

(1) *Dactylocalyx pumiceus*, Stutchbury, named *Dactylocalyx pumicea* by Gray, and identified with *Iphiteon panicea*, Valenciennes (Paris Museum), as a "sponge broad expanded, upper surface rather concave. Hab. West Indies, Barbados, St. Vincent;"¹ and (2) *Dactylocalyx subglobosus*, Gray, a "sponge subglobose, with a deep central concavity above; the outer surface with irregular anastomosing oscules. Hab. Malacca (?)" (pl. xxvii. fig. 1).

A short account of the nature of the continuous siliceous framework of *Dactylocalyx* was given by Claus in 1868 in his treatise on *Euplectella aspergillum*. He says on page 23:—"We have thus to deal here not with united siliceous spicules, but with a fibrous tress-work of siliceous substance like the ceratose fibrous networks which occur in the *Ceratospongia*." On the other hand, Wyville Thomson in the same year remarks,²—"I believe that it would be safe to accept the generalisation that the continuous siliceous network, wherever it occurs in the vitreous sponges, is produced by the fusion of spicules of the hexradiate type."

A detailed description of all these sponges which Bowerbank ascribed to the genus *Dactylocalyx*, Stutchbury, was given by the same author in 1869.³ After first separating off the genus *Iphiteon*, Valenciennes, from *Dactylocalyx*, he characterised the genus *Dactylocalyx*, Stutchbury, in the following manner:—"Skeleton siliceo-fibrous, fibres solid, cylindrical." *Iphiteon*, on the other hand, thus:—"Skeleton siliceo-fibrous, fibres solid, cylindrical. Reticulations symmetrical. Areas rotulate, confluent."

To *Dactylocalyx* he ascribed the following, in part, newly described species:—(1) *Dactylocalyx pumiceus*, Stutchbury; (2) *Dactylocalyx heteroformis*, Bowerbank; (3) *Dactylocalyx macandrewii*, Bowerbank; (4) *Dactylocalyx prattii*, Bowerbank; (5) *Dactylocalyx masonis*, Bowerbank; (6) *Dactylocalyx bowerbanki*, Johnson; (7) *Dactylocalyx polydiscus*, Bowerbank. Of all these, however, only the first, according to the figures and descriptions, namely, *Dactylocalyx pumiceus*, Stutchbury, is truly a Hexactinellid, all the others being Lithistida or Tetractinellida.

From Bowerbank's long description of *Dactylocalyx pumiceus*, Stutchbury, I shall quote only the diagnosis:—"Sponge cyathiform, slightly pedicelled, surface even. Oscula and pores unknown. Expansile dermal system, connecting spicula furcated attenuato-patento-ternate, and dichotomo-patento-ternate. Dermal membrane—tension spicula small, acerate and subequiangular triradiate spicula; retentive and defensive spicula acerate or cylindrical verticillately spinous, whorls of spines numerous and very large; and also attenuato-stellate, very minute and numerous. Skeleton:—rete irregular; fibre stout, irregularly and abundantly tuberculated, apices of the tubercles mainly papillous. Auxiliary skeleton-fibres more or less rectangular, hexradiate, profusely spinous, distal terminations clavate, large and numerous. Tension spicula

¹ Figured *loc. cit.*, pl. xxvii. fig. 2.

³ *Proc. Zool. Soc. Lond.*, 1869, p. 76.

² *Ann and Mag. Nat. Hist.*, ser. 4, vol. i. p. 122.