

were described by him before the Zoological Society of London, as a probable new species, under the name of *Antilocapra anteflexa*. As Dr. Gray's description is attached to the specimen now exhibited, it is unnecessary to repeat it here. I am in possession of no other information respecting it except a fact which I learned after placing the horns in Dr. Gray's hands, and that is, that both pairs of horns were obtained by Mr. Burke in North-West America, but in what exact locality was not stated. The common species ranges from 53° North to the plains of Mexico and California, and is found in considerable numbers on the banks of the Colombia and Saskatchewan rivers.

ON THE HORNS OF THE CHIRU, (*Antelope (Pantholops) Hodgsonii*, Abel), THE SO-CALLED UNICORN OF THIBET. By Mr. Thomas J. Moore.

The reader of Huc's Travels in Tartary and Thibet is not a little astonished at the author's assertion, towards the close of his narrative, in recounting his return from Lha-Ssa, the capital of Thibet, of the veritable existence of the Unicorn. He says, "On the fourth day of our departure from Ghiamda, after having crossed a great lake on the ice, we stopped at the Station Atdza, a small village, the inhabitants of which cultivate a few acres of land, in a little valley encircled by mountains, the tops of which are covered with hollies and pines. The Chinese itinerary says, on the subject of the lake you see before your arrival at Atdza, 'The unicorn, a very curious animal, is found in the vicinity of this lake.'" M. Huc then goes on to say, "The unicorn, which has long been regarded as a fabulous creature, really exists in Thibet. You find it frequently represented in the sculptures and paintings of the Buddhist temples. Even in China you often see it in the landscapes that ornament the inns of the northern provinces. The inhabitants of Atdza spoke of it without attaching to it any greater importance than to the other species of Antelopes which abound in their mountains. We have not been fortunate enough to see the unicorn during our travels in Upper Asia. But all we were there told about it, serves to confirm the curious details which M. Klaproth has published on this subject in the new '*Journal Asiatique*,' and who states 'The unicorn of Thibet is called in the language of this country, *Serou*.'" After some further desultory remarks, M. Huc goes on to say "Mr. Hodgson, an English resident in Nepal, has at length achieved the possession of a unicorn, and has put beyond doubt the question relative to the existence of this species of antelope, called '*tehirou*,' in Southern Thibet, which borders on Nepal. It is the same word with *serou*, only pronounced differently, according to the varying dialects of the North and of the South." Dr. Abel has proposed to give to the *tehirou* the systematic name of *Antelope Hodgsonii*, after the name of the learned person who has placed its existence beyond a doubt.* Unfortunately M. Huc does not inform his readers that the antelope in question is possessed of a pair of horns like other antelopes, and that the so-called unicorns are at the most only such as have broken one off at the root by fighting!

Dr. William Hooker, in his "*Himalayan Journals*," vol. ii, pp. 157-8, gives a sketch of the head and horns in profile, and also a front view of the Chiru, and states that "The accompanying figures of the heads of the Chiru (*Antelope Hodgsonii*) were sketched by Lieut. Maxwell (of the Bengal Artillery) from a pair brought to Dorjiling; it is the so-called unicorn of Thibet, and of MM. Huc and Gabet's narrative,"—a name which the Doctor thinks the profile no doubt suggested. Dr. Hooker saw them feeding on the short grass about the Cholamoo Lakes, which are 17,000 feet above the sea, in company with another antelope (the *Procapra picticauda*), Hares, (*Lepus oiostolus*), Marmots, and tail-less Hares (*Lagomys*).

The only specimens of this animal which have reached England, are a male in the British Museum, a specimen in the East India Company's Museum, and a male and female formerly in that of the Zoological Society. These, and a few horns in the same museums, are the only remains of this rare species that have been imported, and have been chiefly obtained by B. H. Hodgson, Esq., the late British Resident at the Court of Nepal, (mentioned above), to whose zeal is due most of the information obtained on the subject, and to whom zoologists are almost entirely indebted for their knowledge of the natural history of that country, and the discovery of some hundreds of new species of quadrupeds and birds.

