ently free. Walls thick, a cloacal depression at the summit, which may be extended downwards as an open tube. The outer surface of the wall with circular canal apertures disposed in longitudinal rows. There are two series of canals; a larger which traverses the walls in a generally vertical or oblique direction; and a smaller which extends from the surface in an arched direction to the interior of the sponge wall. The skeleton consists of a connected spicular meshwork, apparently of the Anomocladina type, in which there is a relatively small central node with a variable number of rays which connect with adjoining nodes. No distinctive dermal layer is present.

The spicular structure of this genus is nearest allied to that of *Astylospongia*, F. Roemer, but the nodes are less developed, and the network is much less regular. Owing to the manner in which the spicules are replaced, and their coalescence, it is impossible to make a close comparison with other sponges, and, in fact, it is difficult to state positively whether the spicules are uniformly of the Anomocladina type. The canal apertures of the surface, and the shape of the sponges as well, resemble some forms of *Calathium*, Bill., such as *C. Anstedi*[1] and *C. Fittoni*,[2] but the spicular structure in these latter is as yet unknown, and therefore they cannot properly be compared with *Steliella*.

STELIELLA BILLINGSI, sp. n., pl. Figs. 1–4.

Sponges subcylindrical or compressed so as to be nearly elliptical in transverse section, or club-shaped; the basal end obtusely rounded and apparently free. The specimens vary from 28 to 64 mm. in length, and from 14 to 34 mm. in thickness. The vertical rows of canal apertures are about 1 mm. apart, the apertures themselves, in the single specimen in which they are clearly shown, are circular or ovate and about 1 mm. in width. The larger canals, as shown in transverse sections, are from 0.5 to 1 mm. in width, those of the smaller series are from 0.2 to 0.3 mm.

[1] Pal. Fos., vol. 1. p. 210.
[2] Ib., p. 211.