

Family II. MELITTIONIDÆ, Zittel.

Sponges in the form of a ramified tube or of a cup with lateral blind diverticula. The dictyonal framework forms very irregular meshes. The parietal skeleton is honeycomb-like, with tolerably *regular hexagonal*, radially disposed canals, arranged at right angles to the bounding surfaces. In each of these little canals the membrana reticularis, is continued in a funnel-shaped extension of the laterally disposed, glove-finger-like chambers, across the canalicular lumen. The free outer surface is covered with the dermal membrane, and the inner surface with the gastral. The gastral skeleton is without scopulæ.

Single Genus *Aphrocallistes*, Gray.

On the hexact dermalia the distal radial ray is more or less distinctly fir-tree-like with a lateral coating of spines. Besides these there are dermal scopulæ, in which the prongs are usually knobbed, more rarely pointed. The parenchyma contains irregular oxyhexasters, and in many cases also discohexasters.

Species 1. *Aphrocallistes bocagei*, Perceval Wright.

An elongated, almost tubular cup, a hand's length or more in height, with numerous glove-finger-like radial, and somewhat downward directed diverticula from the wall. The lumen of the cup is traversed at considerable intervals by several loose lattice-work septa, which correspond in their insertion on the sides to the lateral diverticula, and exhibit semicircular sections. The loose parenchymalia are represented by uncinates directed at right angles to the bounding surface, and also by hexasters of different kinds. Besides oxyhexasters with approximately equal principals and terminals, there are others in which the axis is considerably elongated, and in which the two strong, more or less long principal rays are divided at their extremities into four markedly divergent moderately long terminals, while the four rays representing the two other axes remain, as a rule, undivided. Small discohexasters occasionally occur. Corresponding to the dermal hexact pinuli, there are on the gastral surface autogastral diacts of variable length, which are more or less rough, especially on their rounded extremities. The dermal scopulæ possess, for the most part, four straight somewhat diverging prongs with pear-shaped terminal knobs bearing lateral barbs. Besides these there are dermal scopulæ with four pointed rough prongs, and others with four strikingly long, rough prongs equipped with small spherical knobs. Cape Verde Islands; Florida, 283 fathoms; English Channel, 700 fathoms; coasts of Spain and Portugal; Antilles Islands, 164 to 400 fathoms; Atlantic coast of France.