

ocular and the tentacular pouches. The total number of lobes is forty-eight, thirty-two of which are large, and sixteen small. In that respect, this genus resembles *Dactylometra*, but it differs from it in having only three tentacles to each tentacular lobe, which, considering the homologies of the structure of these segments of the body, do not correspond to the three large tentacles of *Dactylometra*, but to the middle large tentacles and the two small ones, combined with a great development of the two middle lobes, while the lateral ones are almost rudimentary. From the figure of Mertens', it would appear that the small marginal lobes belong to the ocular, and not to the tentacular pouches. If this is truly the case, this constitutes an additional reason for separating generically *Chrysaora melanaster* from *Chrysaora helvola*, as in that case the marginal structure of the radiating pouches would be reversed in the two genera; the tentacular pouches branching into four sacs in *Polybostrycha*, while there are only two in the ocular pouches; and four sacs in the ocular pouches of *Melanaster*, two of which are large and two small, and only two in the tentacular pouches. The two last genera are thus far only known from the Pacific Ocean, *Polybostrycha helvola* between Sitka and the Aleutian Islands, and *Melanaster Mertensii* on the coast of Kamtschatka. My son has observed another species of each of these two genera on the coast of California.

The genus *Dodecabostrycha* of Brandt is passed over in this enumeration, as it does not belong to the family of Pelagidæ. The genus *Heccædecabostrycha* I have no means of characterizing.

*ZYGONEMA* Ag. Among the drawings made by Mr. J. Drayton, during the United States Exploring Expedition under the command of Captain Charles Wilkes, I find a Medusa, from the harbor of Rio Janeiro, represented under the name of *Pelagia volutata Couth.*, which evidently belongs to this family, but presents a combination of characters not observed in the species thus far mentioned. All the segments between the eyes show four larger lobes, subdivided by shallow indentations, from which arise four tentacles. Such a combination of characters is only intelligible on the supposition that, as in *Pelagia* proper, the marginal sacs of the ocular pouches unite with the marginal sacs of the adjoining tentacular lobes, and that each of the tentacular pouches has six marginal sacs, two of which are united with the sacs of the adjoining ocular pouches, while two and two others, united together, form two independent lobes. But until this Medusa has been examined anew, with reference to this point, the genus to which it belongs must remain doubtful.