and structure, which these two Bowerbankian species bear to the *Farrea infundibuliformis*, Carter, which was described two years previously by Carter,[1] but was entirely unknown to Bowerbank, is certainly striking. Bowerbank, indeed, says nothing of the elegant floricomes, which Carter's specimen possessed in rich abundance, but it is quite possible that these fine forms may have escaped Bowerbank in the course of his examination, and that accordingly all three species may perhaps be united into one.

The fragment which Bowerbank has designated as *Farrea fistulata* consists of a bent tube of 23 mm. in length and 6 mm. in transverse diameter. It is not only open at both extremities, but further exhibits a lateral orifice to which a short tube of equal width is attached. The skeleton with its two or three square lattice-layers consists of smooth, cylindrical beams, with wide central canals. From the intersections of the outer as well as of the inner surface tolerably long tuberculated teeth project. Bowerbank also describes a thin dermal membrane with numerous spicules; but since the latter are called "acerate" and "contort bihamate," and since, moreover, a specimen of *Hymedesmia johnsoni*, Bowerbank, which is distinguished by "acerate" and "trenchant contort bihamate" spicules, was found to have settled in the interior of the tube, there can be no doubt that those free spicules of the outer skin-like casing do not belong to the Hexactinellid any more than the spicules of those Desmacidonids which are firmly fixed in the interior. The whole fragment may have lain dead for a long time on the bottom of the sea before it was brought up, and the width of the central canal of the beams is on that supposition readily explained.

Farrea lævis is the name given by Bowerbank to a new species, of which he possessed only a small fragment, consisting of a tube-like siliceous network from 4 to 5 mm. in breadth, and scarcely 1 cm. in length. Since the entire system of beams which encloses approximately square meshes only forms a single layer, Bowerbank looks upon this as a "dermal network." The beams of the network are smooth throughout, and so too are the long conical teeth which project outwards and inwards at right angles to the intersections. The central canals, of which two, or sometimes even three, lie close to one another, are very wide, and become confluent at the angles.

Since the small fragment found in dredged sand was provided only in one small place with a thin skin consisting of a dried soft mass *without* any spicules, it may be inferred that the skin did not belong to the sponge, and here too, the breadth of the central canals was caused by longer solution in sea-water. Bowerbank finally notes the great resemblance between his *Farrea lævis* and the branched, partially anastomosing, tubular network, figured by Saville Kent[2] and designated *Farrea occa*. He also calls attention to the fact, that that branched tube-like form agrees with a certain "*Farrea tubulata*." I have carefully endeavoured, but to no purpose, to discover in

[1] *Ann. and Mag. Nat. Hist.*, vol. xii. p. 448, 1873.
[2] *Monthly Micr. Journ.*, pl. lxiv. fig. 12, 1870.