

The presumed relationship of the Muriceidæ with the Primnoidæ rests moreover on a purely external resemblance. In both there are large surface spicules and opercular coverings, which latter can more or less close over the mouth. In the one group, however, the operculum is formed by the spicules at the base of the tentacles, in the other by those of the body edge. The formation of the polyps is also different in the two groups. The polyps in the Muriceidæ are retractile, but the amount of the retractability differs much. In *Acanthogorgia* the contraction of the polyps and the arrangement for the protection of the soft parts is still very imperfect (and somewhat as in the Ceratoisidæ); through *Muricea* they show affinities to the Plexauridæ; and through *Elasmogorgia* and *Muricella* with the Gorgonidæ.

The following fourteen genera occur in the Challenger collection. They may be arranged thus:—first, the forms with but slightly contracted tentacles; then those where the whole crown of tentacles can be concealed within the body.

<i>Acanthogorgia</i> , Gray.	<i>Placogorgia</i> , n. gen.
<i>Paramuricea</i> , Kölliker.	<i>Acamptogorgia</i> , n. gen.
<i>Anthomuricea</i> , n. gen.	<i>Echinogorgia</i> , Kölliker.
<i>Muriceides</i> , n. gen.	<i>Acis</i> , Duch. and Mich.
<i>Clematissa</i> , n. gen.	<i>Muricella</i> , Verrill.
<i>Villogorgia</i> , Duch. and Mich. ( <i>emend.</i> ).	<i>Elasmogorgia</i> , n. gen.
<i>Echinomuricea</i> , Verrill.	<i>Muricea</i> , Auct.

### Genus 1. *Acanthogorgia*, Gray.

*Acanthogorgia*, Gray, Proc. Zool. Soc. Lond., 1857, p. 128.

„ Verrill, Bull. Mus. Comp. Zoöl., vol. xi. No. 1, fig. 30.

*Blepharogorgia*, Duch. et Mich., Supp. Mém. Corall. des Antilles, 1864-66, p. 109.

The genus *Acanthogorgia* is here taken in the emended sense of Verrill (*loc. cit.*). Verrill includes in the genus *Blepharogorgia*, Duch. and Mich., but excludes the species *Acanthogorgia grayi*, *Acanthogorgia atlantica*, John., and *Acanthogorgia hirta*, Pourt., which according to their spicules are to be placed in *Paramuricea*, Köll.; *Acanthogorgia johnsoni*, Studer, also belongs to *Paramuricea*. The following must be added to Verrill's characteristics with reference to the polyps and spicules. The polyps are elongated, cylindrical, expanded towards the mouth. The anterior part of the polyp is slightly retractile; in repose the tentacles bend together inwards over the mouth and are protected by spicules on their dorsal sides. The spicules are spindle-shaped and provided with spines, generally somewhat bent. They form eight longitudinal rows on the body of the polyp, the eight rows being arranged in pairs in a like manner, and the spicules of each paired row are at acute angles with each other. Towards the base of the tentacle the