

V. *On the Intestinal Tract of Mammals.*

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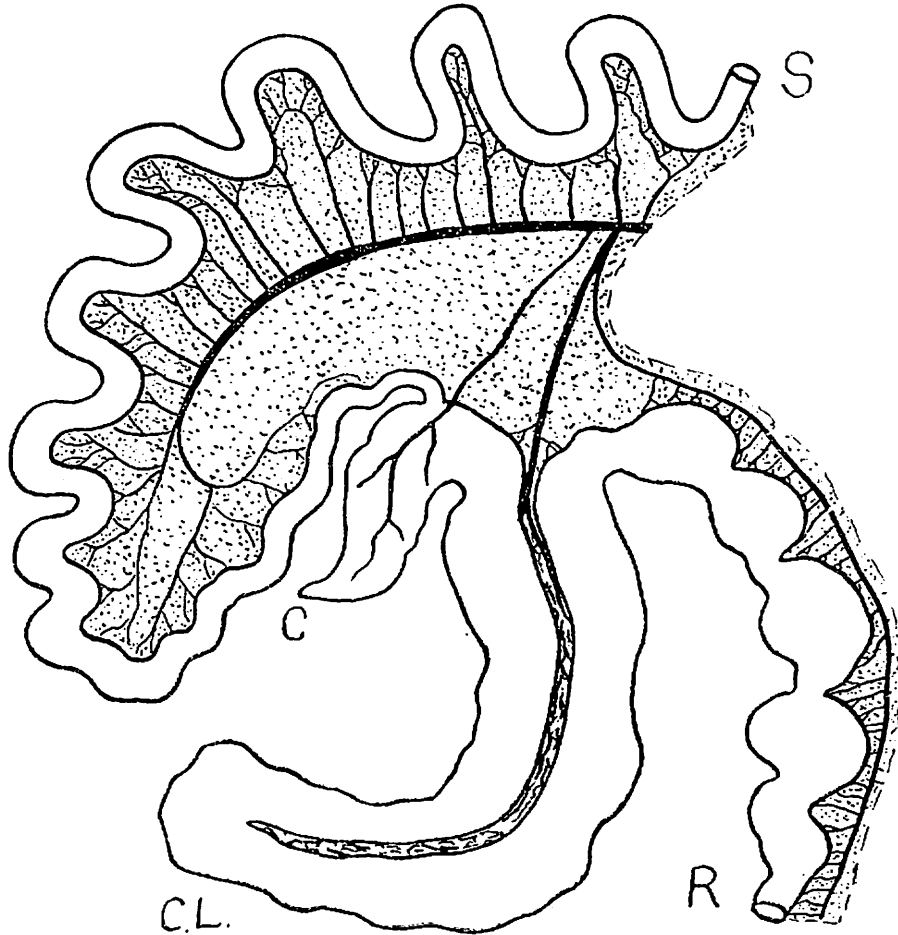
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mesentery of Meckel's tract and receives a very large factor from the cæcum. More proximally it is joined by a large vessel (represented in fig. 23 as cut across at X₂) from the colic loop and by the posterior mesenteric vessel.

Family RHINOCEROTIDÆ. *Rhinoceros unicornis* (fig. 24).

I had the opportunity of examining the intestinal tract of the large Indian Rhinoceros which died in 1904 after having lived many years in the Gardens.' As in

Fig. 24.

