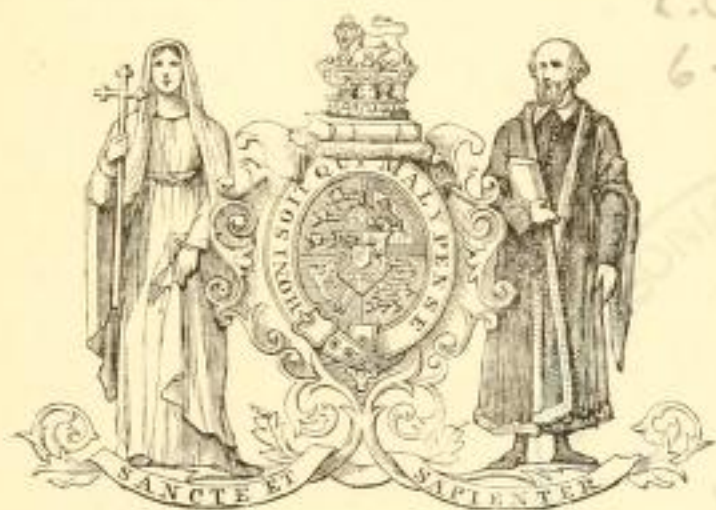
A Popular Introduction to Zoology.

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SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE;

SOLD AT THE DEPOSITORYES:

77, GREAT QUEEN STREET, LINCOLN'S INN FIELDS;

4, ROYAL EXCHANGE; 48, PICCADILLY;

AND BY ALL BOOKSELLERS.

1865.

ORDER II.—THICK-SKINNED QUADRUPEDS.

PACHYDERMATA.*

The relationship between the Whales and the Elephant is not very remote; the bulky head, the giant size, the thick and naked skin, the prolonged tusks, and the straggling irregularity of the teeth, are alike indicative of the aquatic Cetaceans and of the marsh-loving Pachyderms, that next offer themselves to our notice.