* From the Illustrated Edition of Huc's Travels in Tartary, &c., translated by Wm. Hazlitt, forming part of the National Illustrated Library, London, 185-. Vol. 2, pp. 244-248.

Such being the rarity of the Chiru, it is with great pleasure that I am enabled to exhibit to the meeting three pairs of horns, two of which were purchased, and one pair, with the chief part of the cranium attached, presented by the East India Company in their recent magnificent donation to the Free Public Museum. This pair was forwarded to the Company by Mr. Hodgson himself; and the following extracts are from various Papers forwarded by him from time to time to the Zoological Society as he became acquainted with the characters and habits of the species, and printed in the Society's Proceedings.

This animal, the supposed unicorn of the Bhotians, was first described imperfectly by Dr. Abel (in the Edinburgh Journal of Science for 1827) from an injured skin, and the notes of Mr. Hodgson. Dr. Abel gave it the name of *Antilope Hodgsonii*; and it has subsequently been mentioned by M. Lesson as the *Antilope Chiru*, and by Major Hamilton Smith as the *Antilope Kemas*.

"In form the Chiru antelope approaches the deer. Its limbs are long and slender, but not weak; its neck is also rather elongated and slender; its head tapers forwards, but is somewhat deficient in elegance on account of the nasal tufts, and of a rather unusual quantity of hair and bristles about the mouth and nose. The ears and tail are moderate, and devoid of any peculiarity; so likewise are the suborbital sinuses. The horns are exceedingly long, measuring in some individuals nearly two feet and a half. They are placed very forward on the head, and may be popularly said to be erect and straight, although properly speaking they bend forwards and outwards, and become suddenly incurved towards their tips. These latter are rather acute, and the horns near them become round; below they are laterally compressed, and are marked by a series of from fifteen to twenty rings, extending from the base to within six inches of the tip. On the lateral and dorsal surfaces of the horn these rings are little elevated, and present a wavy rather than a ridged appearance; but on the frontal surface, they exhibit a succession of heavy, large ridges, with furrows between.

"Close to the outer margin of either nostril is a soft, fleshy, or rather skinny tumour or tuft, about the size and shape of the half of a domestic fowl's egg. These tufts appear to be peculiar to the *Chiru*.

"In its double covering, the *Chiru* agrees with all the hairy animals of Thibet, where not merely the goats and sheep, but the dogs, horses, and kine, possess an under fleece of soft fine wool. The hair forming the external coat is about two inches long, and so closely set as to present to the touch an impression of solidity; it is straight, nearly erect, rather harsh, and feeble, being for the most part hollow like a quill. Grey blue is the general colour of the hair throughout nine-tenths of its extent from root to tip, as well as exclusively so of the wool beneath the hair. This radical and prevalent color is, however, but dimly seen through the external or superficial hues with which it is overlaid; hues which on the upper parts of the animal are fawn red, and on its under surface and the inside of its limbs are white. The shoulders are faintly marked by a tracing of color lighter than that of the surrounding parts. Down the front of all the legs runs a black line, reaching to the hoofs on the fore-legs, but to the knees only on the hind legs. The forehead is perfectly black, and a fringe of the same hue proceeding from the bottom of the frontal skin passes round the outsides of the nasal tufts. These tufts, as well as the rim surrounding them, are black; as are also the bristles of the mouth and lips; the few hairs, however, which depend from the lower lip are white.

"Entire length of a fully grown young male 4 feet 2½ inches—height at shoulder 2 feet 8 inches.

