

The palate of *Aptenodytes* (Pl. XV. fig. 4) is covered by elongated recurved papillæ, which are more slender than the corresponding structures in *Pygosceles*. They are arranged in eight longitudinal rows, four on either side of the middle line. The papillæ of the central are larger than those composing the lateral rows. Behind the gape the papillæ are of much smaller size, but are still arranged in parallel rows, of which six or seven may be counted on either side of the middle line. These together form an elongated patch, which corresponds in position to that of the laryngeal pads on the floor of the mouth. The papillæ disappear entirely at the commencement of the œsophagus. The palate is completed in front by an elongated oval plate, the anterior extremity of which is prolonged forwards as a narrow spine, which to some extent fills up the interval between the superior maxillary bones of opposite sides. This plate is perfectly smooth and devoid of papillæ. In this respect *Aptenodytes* differs from *Pygosceles*, while it agrees with both *Eudyptes* and *Spheniscus*. The palatal and parotid groups of salivary follicles are well defined, but the lingual group can scarcely be said to exist.¹ The latter consists of only a few isolated follicles, the openings of which are scattered irregularly over the floor of the mouth, instead of forming a well-defined patch on either side of the laryngeal pads, as in *Eudyptes*.

THE ŒSOPHAGUS.

By the term œsophagus I understand that portion of the alimentary canal which extends from the cavity of the mouth backwards to the anterior border of the glandular portion of the stomach, the so-called proventriculus of some authors. The description of the proventriculus will be incorporated along with that of the stomach.

The œsophagus, thus defined, measures in *Eudyptes chrysocome* from Tristan d'Acunha, 9 inches in length. As it passes backwards from the mouth it occupies the middle line of the neck, having the trachea below it. At the posterior part of the cervical region, however, in consequence of the great projection forwards of that portion of the vertebral column, which, as previously noticed, actually comes in contact with the furcular angle, the œsophagus is displaced to the right, and at this spot rests against the right side of the spine, lying between the latter and the right limb of the furculum (see Pl. VIII.). Having reached the aperture of the thorax, the œsophagus regains the middle line of the neck, where it is crossed superficially by the bifurcation of the trachea. Beyond this point it deviates to the left, and comes into contact with the posterior surface of the left lobe of the liver, opposite the upper border of which it becomes continuous with the stomach. The transition from the œsophagus to the stomach is so gradual, that it is impossible from an inspection of the exterior of the organs to determine where the one ends and the other begins. On opening the tube,

¹ According to Reid, Proc. Zool. Soc., 1835, p. 147, *Aptenodytes patachonica* possesses only one pair of salivary glands—the submaxillary.