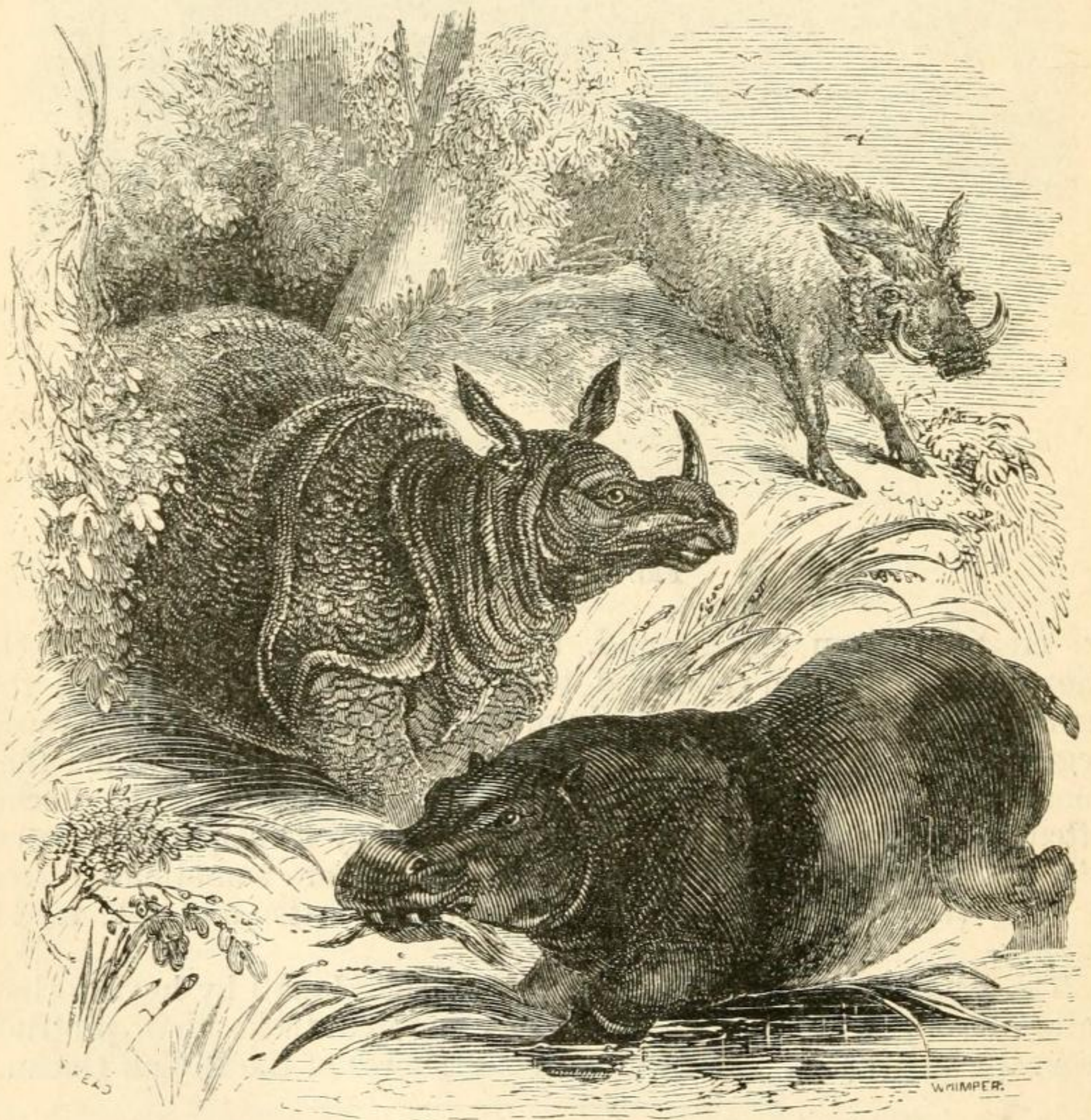


FIG. 417.—WART-HOG, INDIAN RHINOCEROS, AND RIVER-HORSE.

These animals are remarkable for the thickness of their skin, and for having their toes enclosed in hoofs. They have a single stomach, and do not

* *παχύς*, pachys, *thick*; *δέρμα*, derma, *the skin*—*thick-skinned*.

chew the cud. This order includes the largest terrestrial mammalia at present in existence. Except the horse, they are all clumsy in their shape, and have a heavy, indolent gait. They generally live together in herds, and frequent marshy situations, where they find vegetation and roots suited to their wants, and where they can wallow in the mud. Although they resemble each other in the general features of their economy, they are distinguishable by important particulars, which has rendered it necessary to divide them into the following groups:—

The **Proboscidian Pachyderms** are furnished with a proboscis; they have five toes on all the feet, but so enclosed in a sort of hoof of callous skin, that their nails only are visible. This family includes but one living genus, namely,

The **Elephants** (*Elephas*), animals of gigantic size, but mild and docile in their disposition. The proboscis of the Elephant is a