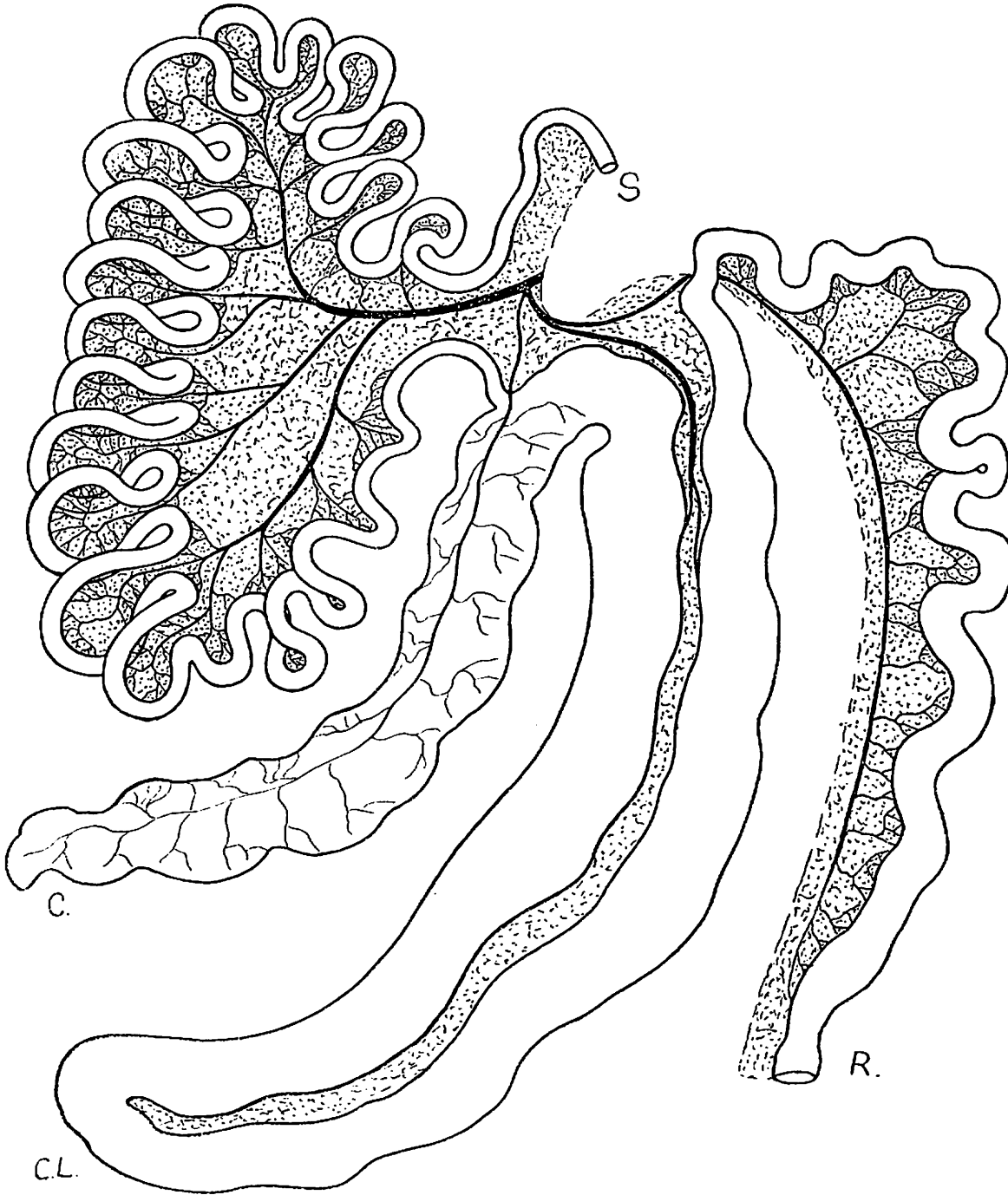


Intestinal Tract of *Rhinoceros unicornis*.

Lettering as in fig. 23.

many large Mammals, the length of the gut is small in proportion to the size of the animal. There is no distinct duodenal loop. Meckel's tract is relatively simple, consisting of a number of simple minor loops at the periphery of an elongated expanse of mesentery. The cæcum is short, but very wide and capacious. The hind-gut repeats the pattern described in the Tapir, consisting of a very long and

Fig. 25.



Intestinal Tract of *Equus granti*.

Lettering as in fig. 23.

extremely capacious colic loop and a wide, sacculated, but nearly straight rectal portion. The arrangement of the veins is essentially identical with that found in the Tapir.

Family EQUIDÆ. *Equus granti* (fig. 25, p. 479).

I have examined the intestines of several Horses and Asses, but, except in minor details, the pattern displayed is identical. The duodenum is not so well marked as in the Tapir, but is more specialised than in the Rhinoceros. Meckel's tract is relatively longer than in the two other Perissodactyle families, and consists of a number of regularly arranged minor loops round the circumference of an oval expanse of mesentery, united with the general mesentery only by a narrow neck. The cæcum is very long and capacious. The hind-gut displays an enormously capacious colic loop exactly similar in its relations to that of the Tapir and Rhinoceros, and a relatively long and slightly folded rectum. The arrangement of the mesenteric veins is similar to that in the other Perissodactyles, save that the anterior mesenteric vein is made up of a number of branching factors.

The almost essential similarity of the gut-pattern displayed by the three Perissodactyle families, although the members of these differ much in structure and habits, is very striking. Except so far as both Artiodactyles and Perissodactyles have the whole gut relatively long and the hind-gut especially long, there is no special connection between the patterns displayed by Artiodactyles and Perissodactyles. In the former group the lengthening of the proximal portion of the hind-gut assumes the form of a narrow and very long loop with no trace of spiral coiling; in the latter the colic loop is always coiled and relatively narrower.

Order RODENTIA.

Sub-Order SIMPLICIDENTATA.

Group HAPLODONTOIDEA.

I have had no opportunity of examining members of this group.

Group SCIUROIDEA. *Xerus capensis* (fig. 26).

This animal shows the characteristic Rodent configuration of the alimentary canal in a relatively simple form. There is a fairly distinct duodenal loop. Meckel's tract consists of a number of simple minor loops at the periphery of the usual, nearly circular expanse of mesentery, and terminates in a relatively straight recurrent portion which enters the cæcum at right angles. The cæcum in *Xerus* is a very capacious sac, much expanded distad of the small intestine and tapering to a point anteriorly. The hind-gut is divided into two regions. There is a much lengthened colic portion, variously disposed, but never showing any trace of the spiral coil which is so well marked in the Artiodactyles; in *Xerus* this portion consists of two specialised loops