

on either side of the middle line. Passing backwards, these papillæ increase in size as well as in number, until opposite the gape in one specimen, there were five longitudinal rows on either side of the middle line, while in a second specimen of the same species there were no fewer than six, making twelve rows of palatal papillæ in all. Posterior to the gape, the palatal papillæ dwindle in size, and form an elongated oval patch on either side of the posterior narial aperture. These papillæ disappear entirely at the entrance of the œsophagus. Instead of being completed anteriorly by means of a perfectly smooth horny plate, as in *Eudyptes*, *Spheniscus*, and *Aptenodytes*, that portion of the palate of *Pygosceles tæniatus* is provided with two rows of well-defined papillæ. The lingual group of salivary follicles in *Pygosceles* is of relatively smaller size than in *Eudyptes chrysocome*.

In *Aptenodytes longirostris* (Pl. XV. fig. 3) the tongue, which measures $2\frac{1}{4}$ inches in length and $\frac{3}{8}$ ths of an inch in greatest breadth, more closely resembles that of *Spheniscus* than of *Eudyptes*, both in respect of size and form. In both *Aptenodytes* and *Spheniscus* the tongue narrows gradually from base to apex, and in both there is a considerable interval between the point of the tongue and the symphysis of the lower jaw bone. The papillæ covering the dorsum linguæ are recurved, and are of nearly uniform size throughout. These papillæ are arranged in five longitudinal rows, of which one occupies the middle line of the tongue and two are placed on either side. There is no diminution in size of these papillæ immediately in front of the laryngeal pads, and consequently there is an absence in *Aptenodytes* of the special papillar patch which occupies that position in *Pygosceles*. The laryngeal pads together measure $1\frac{1}{4}$ inches in length and $\frac{3}{4}$ ths of an inch in greatest breadth. Each is covered by a series of papillæ of much smaller size than those which cover the tongue. They are arranged in four somewhat irregular rows on either side of the laryngeal slit, and disappear entirely at the entrance of the œsophagus. The floor of the mouth (Pl. XV. fig. 5) is bounded laterally by two rows of papillæ. One of these, the external, extends from the gape forwards to the symphysis of the lower jaw, and consists of bayonet-shaped papillæ, which at some places are ranged in single file, while at others they are placed two or three abreast. The second or inner row is situated $\frac{1}{8}$ th of an inch to the inner side of the outer range. It corresponds only to the middle third of the latter, and consists likewise of a series of bayonet-shaped papillæ, which, however, are of smaller size than those which constitute the outer row. The lower surface of the tongue occupies the interval between the two inner rows. Internal to the second is a third row of very minute papillæ, which, commencing at the gape, extends forwards for a very short distance, and does not meet its fellow of the opposite side behind the symphysis of the jaw. The buccal group of papillæ is more largely developed in *Aptenodytes* than in any species of Penguin which I have examined. It consists of a large group of much elongated conical papillæ, the apices of which are directed backwards and come into contact with the lateral margin of the tongue.