

the thickness and the length varying from 1:10 to 1:12. In the spaces between the oscula these triradiate spicules lie pretty regularly, their corresponding rays being disposed more or less parallel one to another, their basal ray turned to the closed end of the Sponge, and the angle between the lateral rays towards the sharp margin dividing the sieve-like surface from that bearing oscula. Near these latter, as well as near the margin just mentioned, their disposition becomes irregular, they lose their characteristic shape, presenting all possible transition-forms to the sagittal triradiate spicules of the sieve-like surface, and, on the other hand, growing smaller, to the rectangular triradiate ones of the oscular skeleton.

*Large acerate spicules of the convex surface.*—Lying in several layers almost parallel to the surface, causing its smoothness and silvery lustre. Form, length, and comparative thickness extremely variable, either spindle-, club-, or lance-shaped, or of quite irregular outline, reaching 1 mm. in length (usually shorter), the proportion between their length and thickness varying from 8:1 to 30:1.

*Oscular acerate spicules.*—Spindle- or lance-shaped, usually twenty-eight times as long as thick, rarely longer than 0.55 mm., often considerably shorter.

*Oscular triradiate spicules.*—Sagittal, basal ray forming with each of lateral rays an angle of 90°; basal ray straight, tapering from the base to a sharp point, usually half as thick as lateral rays, often still thinner, occasionally almost of the same diameter; length inconstant, rarely longer than 0.05 mm., often not exceeding 0.01 mm. or still shorter; lateral rays either straight, or slightly curved inwards, usually sharply pointed, ten times as long as thick, average length 0.1 mm.; connected as regards their form and size with the sagittal subdermal triradiate spicules of the oscular surface by a long series of intermediate stages.

*Oscular quadriradiate spicules.*—Like the rectangular triradiate, nothing but modified sagittal triradiate spicules of the oscular surface; lateral rays either straight or slightly curved forwards, tapering from the base to approximately sharp points, average length 0.2 mm. by 0.02 mm., basal ray usually rather shorter, straight, sharp-pointed, forming with each of lateral rays an angle of about 110°; apical ray curved, not seldom undulating, sharp-pointed like the facial rays, usually rather thinner than these latter; length varying from 0.06 to 0.2 mm.

*Colour.*—White.

*Habitat.*—Station 163A, June 3, 1874, off Port Jackson; depth, 30 to 35 fathoms; rock. Station 163, April 4, 1874; lat. 36° 56' S., long. 150° 30' E.; depth, 120 fathoms; off Twofold Bay, Australia.

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In order to render conspicuous the comparative richness of the Challenger Stations in Calcarea, I give here the following Table, showing also the depths from which the Sponges were dredged.