

distinguished from the other species externally in the arenaceous and coarsely-granular appearance of the white surface, due to the large, densely crowded, *Globigerina* shells which compose the two thick, parallel, dermal plates. The dry sponge, therefore, is very stiff, friable and fragile, arenaceous and inelastic. In the wet state it is extremely flaccid, and may be easily torn. The outline of the leaf is usually ovate or obliquely elliptical; its thickness is considerable, and nearly equal throughout its whole extent, about 2 to 3 mm., sometimes 4 mm. or more. The diameter of the leaf is usually between 40 and 60 mm., sometimes 80 to 90 mm., or even more. The tapering proximal part is prolonged into a conical pedicle of variable thickness, the basal insertion of which is often bulbous. Sometimes the thick pedicle is prolonged as a prominent median rib in the proximal half of the leaf, gradually tapering distally. The coarsely-granular surface of the leaf usually exhibits more or less distinct traces of the concentric zones which are characteristic of *Stannophyllum zonarium*, but they are never so regular nor so distinct as in that species, and sometimes they are absent altogether.

A few specimens of this species were distinguished by the production of one or two surface lobes arising from one or both sides of the leaf (Pl. I. fig. 5B). This production forms a transition to the genus *Stannarium* (Pl. III. figs. 6-14).

Stannophyllum globigerinum is the fittest for anatomical examination of all the five species of this genus, for the greatest part of the skeleton, viz., the calcareous *Globigerina* ooze, is easily dissolved in hydrochloric acid. The remaining portion of the body is partly a scarce maltha (sometimes containing ova), partly a very loose felty mass, composed of irregular bundles of spongin-fibrillæ, interwoven in all directions, and of the branched canals of the sponge, which run between the brown network of the symbiotic Hydroid. The reticular hydrorhiza of this latter is usually richly developed, and may be more easily isolated than in the other species of the genus (Pl. II. fig. 5). In a few specimens the hydranths (*y''*) and gonangia (*g*) were well preserved, and could be recognised as belonging to two distinct species of *Stylactella* (*Stylactella spongicola*, Pl. II. fig. 6; and *Stylactella abyssicola*, fig. 7).

Genus 10. *Stannarium*,¹ n. gen.

Definition.—Stannomidæ with branched lamellar body, forming vertical plates, which arise as lateral branches from a primary flabelliform body.

The genus *Stannarium* comprises those Stannomidæ in which the body is composed of several vertical leaves, which are either free or growing together. There can be no doubt that this peculiar form has originated from *Stannophyllum* by lateral budding, and that two opposite of these vertical wings are the halves of the primary flabelliform leaf

¹ *Stannarius* = Cementing or soldering workman.