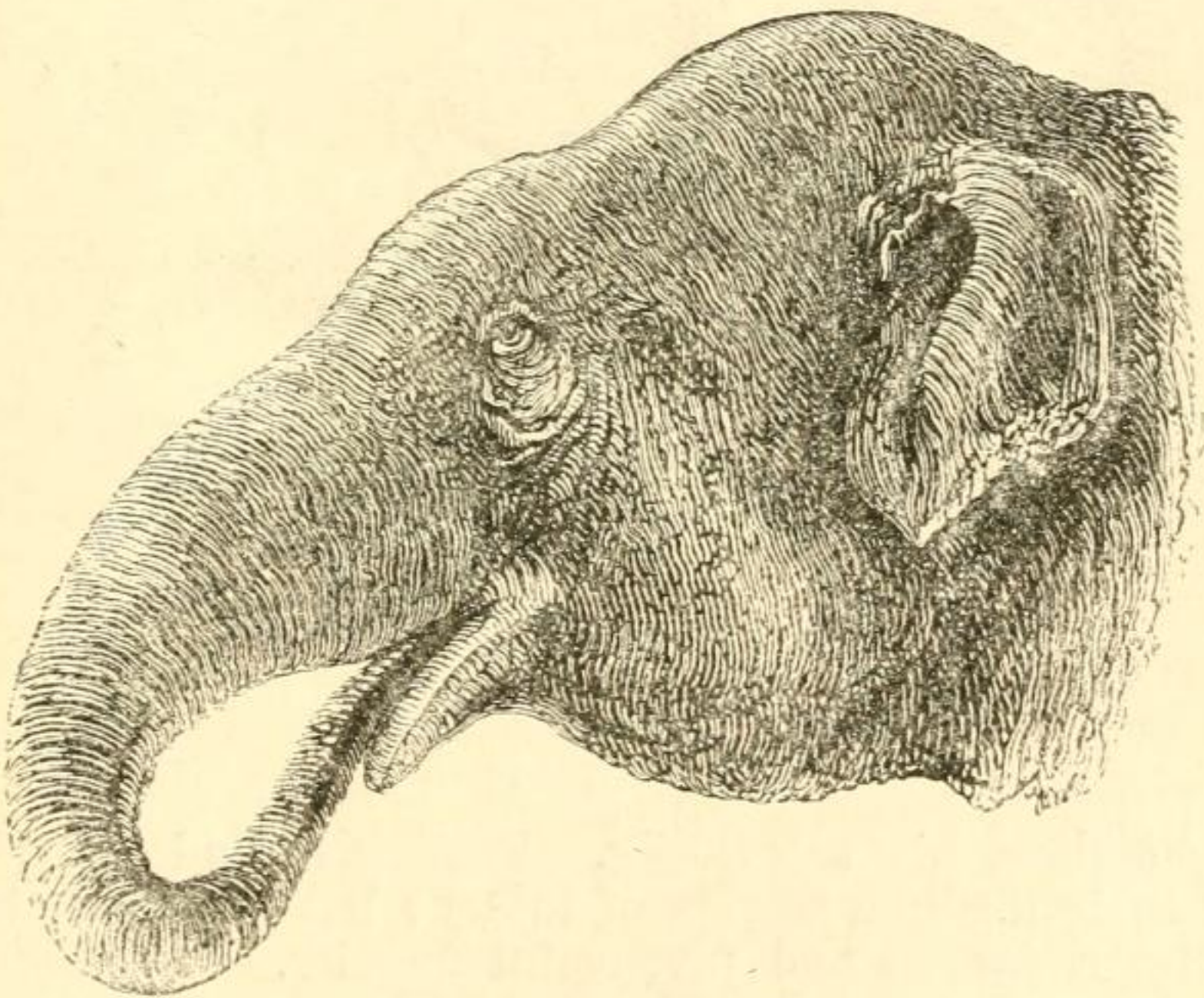


FIG. 418.—HEAD OF INDIAN ELEPHANT.

prolongation of its nostrils; it consists of a double tube surrounded with muscles variously interlaced, so that it is moveable in every direction, and terminates in a curious appendage resembling a finger. This trunk enables the Elephant to seize hold of everything he wishes to convey into his mouth, also to pump up water, and then to pour it into his throat, thus compensating for the shortness of the neck. By means of this wonderful instrument, Elephants can uproot trees, untie knots, open a lock, or even write with a pen. These animals possess a sharp sight; their hearing is quick, their sense of smell delicate. They are very intelligent, and

remember kindness as well as harshness. Elephants usually live together in herds, consisting of from forty to a hundred individuals. The oldest marches at the head of the troop, and the next in age watches the rear. They are easily tamed when taken young, and are employed as beasts of burden. They carry about two thousand pounds weight, and will travel without being very much fatigued, thirty or forty miles a day. These animals swim well: they live to the age of nearly two hundred years. Conscious of their own massive strength, they feared no enemies, till the aggressions of

