

that in three out of four specimens of *Aptenodytes longirostris*, the proventricular gland presented precisely the same form, it seems to me that the presence in the fourth specimen of a proventricular gland of a different form must be regarded as an individual peculiarity. The muscular portion of the stomach of *Aptenodytes*, except in size, agrees with that of *Eudyptes chrysocome*. The intestine comes off from the right margin of the viscus, its commencement being defended by a valve-like fold of mucous membrane.

In one specimen of *Aptenodytes longirostris* the stomach contained a quantity of spines belonging to a species of *Spatangus*, together with a number of small stones. In a second specimen the stomach was filled with a pulpy mass, through which a number of small stones were distributed. The largest of these stones measured $\frac{1}{2}$ an inch in diameter, but did not exceed $\frac{1}{16}$ th of an inch in thickness. A large number of lenses, which may have belonged either to fish or to cephalopods, was also extracted from the pulp.

THE SMALL INTESTINE.

The small intestine in every species of Penguin which I have dissected comes off from the anterior (ventral) surface of the muscular portion of the stomach. It is arranged in two groups of concentric coils. Of these the larger group (Pl. XVI. fig. 9) is superficially placed, and comes into view immediately on opening the cavity of the abdomen. It occupies the right half of that cavity, and lies between the posterior surface of the right lobe of the liver in front and the right margin of the stomach behind and to the left. The second or smaller group is not exposed until after the removal of the stomach, above which it lies. It occupies the middle portion of the abdominal cavity, and lies between the vertebral column above and the upper surface of the stomach below. The intestinal coils composing it are concentrically arranged, the group presenting an appearance as of a watch spring coiled upon itself.

The small intestine terminates posteriorly below the sacrum by becoming continuous with the great gut. The duodenal curve in the Penguins is not so well defined as in the majority of birds. In the latter it usually forms a well-marked curve, within the cavity of which the pancreas is accommodated. In the Penguins, on the other hand, the duodenum, except in so far as it constitutes the first portion of the gut, is indistinguishable from the rest of the small intestine. In them the duodenal curve does not differ either in size or form from the other coils of the small gut. Neither is the pancreas limited to the first of these coils, as in the majority of birds, but extends for a variable distance in different species along the gut, and in every species comes into relation with two or more of the intestinal coils. The hepatic and pancreatic ducts open into the upper portion of the small intestine, at a variable distance from the pylorus in different species. The exact position of the extremities of these ducts, with reference to the intestine, will be found in the description of the glands to which they belong.