

shorter, rounded tail; *Orthotomus*, on the contrary, has a cuneate tail, whereas in this genus the tail is only graduated. The wings are a little longer and less rounded than in *Orthotomus*, the fifth and sixth quills being the longest, the fourth and seventh scarcely shorter, the first considerably shortened, half of the fifth; the bill is straight, attenuated and subulate, a little more robust than in *Orthotomus*, as are likewise the legs and feet.

DRYMOCHÆRA BADICEPS, sp. nov.

Upper parts olive-brown, tinged with reddish brown on the rump and upper tail-coverts; head above to the nape chestnut-reddish; a narrow greyish superciliary stripe, extending to the temporal region, and bordered below by a narrow dark line, which runs from the lores through the eyes; quills and tail dark olive-brown; under parts, from chin to the middle of vent white; sides of head, neck, and breast washed with brownish-grey, remainder of underparts pale earthy brown; bill dark brown; feet pale brown.

al.	caud.	rect. ext.	culm.	rikt.	tars.	dig. med.
23'''	22'''	17'''	5½'''	8'''	9½'''	6'''

Mr. Kleinschmidt discovered this remarkable little bird during an expedition into the interior of Viti-Levu, but could obtain only a single specimen.

MYIOLESTES NIGROGULARIS, Layard.

Lalage ! nigrogularis, Layard, P. Z. S. 1875, p. 149.

Mr. Layard has described this interesting bird wrongly as a *Lalage*: it is a typical *Myiolestes*, agreeing in its generic characters with our *M. heinei* (H. & F., P. Z. S. 1869, p. 546) from Tongatabu. Mr. Layard, strangely enough, does not mention this characteristic bird in his last paper on Fijian birds (P. Z. S. 1875, p. 423).

Mr. Kleinschmidt obtained but one specimen of this species at Ovalau.

RHIPIDURA ALBOGULARIS, Layard (*nec* Less.).

One specimen, agreeing very well with Mr. Layard's description (P. Z. S. 1875, pp. 29, 434). This is a very excellent and peculiar species, not to be confounded with any of its allies.

MYIAGRA CASTANEIVENTRIS, Verr.

One old male as figured (F. & H. Orn. Centr.-Pol. t. ix. f. 2), and corresponding in every respect with specimens from the Navigators' Islands.

7. On the *Cæcum Coli* of the Capybara (*Hydrochærus capybara*). By A. H. GARROD, M.A., F.Z.S., Prosector to the Society.

[Received December 9, 1875.]

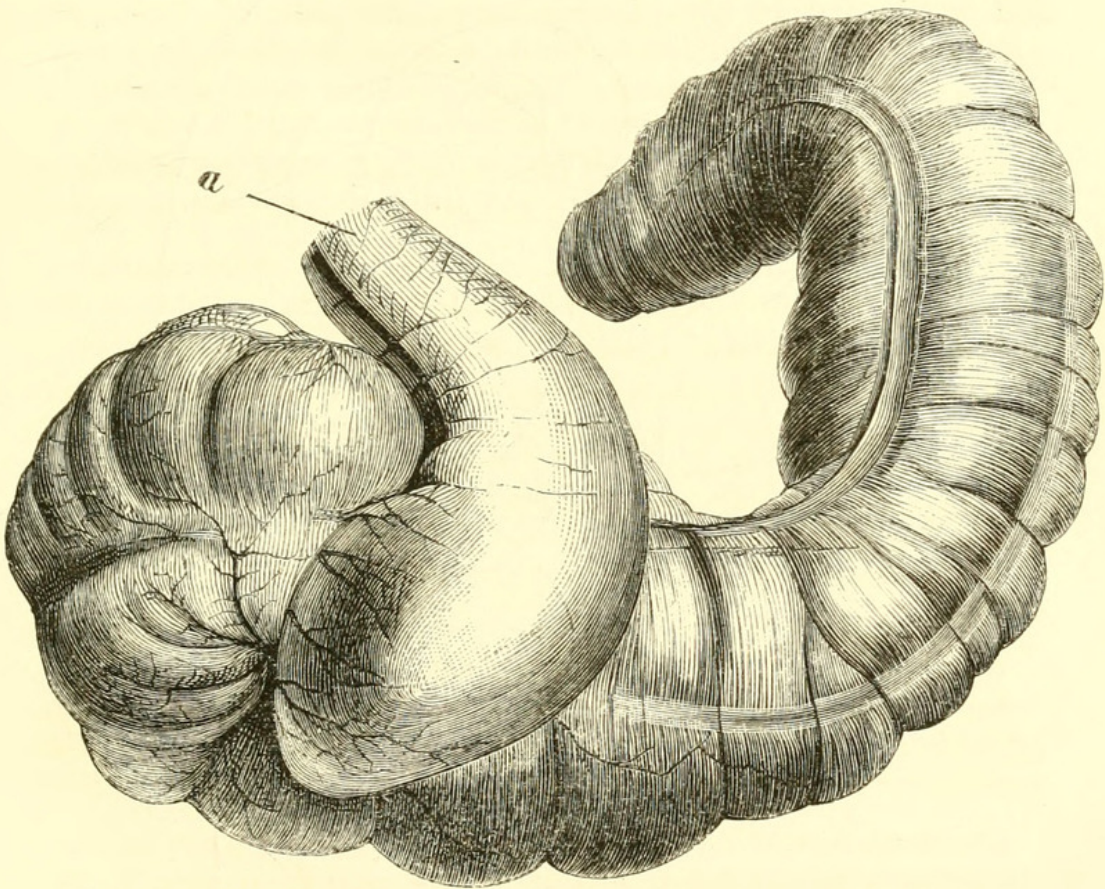
In no work on anatomy with which I am acquainted can I find any reference to the peculiarities of the *cæcum coli* of the Capybara,

