

scales or spiny needles. The spines or thorns usually project beyond the surface of the cœnenchyma, and give it a rough or spiny appearance. In the polyps are distinguishable a calycine (not retractile) region, a median œsophageal region, and a tentacular region. The median region can be withdrawn into the calycine portion, so that in the retracted state the tentacular portion rests directly upon the calycine margin. Around the bases of the tentacles lies a ring of peripherally disposed calcareous spindles, forming the collaret. The tentacles fold together down upon the calyx; their bases are well furnished with spicules. When the polyp is contracted the armoured tentacle-bases form an eight-rayed operculum, closing up the calyx.

This family is the richest in specific forms of the Holaxonia. These may be grouped into several genera, chiefly diagnosed from the shape of the spicules, besides which there is to be taken into account the more or less different methods by which the tentacles are retracted within the calyx. This retraction is least developed in *Acanthogorgia* and *Muriceides*, which are, as regards their polyps, nearest perhaps to the Ceratoisidinæ. The power of retraction increases, however, in the succeeding genera, until in the case of *Muricea*, complete concealment within the calyx becomes possible. This last genus forms a transition to the Plexauridæ.

In the subjoined list, all the genera which have been fully diagnosed by Verrill in his various memoirs are accepted. Of the numerous genera recorded by Gray, only those are retained which have been reinvestigated either by Ridley or the authors. Gray's diagnoses being based upon very trivial characters are in most cases insufficient.

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| 1. <i>Acanthogorgia</i> , Gray, <i>emend.</i><br>Verrill.                    | 11. <i>Echinomuricea</i> , Verrill.                |
| 2. <i>Paramuricea</i> , Kölliker, <i>emend.</i><br>Verrill.                  | 12. <i>Echinogorgia</i> , Kölliker.                |
| 3. <i>Hypnogorgia</i> , Duchassaing and<br>Michelotti.                       | 13. <i>Menacella</i> , Gray, <i>emend.</i> Ridley. |
| 4. <i>Muriceides</i> , Wright and Studer.                                    | 14. <i>Heterogorgia</i> , Verrill.                 |
| 5. <i>Anthomuricea</i> , Wright and Studer.                                  | 15. <i>Astrogorgia</i> , Verrill.                  |
| 6. <i>Clematissa</i> , Wright and Studer.                                    | 16. <i>Bebryce</i> , De Phillipi.                  |
| 7. <i>Villogorgia</i> , Duchassaing and<br>Michelotti, <i>emend.</i> Ridley. | 17. <i>Acamptogorgia</i> , Wright and Studer.      |
| 8. <i>Anthogorgia</i> , Verrill.   | 18. <i>Thesea</i> , Duchassaing and Michelotti.    |
| 9. <i>Menella</i> , Gray.  | 19. <i>Acis</i> , Duchassaing and Michelotti.      |
| 10. <i>Placogorgia</i> , Wright and Studer.                                  | 20. <i>Elasmogorgia</i> , Wright and Studer.       |
|  | 21. <i>Muricella</i> , Verrill.                    |
|  | 22. <i>Eumuricea</i> , Verrill.                    |
|  | 23. <i>Muricea</i> , Auct., <i>emend.</i> Verrill. |