3. The Sze-chuen and Bhutan Takins.

By R. LYDEKKER.

[Received September 2, 1908.]

(Plate XLIII.* and Text-figures 168-171.)

The first recognition of a Takin distinct from the typical *Budorcas taxicolor* of the Mishmi Hills is due to the late Professor A. Milne-Edwards, who in 1874 ('Recherches pour servir à l'Histoire naturelle des Mammifères,' p. 367, pls. lxxiv. & lxxix.†) described and figured a representative of the species from Moupin under the name of *Budorcas taxicolor*, var. *tibetanus*. Here I may take the opportunity of mentioning that Moupin is stated in all zoological works that have come under my notice to be in Eastern Tibet. As a matter of fact, it is, as pointed out to me by my friend Mr. Thomas, situated in Sze-chuen; a circumstance which clears up a number of difficulties and misconceptions with regard to the range of the animals of this part of Central Asia. The name *Budorcas sinensis* has been applied to the Takin of Kansu, which, as shown by a specimen in the Tring Museum, is inseparable from the Sze-chuen animal; the authority for the name I am, however, unable to find.

Milne-Edwards described the male of the Sze-chuen Takin as a yellowish-red animal; and also stated that the female is paler and greyer. Neither his description nor his plate of the male is, however, satisfactory; and as mounted specimens of both male and female are now exhibited in the public galleries of the British Museum (Natural History), I consider that they should be figured before their colouring is deteriorated by exposure.

The male specimen (Plate XLIII. fig. 1), which was stated to come from Sze-chuen, was purchased by the Trustees of the British Museum from Rowland Ward Ltd. in 1905. The female (Plate XLIII. fig. 2), on the other hand, was given by Mr. Mason Mitchell, of the American Consular Service in Sze-chuen, to Mr. Rowland Ward in 1908, by whom it was, in turn, presented to the British Museum. In noticing the presentation of the latter specimen in the 'Field' newspaper (vol. cxi. p. 790, 1908), I stated that the presumption was that it represented the cow of the race described by Milne-Edwards. The original sender of the specimen stated, however, in a letter to Mr. Ward that there are two distinct kinds of Takin in Sze-chuen, differing not only in colour, but also in size and in habits; the smaller red kind—known to the Chinese as *yea-nu* (wild ox)—associating in small herds, while the larger grey one—the *tunu-yea* (big wild ox) of the Chinese—goes about singly, or at most in pairs. I accordingly suggested that if this statement were borne out by the facts, the larger grey race might be named *Budorcas taxicolor mitchelli*.

When, however, the grey female was mounted and placed

* For explanation of the Plate see p. 802.

† The work was published in parts from 1868 to 1874; as I do not know the dates of publication of the separate parts, I have given the date of completion of the work.

beside the yellow male (with which it is approximately equal in size, although its horns are considerably smaller), I could not entertain any doubt as to the two representing the different sexes of one and the same animal. Whatever, therefore, may be the truth with regard to the Chinese story, I cannot but regard the two specimens in the Museum as severally representing the male and female of the *Budorcas taxicolor* var. *tibetanus* of Milne-Edwards. Both specimens are subadult animals.

Text-fig. 168.

Imperfect skull and horns of adult male of the Mishmi Takin.

The distinctive characteristics of the Mishmi and the Sze-chuen Takins (which I now consider worthy of specific separation) will perhaps be made most readily apparent by the following comparison:—

1. BUDORCAS TAXICOLOR.—Size large, although precise shoulder-

height not ascertainable, owing to the bad mounting of the British Museum specimen. General colour (apparently in both sexes) of upper-parts cigar-brown, with an elongated tawny "saddle" on the back, becoming much darker on the under-parts, and passing into deep blackish brown on the limbs; the ears and the whole of the head in advance of the same, together with the entire under surface of the lower jaw, and a dorsal stripe extending from the occiput to the root of the tail, black. No distinct beard in male; and tail apparently not distinctly tufted, and brown in colour.

Horns (text-fig. 168) stout, elevated into a strong, oblique, prominent, longitudinal ridge at the base, with the long smooth tips situated in a plane different from that of the basal portion, and generally directed (when fully adult) almost straight upwards, but inclining somewhat backwards at the extreme tips.