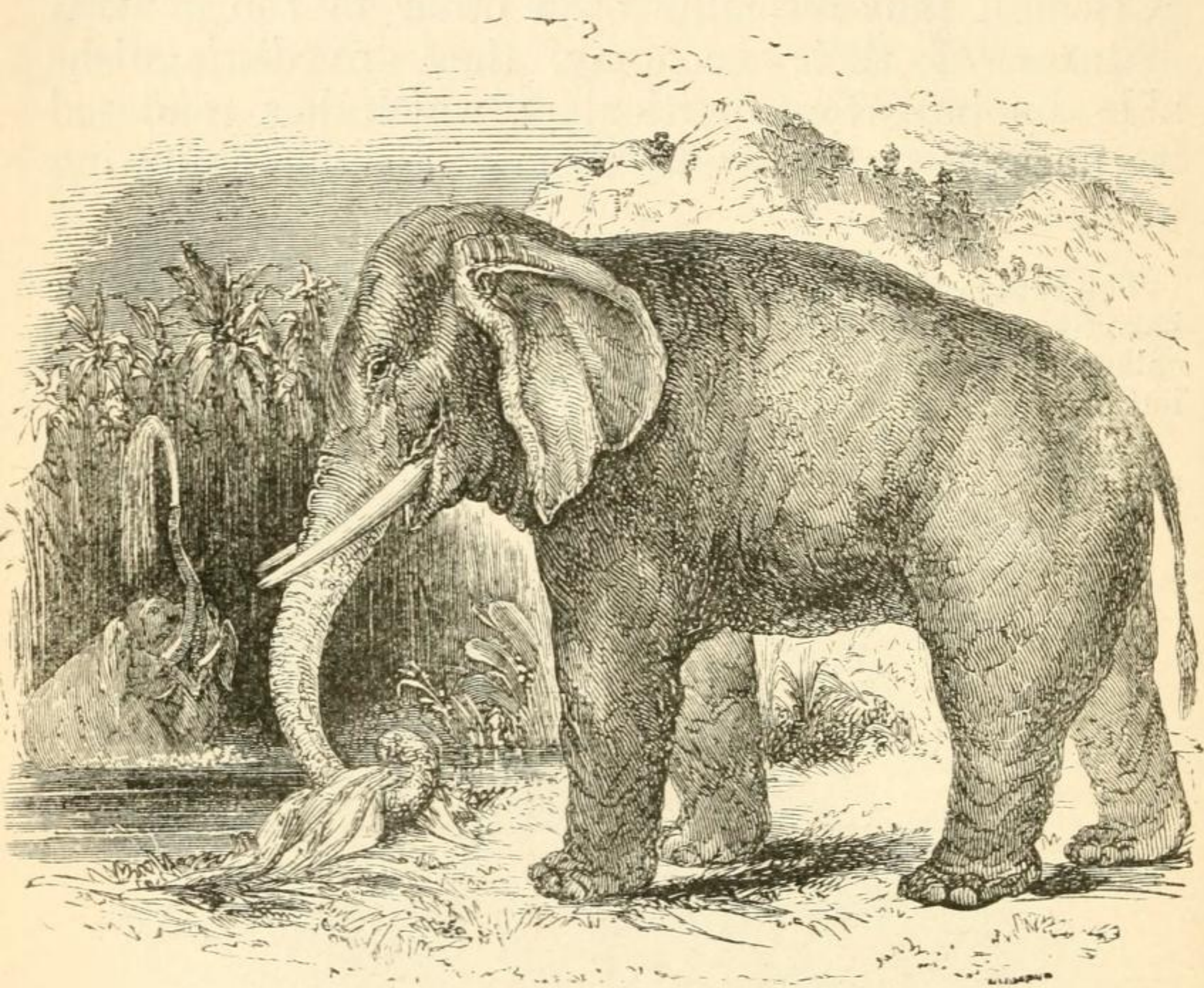


FIG. 419.—AFRICAN ELEPHANTS.

man taught them his superiority. Inoffensive and peaceful, they rarely use their gigantic powers of injury: but when irritated, they often exhibit a furious and revengeful ferocity. Heavy and massive in their structure, their pillar-like limbs seem ill calculated for speed, yet their "pace," when they have fairly commenced it, from the length of their stride, and the great propelling weight of their bodies, is for a time very rapid, and bears before it all ordinary obstacles, clearing a way through the thickest and most matted underwood.

