

for the most part are longitudinal in direction, but communicate freely with one another by means of short oblique folds. The pyloric orifice is provided with two prominent projections of the mucous membrane, which may to some extent serve the purpose of a pyloric valve.

In one specimen dissected the stomach was empty. In another the stomach contained a quantity of dark-coloured pulp, the nature of which to a large extent could not be determined, but appeared to consist of partially digested fish. In corroboration of this opinion, it may be mentioned that numerous scales and bones of fish were extracted from the mass. There was not the slightest trace of gravel in the stomach of either of the specimens examined.

In *Spheniscus demersus*¹ (Pl. XVI. fig. 2) the stomach externally measures $6\frac{1}{2}$ inches in length, and 3 inches in diameter at its widest or glandular portion. In one specimen the stomach was distended with food to such an extent that there was no trace of the external constriction which usually separates its glandular and muscular parts. In a second specimen, however, this constriction was well defined. In it the glandular portion measured 2 inches in diameter, while that of the gizzard amounted to $1\frac{1}{2}$ inches. In the first of these specimens the stomach occupied the greater part of the abdominal cavity, and completely concealed the coils of the small intestine. In the second the gastric relations were similar to those above described in *Eudyptes*. The duodenum comes off from the anterior wall of the gizzard. The proventricular gland is triangular in form with rounded angles, and occupies the right wall of the viscus, but does not form a complete belt. Its base corresponds to the line of junction of the glandular and gizzard portions of the stomach, while the apex is directed forwards towards the mouth. The gland measures 2 inches in length from base to apex, and $2\frac{1}{2}$ inches in breadth at the base. Between the basal angles on the left side of the viscus is a space measuring $1\frac{1}{2}$ inches in breadth, which is altogether devoid of glands. The glandular follicles are more closely aggregated at the margins than at the centre of the patch, and in one of the specimens examined this arrangement was so pronounced as to give rise to the appearance of two distinct patches of follicles. Closer examination showed, however, that the apparent line of separation was likewise, but to a much less extent, provided with glandular follicles. The muscular portion of the stomach does not differ, except in size, from the corresponding part in *Eudyptes*.

In one specimen of *Spheniscus demersus* the stomach was empty, while in another not only both portions of the stomach, but also the œsophagus was crammed with the remains of fish, including a large quantity of bones. Among these contents I failed to recognise any crustacean remains, neither was there any trace of gravel among them.

In *Spheniscus magellanicus* (Pl. XVI. fig. 3) the stomach measured $6\frac{1}{2}$ inches in

¹ According to Garnot (*Annales des Sciences Naturelles*, 1826, p. 53), the stomach of *Spheniscus demersus* when empty, measures 4 inches in length.