

hardly be regarded as certain—it would represent, to judge from the peculiarity of the isolated spicules, a new species differing at once from *Aphrocallistes bocagei* and *Aphrocallistes beatrix*.

According to the report of Milne-Edwards,¹ *Aphrocallistes bocagei* was also dredged by the French "Travailleur" Expedition in the Atlantic Ocean, off the coasts of France and Portugal.

After Zittel, in his Studies on the Hexactinellida,² had mentioned that in the living species of *Aphrocallistes* a very delicate framework extended over the outer surface and the branches of the canals, Weltner described³ (1882) a continuous covering both on the inner side and outer side of *Aphrocallistes bocagei*. In the case of the outer surface he noted the presence of a delicate covering with large inhalent pores, which passed into the characteristic parietal meshes and also spread over the ostia on the inner surface. The outer membrane contained hexradiate spicules with an externally projecting fir-tree-like ray and forming a regular meshwork; in the inner lay "the characteristic *Aphrocallistes* rosettes, the rod-like spicule (thorn spicule), and the greatly reduced form which, though only exhibiting four medium knobs, was yet recognisable as hexradiate, and lastly, a large well-developed hexradiate form which is often fused to the parietal skeleton." Moreover Weltner observed in his specimen "a third plasma layer between these coverings of the outer and inner surfaces in the interior of the meshes (canals). This was for the most part well preserved and was interrupted only in the middle, while it was continued inwards to form an outer covering for the cavity of the sponge. In it the free spicules of the internal covering were but seldom met with, although it stood in manifold connection with the latter by means of plasma-threads. This third layer," continues Weltner, "may indeed be an artificial product. I would not, however, leave it unnoticed merely on that account, because it seemed to me to show that the free spicules (flesh spicule) do not as a rule extend into the interior of the plasma."

Character of the Genus.—The wall of the cup- or tube-like body is supported by the honeycomb-like framework of the dictyonal skeleton. The radial canals which traverse it, and are from 1 to 2 mm. in breadth, appear almost regularly hexagonal and prismatic. The septa between the latter form a network of beams, with irregular but predominantly three-sided meshes, from the margins and surfaces of which conical pegs project, which are sometimes swollen and knob-like at their extremities. Where three such bounding plates meet laterally the networks of beams usually form three-sided prismatic interspaces, and thus the margins of the six-sided prismatic canals or honeycomb-like mesh-spaces become somewhat truncate or rounded.

The strongly developed reticulate dermal membrane is continued without inter-

¹ *Comptes rendus*, 1881, vol. xciii. pp. 876-931 ; *Ann. and Mag. Nat. Hist.*, vol. ix. p. 46.

² *Abhandl. d. baier. Akad.*, 1877, p. 49.

³ *Zur Kenntniss der Spongien*, 1882, p. 32.