

ACANTHEMBLEMARIA PAULA, A NEW DIMINUTIVE
CHAENOPSID (PISCES: BLENNIOIDEI) FROM BELIZE,
WITH COMMENTS ON LIFE HISTORY

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Abstract.—*Acanthemblemaria paula* is described from the barrier reef and outlying islands of Belize. The new species is the smallest member of the Chaenopsidae, reaching sexual maturity at 11.5 mm SL or smaller and attaining a maximum size of about 18 mm SL. In addition to its small size, it differs from all other *Acanthemblemaria* by its low number of dorsal-fin spines and distinctive head spination. Confusion of *A. paula* with *A. spinosa* led previous authors to erroneous conclusions about life history parameters of *A. spinosa* and larval recruitment in *Acanthemblemaria*.

In March 1987, we made shallow rotenone collections of fishes at the north end of Carrie Bow Cay, Belize, the site of a Smithsonian Institution field station since 1972. The purpose of these collections was to obtain otoliths for analysis of daily growth increments, and, thus, all specimens were fixed in 95% ethanol. Among the fishes collected were two tiny specimens of the chaenopsid genus *Acanthemblemaria* Metzelaar that we were unable to identify using the most recent generic revision (Smith-Vaniz & Palacio 1974). The ethanol-fixed material was less than ideal for systematic study, but led us to examine the extensive holdings of Belize *Acanthemblemaria* at the Field Museum of Natural History, collected and reported on by Greenfield & Johnson (1981). There, among 12 lots identified as *A. spinosa*, we found 50 additional specimens representing what we were then able to recognize as a previously undescribed species. Returning to Carrie Bow in March 1988, we discovered that the new species is quite common on the reef flat and has habits similar to those of *A. greenfieldi*. The new species is a diminutive form, the smallest known member of the Chaenopsidae, and this may partially explain how it has gone unrecog-

nized, despite its residence in the environs of the very active Smithsonian research facility. As currently known its geographic distribution is restricted to Belize, and specimens were not present in material examined by Smith-Vaniz & Palacio (1974). In this paper we describe the new species and discuss its bearing on the conclusions of Greenfield & Greenfield (1982) concerning life history parameters of *A. spinosa* and habitat partitioning and larval recruitment in *Acanthemblemaria*.

Methods.—Counts and measurements largely follow the methods of Stephens (1963). Pore terminology is that of Smith-Vaniz & Palacio (1974), as modified by Johnson & Greenfield (1976) and Rosenblatt & McCosker (1988). Measurements were made with an ocular micrometer. All lengths are standard length (SL) unless stated otherwise. Vertebral and median fin ray counts were made from radiographs. Tooth and gill-raker counts were determined on cleared and stained specimens. Pore counts and head spine distribution were determined from scanning electron micrographs and whole specimens. Institutional abbreviations are as follows: ANSP, Academy of Natural Sciences of Philadelphia; FMNH,