which are but an extreme exaggeration of those observed in many of the allied forms.

In most of those mammals in which a cæcum is present, that organ is simply a direct continuation backwards of the colon beyond the place of junction of the small and large intestines. In some Rodents, however, this is not the case, the sacculated cæcum in them not being a direct continuation of the larger gut, but a lateral diverticulum from a true but simple cæcum.

In his account of the anatomy of *Capromys fournieri**, Prof. Owen remarks that the arrangement at the ilio-colic junction is such that "the two orifices of the blind intestine [that into the ileum and that into the colon] are analogous to the cardia and pylorus of the stomach;" and in his 'Anatomy of Vertebrates'† the same illustrious

Fig. 1.



Sacculated and simple caeca of the Capybara. The continuation of the colon is seen at *a*. The small intestine at its termination cannot be seen, being hidden in the proximal angular bend of the sacculated cæcum.

author tells us, with reference to the same animal, that "the cæcum is marked off from the colon by a valvular structure, similar to that at the end of the ileum." This is an approximation to the condition which obtains in the animal under consideration.

In the Capybara the small intestine enters the enormous saccu-

* P. Z. S. 1832, p. 70.

† Vol. iii, p. 425.

lated cæcum at about an inch from its open extremity, and its relations to it are not in any way peculiar. The sacculated cæcum is nearly two feet long, and is traversed by four longitudinal bands. At its open end, which is an inch beyond (that is, further from the cæcal extremity than) the ileo-cæcal valve, it is constricted by a circular sphincter muscle, which forms the orifice of communication with the rest of the cylindrical large intestine. The colic surface of this sphincter is situated *in the side of the colon*, three inches from the blind extremity of a true, simple, thick-walled, slightly pyriform

Fig. 2.

