

February 7, 1905.

HOWARD SAUNDERS, Esq., F.L.S., Vice-President
in the Chair.

The Secretary exhibited, on behalf of the Hon. Walter Rothschild, F.Z.S., a pair of Gorillas, mounted by Mr. Rowland Ward. He remarked that these Gorillas appeared to be on the eve of becoming adult, and that they were probably from twelve to thirteen years old. He added that Mr. Rothschild had called his attention to the unusually large red patch on the head of the male, and to the absence of the patch in the female. This difference in the coloration of the sexes confirmed Mr. Rothschild's opinion that *Gorilla castaneiceps* of Slack was not a valid species or subspecies, but was based on individual variation.

Mr. Frederick Gillett, F.Z.S., exhibited some mounted heads of the Rocky Mountain Goat (*Haploceros montanus*), and made the following remarks:—

"I have brought here to-night, specimens of the Rocky Mountain Goat, with the object of pointing out a gland which lies at the base of each horn and acts, one might almost say, as a pad to it. Under the external skin these glands consist of a soft red tissue saturated with a milky substance, like the udder of a cow. In the specimen at our Gardens these glands are partially covered up by long hair at the present time, but in October and November they are more conspicuous. The older the animal, the more pronounced are the glands."

Mr. R. H. Burne, F.Z.S., showed specimens made for the Royal College of Surgeons Museum from the viscera of the Indian Rhinoceros (*R. unicornis*), known as "Jim," that had lately died at the Society's Gardens, and made the following remarks:—

The specimens include parts of the following organs:

*Stomach**.—A section showing the line of demarcation between the cardiac and glandular regions. The epithelium of the cardiac region, as in other Perissodactyles, is similar to that of the oesophagus—a stratified epithelium with easily separable corneous superficial layer. The deeper parts of the epithelium project into the submucosa in the form of elongated papillæ. These are peculiarly long and resemble very closely those in the oesophagus of the Horse. A microscopic section taken from the glandular region of the stomach, 1 ft. in front of the limit of the lower parts of the cardiac region, shows a deep layer (6 mm.) of peptic glands. The gland-tubules were about .04 mm. in diameter.

A section taken about 1 ft. 6 in. in front of the last, from the

* Owen, "Anatomy of the Indian Rhinoceros," Trans. Zool. Soc. vol. iv. 1862, p. 40.

pyloric dilatation (Owen, *l. c.* pl. xi. figs. 1 & 2), shows a layer of pyloric glands 2 mm. thick. The gland-tubules have about twice the diameter of those of the peptic glands, but are far shorter and more branched. They are separated into groups of various size by septa running up from the submucosa.

Duodenum.—A portion, taken about 1 ft. 6 in. from the stomach, showing the papilliform valvulæ conniventæ (Owen, *l. c.* pl. xii. figs. 1 & 2). Microscopic sections show that the papilliform processes are covered with villi. The interior of each process contained a number of follicles belonging to Brunner's glands. The ducts from these open upon the surface of the process between the villi. Brunner's glands were only observed within the papilliform processes, and not in the general submucosa of the intestinal wall. With hæmatoxylin they stained a vivid blue, in marked contrast to the pinkish purple of the surrounding tissues.

Gervais, who describes the histology of the small intestine of the Rhinoceros *, makes no mention of Brunner's glands; probably his sections were taken from a point further down the intestine below the level of these glands. He, however, speaks of Crypts of Lieberkühn lying between the papilliform processes. These were not seen in the present sections.

Ileum.—Owen, *l. c.* pl. xii. fig. 3.

Cæcum.—This organ is lined by a voluminous mucous membrane, separated from the muscular wall by an extremely loose submucosa, and thus easily thrown into transient folds. The mucous membrane consists, as usual in this part of the gut, of an even and close-set series of Crypts of Lieberkühn. They are .25 mm. long, only about half as long as in the cæcum of the Horse.

The Larynx.—(Owen, *l. c.* pl. x. figs. 1 & 2, pl. xv. figs. 1 & 2.) The epiglottis is intranarial. The outer walls of the ventricles and lateral pouches are covered by gland-tissue. The two folds of mucous membrane that run upwards, outwards, and backwards from the anterior attachment of the vocal cords and form the anterior lips of the ventricles (Owen, p. 48) are strongly developed; they are even more marked in the Sumatran Rhinoceros, but are absent in the Tapir and Horse. Above the anterior point of union of the vocal cords is a vertical indentation of the mucous membrane of the epiglottis. In this position in the Horse and Ass there is a definite median saccus.

The Parathyroid Body.—The external appearance and position of this body are accurately given by Owen (*l. c.* p. 48). In histological structure it conforms to Welsh's type 4 †, consisting of small cells clustered so as to form globular alveoli. In some parts the masses of cells apparently do not surround a lumen, and in these places there is more resemblance to Welsh's type 3. The

* Gervais, "Structure de l'intestine grêle chez le Rhinocéros," *Journ. de Zool.* t. iv. (1875) p. 465.

† Welsh, "Concerning the Parathyroid Glands," *Journ. Anat. & Physiol.* vol. xxxii. (1898) p. 392.

individual alveoli and cell-masses are separated from one another by a delicate packing of connective tissue.

The Kidney.—(Owen, *l. c.* p. 44, pl. xiv. fig. 3.) Except at the hylus the kidney is not lobulated. Thickenings of the capsule along certain anastomosing lines give it, however, superficially a lobulated appearance.

In the entire absence of any pyramids projecting into the pelvis there is more resemblance to the Tapir than to the Horse.

The Bladder and Urethra.—(Owen, *l. c.* p. 49, pl. xvi.) The seminal vesicles and prostate are more complex than one would be led to suppose from Owen's description and figure. When fully dissected out, the seminal vesicles can be resolved into a number of convoluted tubes, that converge towards the neck of the bladder and unite to form a pair of common ducts which open into the *vasa deferentia* shortly before their entry into the urethra. This condition is similar to that described by Forbes* in the Sumatran Rhinoceros, but is very different to the arrangement seen in the Sondaic Rhinoceros by Beddard and Treves †, where the seminal vesicles and prostate are quite simple and compact, more nearly resembling the same organs in the Tapir.

The prostate is larger and more branched than represented by Owen.

There was a well-marked uterus masculinus, not noted by Owen.

The following papers were read :—

1. On Abnormal Ranid Larvæ from North-Eastern India.

By NELSON ANNANDALE, B.A., Deputy Superintendent of the Indian Museum, Calcutta ‡.

[Received December 13, 1904.]

(Plate VI. §)

The two specimens on which the following notes are based were found in a bottle of miscellaneous specimens in the Indian Museum, which had been purchased in 1893 and were said to have come from Northern Cachar, in Assam. Unfortunately no information can be obtained as to the environment in which the tadpoles (which are not in a good state of preservation) were found. They were the only Batrachians in the bottle, but the Museum also possesses a number of specimens from Tenasserim of what I take to be the normal form of the same larva. Some of

* Forbes, "On the Male Generative Organs of the Sumatran Rhinoceros," *Trans. Zool. Soc.* vol. xi. p. 107.

† Beddard & Treves, "On the Anatomy of the Sondaic Rhinoceros," *Trans. Zool. Soc.* vol. xii. p. 195.

‡ Communicated by G. A. BOULENGER, V.P.Z.S.

§ For explanation of the Plate, see p. 61.