Two species of Elephants are known in existing nature.

The **Indian Elephant** (*Elephas Indicus*) has an oblong head, a concave forehead, ears of middling size,

and four nails on the hind feet. Its tusks are often very short.

The **African Elephant** (*Elephas Africanus*) has a round head, a convex forehead, large flattened ears, and but three nails on the hind feet. It is more fierce than that of India; its tusks are much longer, and the female has them as long as the male. This species is not tamed.

The **Ordinary Pachyderms** are distinguished by having no prehensile trunk, and feet provided with three or four distinct toes. They are divided into several genera, as in the following Table:—

CLASSIFICATION OF ORDINARY PACHYDERMS.

Number of their toes .	Equal, and the foot having the appearance of being forked .	Four equal toes .	HIPPOPOTAMUS.
	Having on all the feet . . .	Two large middle toes armed with strong hoofs, while the late- ral toes are too short to rest on the ground . . .	HOG.
	Unequal, and the foot not forked . . .	Three toes on all the feet . . .	RHINOCEROS.
		Four toes before and three be- hind . . .	TAPIR.

The **River Horse** (*Hippopotamus**) is found in most of the rivers of Africa, but in greatest numbers south of the equator. These are unwieldy looking animals, having their legs so short that the belly almost touches the ground. The feet are curiously constructed, so as to facilitate walking among the mud and reeds of the river bottoms, and enable them to swim with ease. The hoof is divided into four short, apparently clumsy, and unconnected toes, and they are able, through this spread of foot, to walk rapidly through the marsh. These animals consort together in flocks of from three to thirty. They choose shallow parts of the river, where the depth of the water allows them to keep their footing, and yet have their whole body submerged. Here they remain all day, swimming off into the deeps, and diving for their grassy food. They prefer parts of the river

* ἵππος, hippos, a horse; ποταμός, potamos, a river.

where the current is not very swift, and are therefore to be found in all the lakes of the interior.