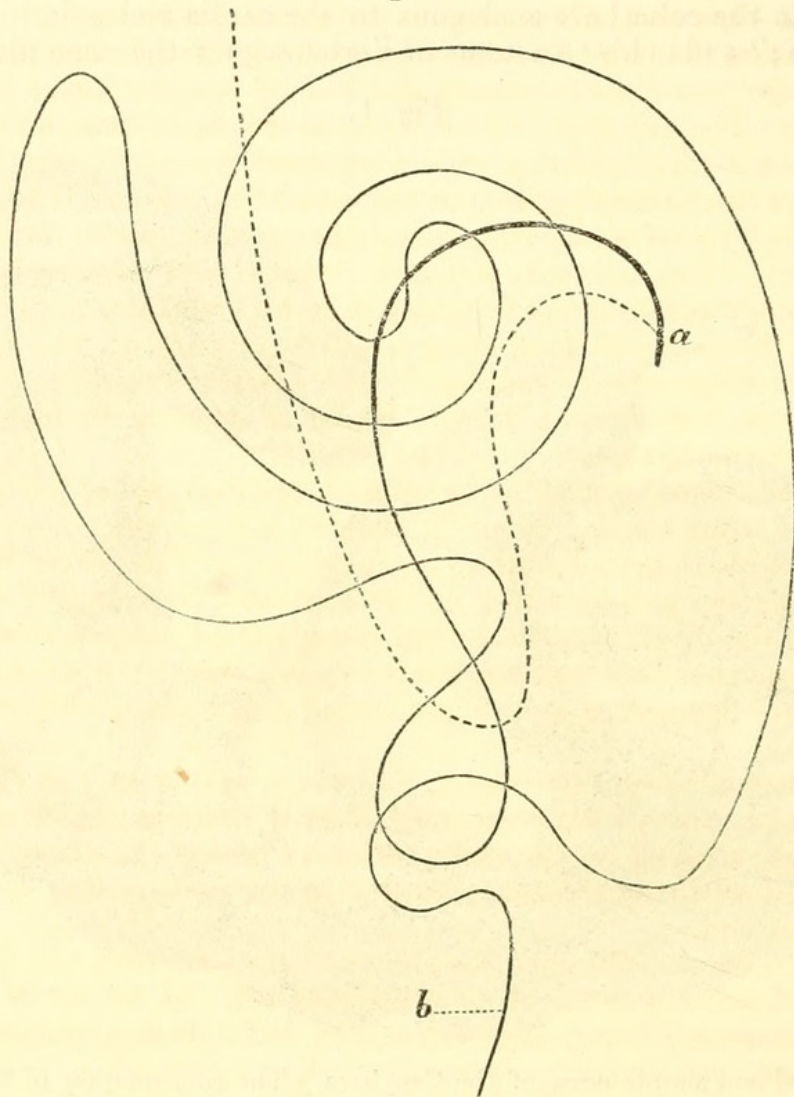


Diagram of the convolutions of the colon in the Capybara. The dotted line represents the cæcum springing from the side of the dilated end of the large intestine, and running forward to the diaphragm. *a*, ileo-cæcal valve; *b*, rectum.

cæcum, which is directly continuous with the colon, and is indistinguishable from it in structure. This second cæcum is, as indicated above, three inches from the extreme end to the centre of the orifice by which it communicates with the sacculated one. Superficially its

longitudinal muscular coat is strongly marked, covering it perfectly uniformly.

The ileo-cæcal valve is linear and longitudinal; it projects a short distance into the sacculated cæcum from above as a tube with slightly turned lips, of which the inferior is a little the longer and larger. There are some thickened gland-patches in the sacculated cæcum, and a large one in the colon, at the margin of the sphincter which is towards the continuation of the large intestine; three or four others are situated irregularly in the walls of the true cæcum.

The disposition of the colon is peculiar and interesting. The accompanying sketch (fig. 2, p. 22) will explain it best. It was taken from the view obtained of them as the animal lay on its back. As is well known, the large intestine commences in the left hypochondriac region, the true cæcum capping the end of the sacculated one anteriorly. The gut then, with a curve to the right, runs back to the hypogastric region, where, with a reversed figure-of-eight twist, it gets into the normal position of the ascending colon. It so reaches the right hypochondriac region, and then commences to form, in the transverse colon, coils very similar to, though on a smaller scale than those in *Indris* among the Lemurs and in the Artiodactylate Ungulata, the much-developed loop being twisted on itself to the left side. After reaching the left hypochondrium the descending colon continues straight to the sigmoid flexure, which is strongly developed, and thence to the rectum.

The sacculated cæcum being bound to the first part of the colon by bands of equal length (about $2\frac{1}{2}$ inches), follows the course of that canal, and is therefore doubled on itself, not, as Prof. Owen remarks, occupying the posterior half of the abdomen, but running forwards towards the diaphragm, above the colon, till its caput arrives in the right hypochondriac and epigastric regions, where the ruminant-like coil above referred to is strongly bound to it on its under or ventral surface.

Neither in *Cavia*, *Dolichotis*, *Capromys*, nor in any of the allied forms with which I am acquainted, does the strong sigmoid curve of the large intestine, at the commencement of the sacculated cæcum, develop into a true secondary cæcum in the manner that it does in the Capybara.

Whilst on the subject of the viscera of the Capybara, the following measurements of those of an adult male will not be out of place—small intestine 21 feet, large intestine 6 feet 7 inches, cæcum 1 foot 10 inches.

The liver is comparatively simple. The gall-bladder is pyriform, situated in a cystic fossa, not reaching the free margin of the gland. The right central lobe is slightly more bulky than the left lateral, which is more than twice the size of the left central, which, again, is somewhat larger than the caudate. The spigelian lobe is minute, and bifid as in so many Rodents.



Garrod, A. H. 1876. "7. On the Caecum Coli of the Capybara (*Hydrochaerus capybara*)."
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