2. *BUDORCAS TIBETANUS*.—Size probably equal to that of the last; height at shoulder of subadult male $40\frac{1}{2}$ inches. General colour of upper-parts of subadult animals in winter coat orange or grey, strikingly different in the two sexes; dorsal stripe not extending further forwards than the withers; under-parts lighter than back; black on head confined to the backs of the ears, a ring round each eye, the front of the face in advance of the eyes, and the extreme tip of the inferior surface of the lower jaw, thus forming a striking contrast to the light area. A distinct beard on the throat of the male; tail strongly tufted, and blackish in colour.

Horns (text-fig. 169, p. 798) more slender than in *taxicolor*, with much less development of the oblique basal prominence, and the long tips in the same plane as the basal portion; these tips inclining somewhat inwards and also decidedly backwards throughout their length.

In the male, the whole of the fore-quarters, exclusive of the black areas, bright golden-yellow, gradually becoming more and more grey posteriorly till it passes on the hind-quarters into grizzled grey, which is continued on to the limbs, and also forms a vertically elongated patch on the lower part of the shoulder. Dorsal stripe extending as far forwards as the withers.

In the female (which, as in the type species, has much smaller horns) the yellow on the fore-quarters of the male replaced by dirty white; and the limbs a darker grey, becoming nearly black on the knees and hocks. Dorsal stripe not extending further forwards than the middle of the back.

These differences are, in my opinion, amply sufficient to justify the recognition of the Sze-chuen Takin as a species distinct from the typical Mishmi animal and its smaller Bhutan representative. With its bright golden-yellow or white fore-quarters, contrasting strongly with its black face, ears, and eye-rings, the former is indeed a much more strikingly coloured animal than the latter,—a feature in which it agrees with several of the other Sze-chuen mammals.

My only doubt is whether the name *tibetanus*, as being somewhat misleading, ought not to give place to *sinensis*. On the other hand, it is possible that the species may cross the border dividing Sze-chuen from Tibet.

Text-fig. 169.

Skull and horns of old male of the Sze-chuen Takin, collected by Mr. J. W. Brooke

Coming to the Bhutan Takin, which I described in the 'Field' for 1907 (vol. cx. p. 887) as a small local race of the typical species under the name of *Budorcas taxicolor whitei*, giving also a preliminary notice in the Society's 'Proceedings' for the same

year (p. 749), I regret to say that the two skins there referred to as being in the possession of the Hon. Walter Rothschild have

Text-fig. 170.

Skull and horns of old male of the Bhutan Takin.

gone elsewhere than to the Tring Museum, and are therefore unavailable for fuller description and figuring. I must therefore

rely mainly on the two pairs of horns (those of an old bull and of a subadult female) presented to the British Museum by Mr. J. Claude White, C.M.Z.S., British Commissioner in Sikhim, which form the type of this race.

Before proceeding further, it may, however, be well to mention that the Bhutan Takin, which lives high up on the mountains on the open zone between the upper limit of forest and the snow-line, is completely cut off by deep river-gorges from the habitat of its Mishmi representative. On this ground alone it, therefore, undoubtedly belongs to a separate race.

As to the height attained by this race, I cannot, in the absence of a mounted skin, give even an approximate estimate; but I believe it to be somewhat smaller than the typical *Budorcas taxicolor*, although its chief claim to distinction rests on the relatively small size of its horns.

The type horns of the old bull are somewhat worn at their tips, as they also are at the base, where the rugosities have in consequence disappeared. When entire, they would probably have measured about 15 or 16 inches in length along the front curve, as against from 20 to 24 inches in adult bulls of the Mishmi Takin. The horns of a younger bull, associated with one of the skins referred to above, measured 13 inches, against 18 inches in horns of a Mishmi bull of about the same age. Horns of cows are much smaller. Similar characters are shown by the horns of the skull here figured (text-fig. 170, p. 799), which was sent to the Museum by Mr. White.

I have been hitherto unable to institute an exact comparison between the skins of the Mishmi and the Bhutan Takin, but I think the latter has a somewhat smaller lighter dorsal saddle than the former. Both agree in their general dark colour, and in the under-parts being darker than the back, as well as in the large extent of black on the head, and the extension of the dorsal stripe to the occiput.

In this place it may be mentioned that the skull of a large ruminant from the Pliocene of the Siwalik Hills, N.E. India, described by the late Professor L. Rütimeyer (by whom it was regarded as probably indicating a hornless species) as *Bucapra daviesi*, appears to represent an animal nearly related to the Takin. Certain details in the form of the skull, as well as of the teeth, seem, however, to indicate the generic distinctness of *Bucapra* from *Budorcas*. I have little doubt that, when entire, the Siwalik skull carried horn-cores of a type approximating more or less closely to those of the Takin.

