

project more or less beyond it, and fill up to a greater or less extent the four angles of the cruciate tangential rays of the pentact. Contrary to Carter's report, according to which six clavulæ usually accompany each pentact, I generally found eight round each in the best preserved specimens, and disposed so that two lay in each of the angles of the tangential rays. This number does not seem, however, to be in any way constant. Not unfrequently I have found ten or more clavulæ in one bundle, and very frequently fewer than eight, and sometimes very few. It is difficult to determine whether they may be sometimes wholly absent; where this appears to be the case, it is quite conceivable that they may have fallen out or have been torn away. Nor does the fact that they frequently project more or less beyond the surface of the skin necessarily imply that they have this position in the living sponge. On the contrary, in the best preserved specimens the normal position seems to be that in which the hemispherical terminal discs occur within the dermal membrane. Deformation of the body-wall or pressure of apposed foreign bodies has forced them outwards, as may be inferred indeed from their shape.

The form of the dermal clavulæ in *Farrea occa* varies considerably, as Carter has already noted, and that between somewhat wide limits, from the long-toothed umbels to the smooth club (Pl. LXXII. fig. 8), nevertheless one definite form is so predominantly frequent, that it may be regarded as the normal type, of which all the others are only exceptional modifications (Pl. LXXI. figs. 5, 9). This typical dermal clavula exhibits a club-shaped or poppy-head-like terminal swelling, which is externally and laterally roofed over by a hemispherically arched umbel, frequently raised in the centre into a projecting boss. The overhanging margin of the umbel is toothed. The teeth, which number eighteen to twenty-two are either simple marginal teeth resulting between notches of the margin, or are more or less sharply defined off from the edge and laterally compressed even at the base. The cylindrical stalk is gradually narrowed towards the lower, simply rounded extremity, and is usually straight or gently bent, and, like the poppy-head-like extremity, is beset with small irregularly disposed tubercles, which increase somewhat in size and number towards the narrowed lower end (Pl. LXXI. fig. 5).

Various deviations from the above described typical form often occur both in different regions of the same sponge and in specimens obtained from different localities. The variation is especially associated with the terminal portion which we have shortly designated the "head." In thickness and length, for instance, it varies greatly. In many cases the stalk shows towards its upper end at most a gentle thickening, which bears terminally a thin toothed umbel like that of a toad-stool, while in others there is a broad club-shaped terminal portion from which the umbel region is but slightly, or even not at all marked off, so that a perfectly smooth club-like swelling may result. While the terminal portion of the umbel is sometimes quite flat and without any central elevation