"The *Chiru* is highly gregarious, being usually found in herds of several scores and even hundreds. It is extremely wild, and unapproachable by man, to avoid whom it relies chiefly on its wariness and speed; but though shy it is not timid, for if overtaken it meets danger with a gallant bearing. An individual which was kept alive at the Presidency, though captured very young, was perfectly fearless, and could only be approached with caution. It is said by some to inhabit the plains of Thibet generally; while according to others it is confined to those plains which are within sight of mountains, especially of the Hemáchal mountains. It cannot bear even the moderate heats of the valley of Nepal, an individual belonging to the Lama of Digurchee having

died at the commencement of the hot season, when the maximum of temperature was only 80°, a temperature seldom reached for two hours a day, or for two days of that month, March.

"The Chiru is extremely addicted to the use of salt in the summer months, when vast herds are often seen at some of the rock-salt beds which so much abound in Thibet. They are said to advance under the conduct of a leader, and to post sentinels around the beds before they attempt to feed."—*Hodgson in Proc. Zool. Soc. Lond.* 1831, p. 52.

The nasal tumours which form so remarkable a peculiarity of the species, are stated by Mr. Hodgson, in a subsequent paper, "to consist of fine elastic skin and cartilage, similarly to the nostrils, immediately behind the posterior boundary of which they are situated, and into which they open freely, being, in fact, a prolongation backwards, and accessory dilatation of that reflection of the skin which lines the nostrils. Externally they present a round, firm, elastic swelling on each lip, well defined, and covered with hair like the adjoining parts; internally they constitute a sac, of capacity to contain a marble, lined with the same skin that lines the nostrils, and not communicating with the interior of the nose except by and through the ordinary nostrils, into which the sacs open forwards by a slit that will admit the finger to be passed into it; and thence all over the interior of the sac. These sacs are usually defiled with *mucus*, secreted from the nose; and they seem to be nothing more than supplementary nostrils, designed to assist this exceedingly fleet animal in breathing when he is exerting all his speed, for the expansion of the nostrils opens them also, and their elasticity allows of their being dilated in the manner of the nostrils. There is no appearance, either external or on the bones of the face, of the lachrymal sinuses." *Id.* 1833. p. 110.

"The female is hornless, and has two teats only; she has no marks on the face or limbs, and is rather smaller than the male. The male has a large pouch at each groin, as in the *Doreas Gazelle*; that of the female is considerably smaller." In conclusion, Mr. Hodgson's opinion as to the position of the species in the system is, that "The Chiru with his bluff bristly nose, his intermaxillary pouches, and hollow-cored horns," (the bony core of the horns having a large oval cavity, communicating by one clean canal with the frontal sinuses) "stands in some respects alone," and hence Mr. Hodgson is disposed to suggest, that it should be regarded as representing "a new subgenus, to be termed *Pantholops*, the vulgar old name of the Unicorn.—The habits and manners of the *Chiru*, his medial size, and his elegant vigorous form, ally him most to the *Antilopine* and *Gazelline* groups, and equally to both." (*Id.* 1834, pp. 80-81.) This opinion is shared by Dr. Gray, who, in his last published arrangement of the Ruminantia, (List of Ungulata Furcipedes in British Museum, 1852,) places the *Chiru* in the same subdivision as the Gazelles; under the amended title of *Pantholops Hodgsonii*.

Colonel Hamilton Smith remarks, "The species might still have remained unnoticed in the elevated wildernesses of Central Asia, if the people of the country had not asserted it to be the Unicorn, and since the specimen is produced, insisted that it is often found with only one horn. No doubt all the" Antelopes of this group "are liable to break one of their horns, when we consider their length, small diameter, and the vigour and courageous disposition of the animals." *Griffith's Cuvier*, 4, p. 198.

The following papers were then read:

ON THE LEPIDOPTEROUS INSECTS OF THE DISTRICT AROUND LIVERPOOL. By Charles Stuart Gregson, Esq.*

ON THE ADVANTAGES OF THE STUDY OF NATURAL HISTORY, IN OUR NATIONAL OR PEOPLE'S SCHOOLS. By Charles Stuart Gregson.

The introduction of Natural History more fully and formally into our National Schools, was strongly advocated; though the writer gladly admitted that the principle

* Transactions, p. 153; continued from Transactions vii, p. 254.