Since the above was written the Museum has received from Mr. J. W. Brooke, skins, skeletons, and skulls of Takin of both sexes and of several ages from Sze-chuen, where the animals were killed in rhododendron and bamboo jungle at an elevation of about 10,000 feet. The skulls and skins include those of a fully

adult bull and cow; the bull is larger and darker than the figured specimen. The skull represented in text-fig. 169 (p. 798) belongs to the bull obtained by Mr. Brooke.

Special interest attaches to the skull of a very young Takin (text-fig. 171), with the three pairs of milk-molars just about to cut the gum, and no traces of horns whatever. Unfortunately no skulls of Serow or Musk-Ox of corresponding age are available for comparison, so that it is impossible at present to get much further in the matter of the Takin's relationships.

Text-fig. 171.

Skull of very young Sze-chuen Takin, collected by Mr. Brooke.

Compared with that of a somewhat older Serow, in which horns are developed and the first true molars in use, the skull of the baby Takin is mainly distinguished by the great elevation of the frontal region, and the shortness and breadth of the nasal bones,—characters which become greatly exaggerated in the adult. The premaxillæ are still more widely sundered from the nasals than is the case in Serows; and above the supraoccipital, wedged in between the hind portions of the parietals, is a large undivided interparietal, which I believe to be represented in the Serow skull. Allowing for the greater breadth of that of the Takin, the two skulls seem in other respects to present a great general similarity.

[*Addendum*.—Since the paper was read I have received a letter

from Mr. Brooke, in which it is stated that old males of the Sze-chuen Takin grow to a very large size, as, indeed, is indicated by the skin and skull sent to the Museum. Also, that in summer the long and rough orange or reddish coat is replaced by one of short greyish hair.]

EXPLANATION OF PLATE XLIII.

Subadult male (1) and female (2) of the Sze-chuen Takin (*Budorcas tibetanus*), in winter coat, from the mounted specimens in the British Museum.

4. On an Indian Dolphin and Porpoise.

By R. LYDEKKER.

[Received September 2, 1908.]

(Plates XLIV. & XLV.*)

Once more I am indebted to the Director—Lieut.-Colonel F. W. Dawson—of the Trevandrum Museum for sketches and measurements of certain Cetaceans recently captured on the Travancore coast. These are represented by three specimens, referable to two species; they differ to a greater or less degree from the typical forms of all the Dolphins and Porpoises hitherto described from Indian waters, and from the world generally. The most remarkable fact about the new specimens is that two of them are Bottle-nosed Dolphins, referable to *Tursiops*, of which genus, in addition to the typical *T. tursio*, I have already recognised (Proc. Zool. Soc. 1905, vol. i. pp. 125–128) three, if not indeed four, Indian species.

Col. Dawson informs me that the two examples of this apparently new Bottle-nose were caught by fishermen about six miles to the north of Trevandrum, in the spring of the present year (1908). The skeletons of both were preserved; and one of these has, at my request, been presented by Col. Dawson to the British Museum, as it seemed desirable that an apparently new form should be represented in the chief English collection.

The following particulars concerning these two specimens (*A* and *B*) have been supplied to me from Trevandrum:—

	<i>A.</i>		<i>B.</i>	
	ft.	in.	ft.	in.
Length from tip of snout to cleft in flukes ...	9	0	9	4
Do. to origin of dorsal fin	4	0	4	2
„ flipper	2	0	1	1
„ genital groove	5	6	5	7
„ anal groove	6	6	6	7
Length of dorsal fin	1	6	1	7½
„ flukes	1	7	1	7
Expanse of flukes	2	1	2	6

* For explanation of the Plates see p. 808.

Lydekker, Richard. 1908. "The Sze-chuen and Bhutan Takins." *Proceedings of the Zoological Society of London* 1908, 795–802.

<https://doi.org/10.1111/j.1469-7998.1908.00795.x>.

View This Item Online: <https://www.biodiversitylibrary.org/item/99643>

DOI: <https://doi.org/10.1111/j.1469-7998.1908.00795.x>

Permalink: <https://www.biodiversitylibrary.org/partpdf/72456>

Holding Institution

Smithsonian Libraries

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.