

NOTES AND NEWS

HYPEROCHE MEDUSARUM (KRØYER, 1838) (AMPHIPODA, HYPERIIDAE) AND *MNEMIOPSIS MCCRADYI* (MAYER, 1910) (CTENOPHORA): A NEW HOST AND FIRST RECORD OF THIS ASSOCIATION FOR THE SOUTHWESTERN ATLANTIC

BY

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The association of gelatinous zooplankton (ctenophores, medusae, siphonophores, and salps) with hyperiid amphipods, has reached a total of 85 species of amphipods up to 1980 (Harbison et al., 1977; Laval, 1980). Some of these amphipods begin their life cycle as obligate parasites, being found afterwards as free-swimming adults in the plankton (Von Westernhagen, 1976; Hoogenbaum & Hennen, 1985; Dittrich, 1992). Others use the host as a substrate, as food for their brood, and protection against enemies during their whole life. The amphipod *Hyperocche medusarum* (Krøyer, 1838), has been found as a parasite on six species of cnidarian medusae and five ctenophores (Laval, 1980; Cahnon et al., 1986). The present study reports its association with *Mnemiopsis mccradyi* (Mayer, 1910) observed on live specimens captured during the austral summer of 2000 in the harbour of Mar del Plata, Argentina (fig. 1). Sixty-eight specimens of Amphipoda were found among the tissues, in cavities of the body, and over the surface of 24 ctenophores, with an average of 2-3 individuals per host. These observations were complemented aboard the RV "Canepa", with fixed samples taken during December 1999 in coastal waters of the district of Buenos Aires, between 36° 30' and 38° 30' S (fig. 1). These specimens were identified on board, previous to their conservation with formalin.

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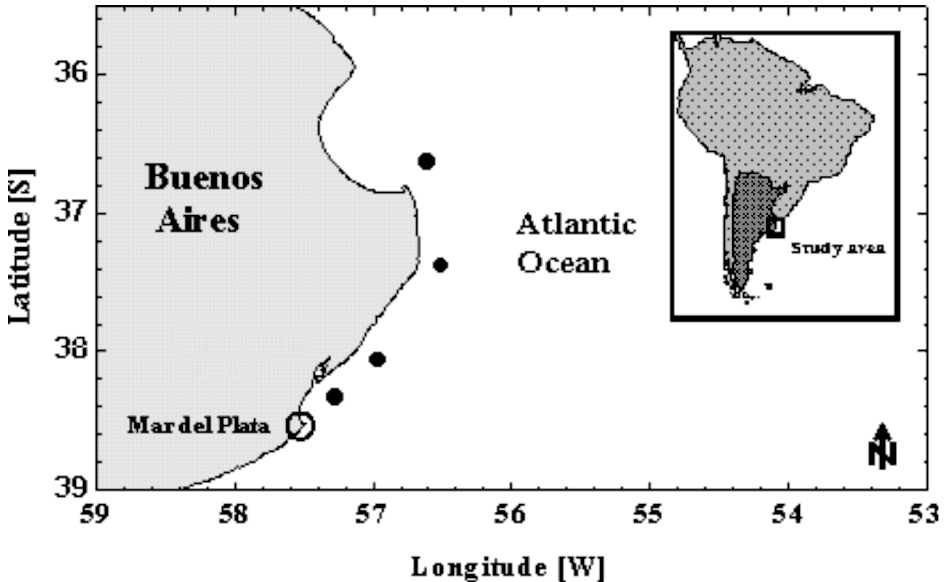


Fig. 1. Locations of the fixed (black dots) and alive (open circle) specimens of *Hyperoche medusarum* (Krøyer, 1838) and *Mnemiopsis mccradyi* (Mayer, 1910) in the southwestern Atlantic, reported on herein.

In living specimens, distribution of the hyperiids over the host differed in relation to their developmental stages (Laval, 1965): the pantochelis were lodged inside the gastric channels or found embedded in the body mass; others were in the lumen formed by the meeting of the 8 radial canals, and thus exposed to the water passage. These results agree with those of Flores & Brusca (1975), who recorded their presence inside the ctenophore *Pleurobrachia bachei* (A. Agassiz, 1860). These authors did not report the presence of specimens larger than 1 mm (protopleon and juveniles stages) on the ctenophore surface. However, we found these stages clinging to the comb plates. In the preserved samples, protopleon and juvenile stages, and adults were found separated from the ctenophores, suggesting they were clinging to the comb plate of their host, as observed *in vivo*. This separation, then, is presumably the result of fixation, as also observed by Laval (1980). Also, the presence of both the parasite and the host in the samples suggests the dependence of the first species on its relation with the other.

Von Westernhagen (1976) and Dittrich (1987, 1988, 1992) suggest a possible free-living existence of *H. medusarum* throughout its life cycle. Our evidence suggests a permanent dependence on its host. This difference also accounts for the type of development of the amphipods: our findings of larval stages in the ctenophores (anamorphic type) disagree with the epimorphic type (lack of larvae) put forward by the authors mentioned. This conforms with the reports of Laval

(1980) and Hoogenbaum & Hennen (1985), who considered most of the hyperiids host-dependent through all their developmental stages, contrary to a free life with only occasional associations with jelly hosts.

Assuming that the distribution and abundance of the amphipods will be determined by the host (Harbison et al., 1977; Lavaniegos & Ohman, 1998), the high abundance of *M. mccradyi* in these waters (Mianzan, 1999; Sorarrain, 1998) could determine the consequent presence of *Hyperoche medusarum*. Our study extends the known geographical distribution of the association of both species to the south-western Atlantic.

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