The **Hogs** (*Sus*) have on all their feet two middle toes, which are

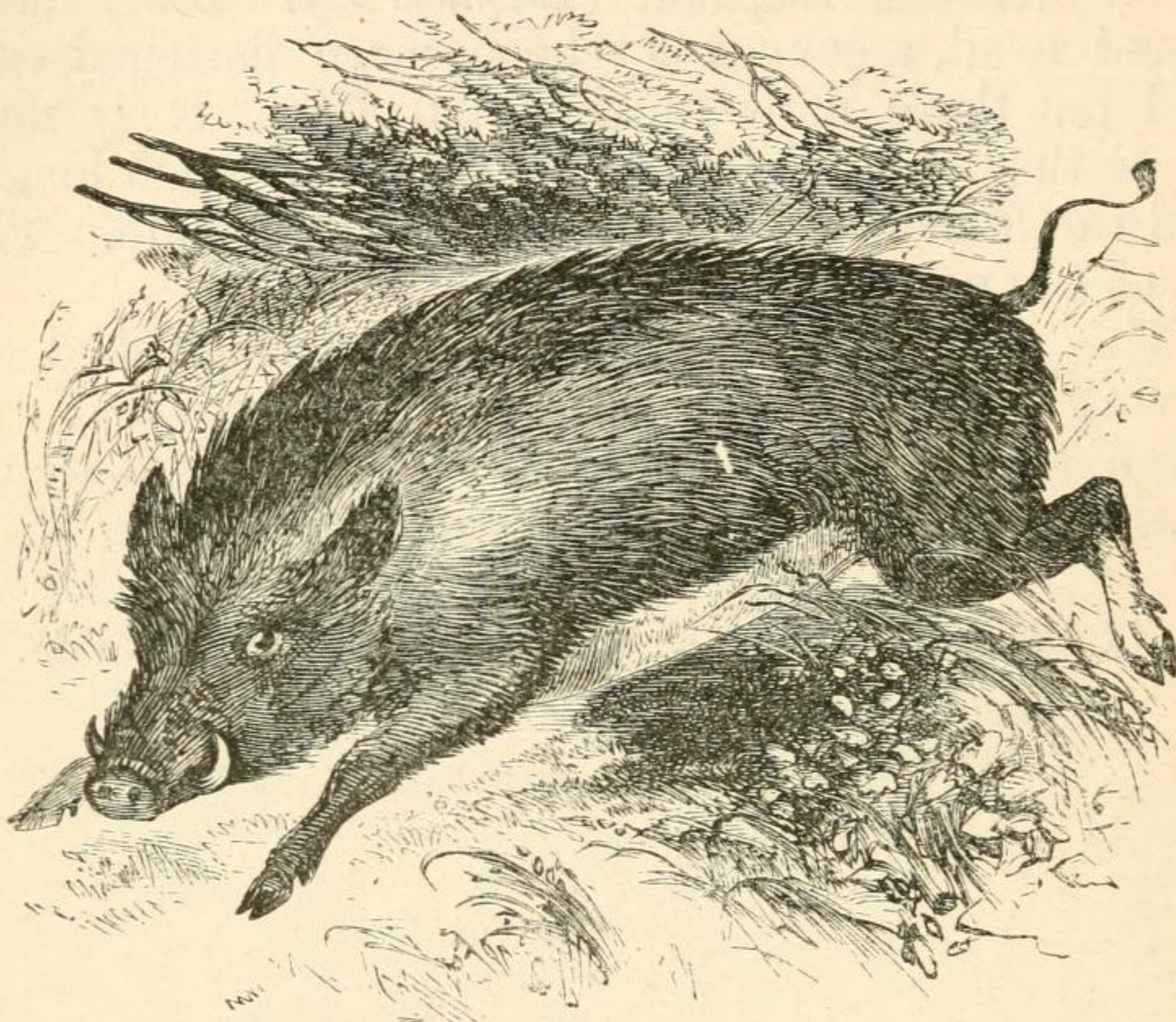


FIG. 420.—WILD BOAR.

of large size, and armed with strong hoofs, and two exterior toes, which are much shorter, and scarcely touch the ground in walking. Their canine teeth bend upwards, so as to form projecting tusks, and their snout is flattened, and adapted for rooting in the earth.

