

M. canum is to be found in Grimstone, Horne, Pantin and Robson (1958, p. 538) concerning the banding of mesogloecal fibrils based on data provided by Dr. E. J. Batham. This brief list, just presented, represents the total of the literature on *Metridium canum*.

The family, Metridiidae, to which *M. canum* is assigned, is a small one, consisting of two genera, *Metridium* and *Isometridium*. Excluding *Metridium canum* there are the following species known to date; *Metridium senile* (Linnaeus, 1767, p. 1088); *Metridium exilis* Hand (1956, p. 206); and *Isometridium rickettsi* Carlgren (1949, p. 106). Another species, *M. parvulum*, was described by McMurrich (1904, p. 276) from Chile; however, it has not been established that this is a veritable *Metridium*. The distribution of the valid species of *Metridium* and *Isometridium* is limited to the Atlantic and Pacific Oceans, north of the equator, and the occurrence of a species of *Metridium* in the southern Pacific Ocean was of considerable interest to the writer. Therefore, when the opportunity to work for a period at the Portobello Marine Biological Station materialized, I was very glad to address myself to a careful comparison from the systematic point of view of *M. canum* with *M. senile* and *M. exilis*, having studied the latter two earlier (Hand, 1956, pp. 192 and 206). However, examination of both living and preserved specimens of the Otago Harbour species referred to as *M. canum* soon disclosed that this anemone was not a *Metridium* and in fact represented a family of acontiate anemones, the Acontiphoridae, new to the New Zealand fauna. The anemone also must be referred to a genus and species, new both to New Zealand and to the systematics of the Actiniaria. The description follows.

Family ACONTIOPHORIDAE Carlgren, 1938, p. 65

Thenaria (Acontia) without sphincter. Mesenteries divisible into macro- and micronemes, at least in young individuals. Acontia with basitrichs and microbasic amastigophores.

If the above family definition is compared with that given by Carlgren (1949, p. 87) two minor changes will be noted. First, I have added the qualification "at least in young individuals" with reference to the type of mesenterial arrangement. This is necessitated, as will be detailed below, by the fact that in fully mature anemones one would describe the mesenterial arrangement as that of normal cycles, while it is only the young specimens which possess mesenteries readily designated as micronemes and macronemes. The second change concerns the types of nematocysts possessed by the acontia. Carlgren (1938) had only preserved material of *Acontiphorum mortenseni* available to him, and he stated in his 1949 diagnosis of this family that the acontia "probably" contained microbasic amastigophores. The diagnosis of nematocyst types from preserved material is difficult at best and frequently it is impossible to determine the type of some capsules, while it is considerably easier from live material. Thus, since I have found basitrichs and microbasic amastigophores in the material under study here, it seems safe now to alter the family diagnosis by eliminating the suggestion of doubt implied by the word "probably".

Concerning the nematocysts of this family, one additional word of caution should be inserted here. Carlgren's (1938) description of *Acontiphorum mortenseni* gave a partial account of the nematocysts which he supplemented in 1947. In that latter account he stated (p. 105) that as well as basitrichs there also were ". . . probably microbasic p-mastigophores" in the acontia. The kinds of nematocysts in the acontia vary from family to family in the Acontia, but they are constant within each family. Thus, if further examination of *Acontiphorum* should reveal that the nematocysts of the acontia include microbasic p-mastigophores and not the amastigophores assumed here and by Carlgren (1938, 1949), then the genus described below will have to become a member of a new and as yet unnamed family of acontiate anemones.