

iscus magellanicus and *Spheniscus minor*, but in both of these, as above noticed, the glandular follicles are not so closely aggregated on the left wall of the stomach as elsewhere. In these species, therefore, the gland shows a tendency to lose the completely zonular character, and to approach that of other species in which the gland assumes a less regular form. In *Pygosceles*, on the other hand, the gland follicles are as closely aggregated on the left as on the right gastric wall, and hence every portion of the belt presents a similar structure. The interior of the gizzard resembles that of *Eudyptes chrysocome*, the mucous membrane forming well-marked rugæ, which communicate freely with one another. The pylorus occupies the usual position on the anterior gastric wall. It is defended by two nodular, valve-like folds of mucous membrane.

The stomach and œsophagus in one specimen of *Pygosceles* was distended with a soft pulpy mass, intermixed with which was an immense quantity of small fish bones. Several fragments of Annelids were distinguished amid the pulp. The stomach, moreover, contained about thirty small stones, varying in size from $\frac{1}{2}$ an inch in diameter to that of small gravel particles. In a second specimen of the same species, the stomach contained a quantity of isopodous crustacea, amongst which fragments of *Oniscus* were distinguishable. About fifty small stones were also extracted from among the gastric contents. The stones varied in size from that of a coffee bean to that of sand particles.

In *Aptenodytes longirostris*¹ (Pl. XVII. fig. 2) the stomach measures 8 inches in length. The line of junction of its glandular and muscular portions is indicated externally by a well-marked constriction. The glandular portion measures $2\frac{3}{4}$ inches, and the muscular portion 3 inches in diameter. As a whole, the external form of the stomach closely resembles that of *Eudyptes chrysocome*. In three of the four specimens of *Aptenodytes* which I examined, the proventricular gland was of an irregularly oval form, the long axis of the oval being placed transversely to that of the œsophagus. In them the glandular patch occupied the right wall of the stomach, and measured $2\frac{3}{4}$ inches in greatest breadth, and $3\frac{1}{2}$ inches in length from side to side of the stomach. In each of these specimens there was an interval on the left gastric wall which was altogether devoid of glandular follicles, and in this interval the œsophageal rugæ were prolonged to become continuous with those of the gizzard. In the fourth specimen of *Aptenodytes* the proventricular gland formed a complete zone, much as in *Pygosceles*. In it the broadest part of the belt was situated on the right wall of the stomach, and measured 4 inches in breadth, while on the left gastric wall it did not exceed 2 inches in breadth. The occurrence in two specimens of one and the same species of *Aptenodytes* of a proventricular gland of different form is difficult to explain. In every other species of Penguin which I have examined I have found the proventricular gland similar in form in every specimen of the same species, and, taking into consideration the fact

¹ In *Aptenodytes patagonica* the stomach measures 4 inches in length and $2\frac{1}{2}$ in breadth.—Reid, Proc. Zool. Soc., 1835, p. 147.