

radiating irregularly from the centre towards the circumference. Surface even. Oscula, pores and expansile dermal system unknown. Skeleton fibre stout, more or less furnished with scattered warty tubercles. Auxiliary fibres abundantly tuberculated, terminating spinulately. Interstitial spicula rectangulated, hexradiate, large; radii nearly equal, attenuated and acutely terminated. Retentive spicula spinulo-quadrifurcate hexradiate stellate; terminal radii long."

The fifth form, *Iphiteon callocyathes* = *Myliusia callocyathes*, Gray, belongs to another genus, *Myliusia*, Gray, which will be described more closely below.

Oscar Schmidt¹ first called attention to the fact that the greater number of the forms described by Bowerbank as *Dactylocalyx* are not Hexactinellids at all, but belong to the Lithistida. According to Oscar Schmidt, the genus *Dactylocalyx* strictly embraces those sponges which are characterised by a triaxial type of spicule, "their siliceous network resembles neither the wide tubes of *Farrea* nor the prismatic tissues of *Aphrocallistes*, but a more dense irregular tresswork. The habit of the body may accordingly be very variable."

In addition to the meshed forms, *Dactylocalyx pumiceus* and *Dactylocalyx subglobosus*, Oscar Schmidt described and figured a third species, of very different appearance, under the designation *Dactylocalyx crispus*. From a short compact solid base, there rises a simple or divided funnel-shaped tube with a thin and somewhat folded wall, while the upper terminal opening appears to be either irregularly round or else sinuous and fissure like. Short tube-like lateral protuberances or branches which are here and there arranged in distinct longitudinal rows open to the exterior by a rounded aperture.

In an article on the classification of the sponges, published in 1872,² Gray distinctly curtailed his family of the Dactylocalycidæ as established in 1867. He removed the genus *Macandrewia*, which was regarded as representative of a special family, the Macandrewiadæ, retained the genera *Dactylocalyx*, *Myliusia*, *Kaliapsis*, and *Discodermia*, and characterised the restricted family as follows:—"Sponge massive or expanded or cup-shaped. Skeleton more or less regularly reticulated, with angular openings diverging from the centre."

In 1873 Carter³ united *Dactylocalyx pumiceus*, Stutchbury, *Dactylocalyx pumicea*, Gray, and *Iphiteon pumicea*, Valenciennes, in his division of the Vitreohexactinellida, in the subdivision of "species massive, excavated, shallow," and in a family for which "rosettes or flesh-spicules, many rayed, rays of equal length, straight, capitate, sometimes only pointed," were said to be characteristic, while he formed a special family for *Dactylocalyx subglobosa*, Gray, with the following peculiarities:—"Rosette many rayed, rays of equal length, straight capitate, or with multitudinous rays of unequal

¹ O. Schmidt, Spongienfauna des Atlant. Gebietes, p. 18, 1870.

² *Ann. and Mag. Nat. Hist.*, ser. 4, vol. ix. pp. 453-457.

³ *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xii. p. 357.