The **Rhinoceros** (*Rhinoceros**). These are large animals, with each

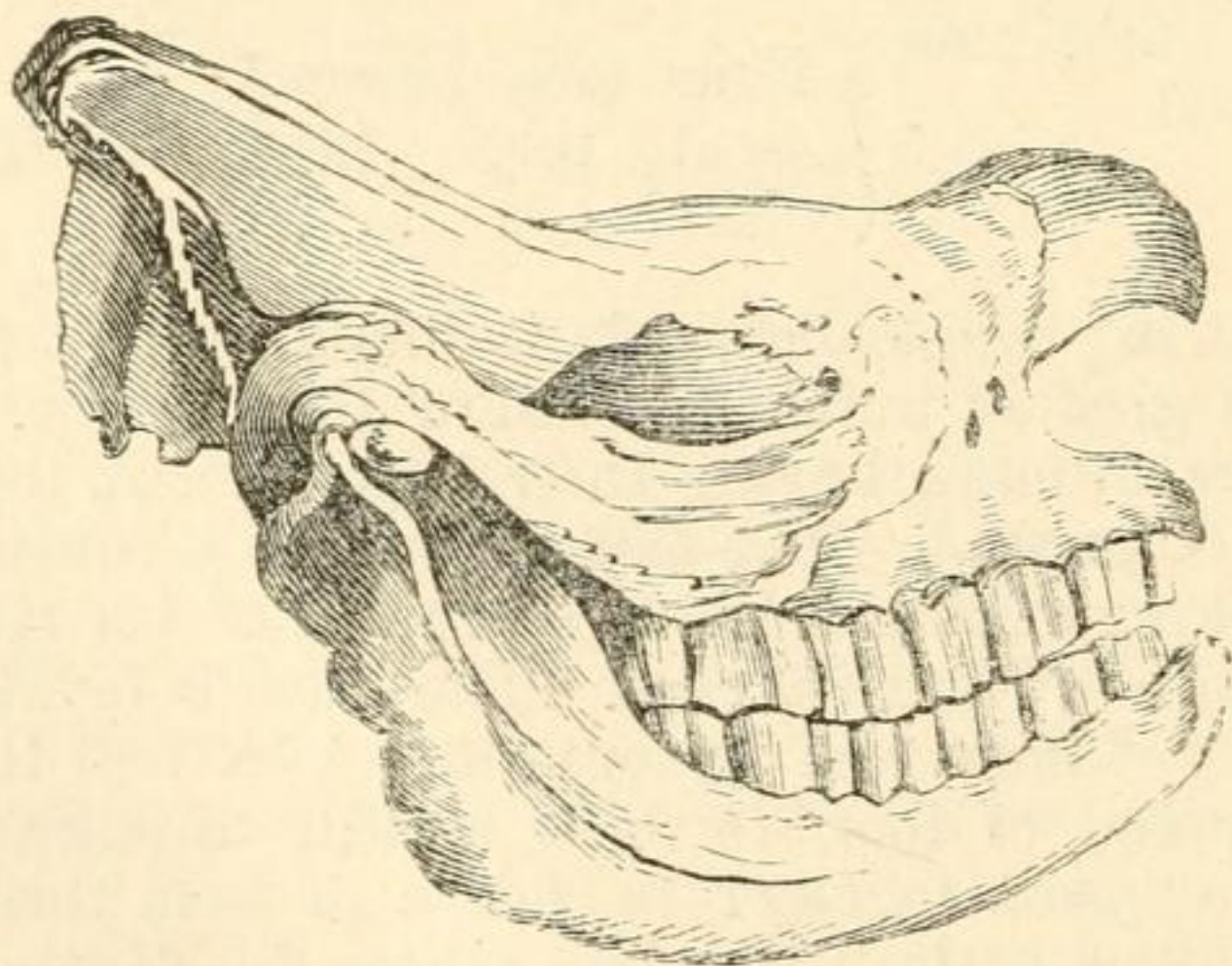


FIG. 421.—SKULL OF RHINOCEROS.

foot divided into three toes. The bones of the nose are very thick, and

* *ῥίν*, *ῥινός*, rhin, rhinos, a nose ; *κέρας*, keras, a horn.

united into a sort of vault, upon which is supported a solid horn, composed of agglutinated hairs. They frequent marshy places, and live on herbs and the branches of trees.

The **Tapirs** (*Tapir*) have their nose prolonged into a short pro-

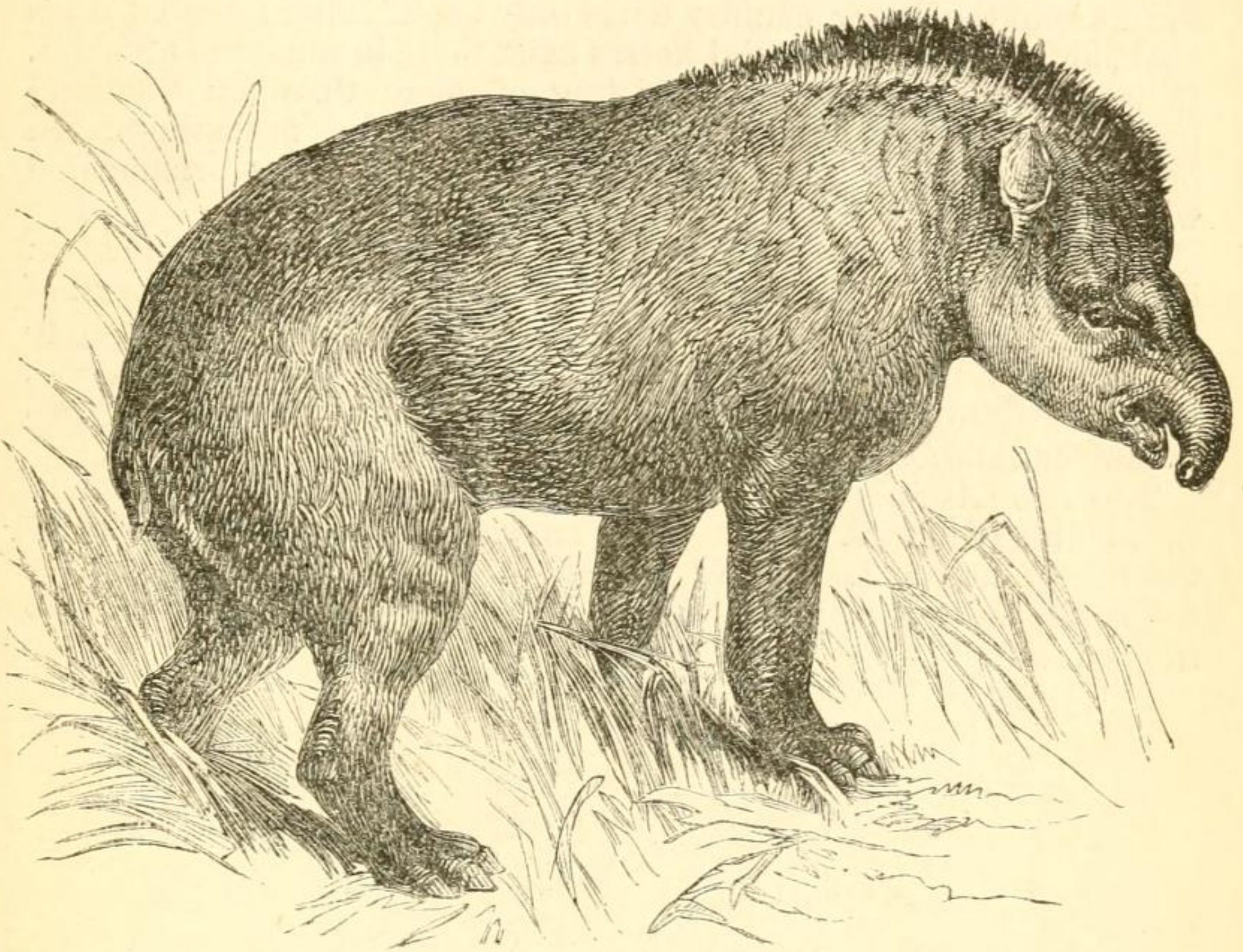


FIG. 422.—AMERICAN TAPIR.

boscis, which, although very moveable, is not prehensile, like that of the Elephant. There are several species known.

The third family of Pachydermata, or hoofed non-ruminating animals, comprehends

The **Solipedes**, having only one apparent toe on each foot, which is enclosed in a single hoof. They have, however, under the skin, the rudiments of lateral toes. Only one genus is known, namely,

The **Horses** (*Equus*), distinguished by having six incisors in each jaw; small canines likewise exist in the males, which are wanting in the females. Between the canines and the first cheek-tooth there is a space which corresponds with the angle of the lips, where the bit is placed, an arrangement by which alone man has been able to subjugate this vigorous quadruped.

The **Horse** (*Equus Caballus*), the noble companion of man in the