TWO NEW AMPHIPOD CRUSTACEANS FROM ANCHIHALINE CAVES IN BERMUDA

BY

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INTRODUCTION

The two Amphipoda described in this paper are both rare in the anchihaline caves of the Walsingham area in Bermuda (see Sket & Iliffe, 1980).

The occurrence of a bogidiellid amphipod was already noted by Sket & Iliffe, I.c. The species in question was not described, but referred to as "Bogidiella martini Stock n. ssp." Recent sampling in Bermudian caves, during and after the International Symposium on Marine Caves (October 1984), has yielded some fresh specimens which form the basis for the following description. B. martini, from St. Martin in the Lesser Antilles, is indeed its closest relative, but the nature of the differences is such that we prefer now to give the Bermudian material full specific rank.

The presence of an ingolfiellid was briefly mentioned by Sket, 1979, and by Sket & Iliffe, 1980. Only a single specimen was originally collected and no new material has been found during subsequent sampling. The presence of an ingolfiellid in Bermudian cave waters is interesting enough to justify the description of the species involved, even though it is based on a single female only.

The ingolfiellids are an old group with a curious distribution pattern (Stock, 1977): (1) some species are bathyal or abyssal; (2) many species occur in inland groundwaters of old continental masses (Europe, Africa, South America); (3) many species occur in coastal groundwaters and interstitial waters. In the West

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2) For a discussion of the spelling "anchihaline" see this issue, p. 107.
Indies, ingolfiellids are absent, except for on the series of islands just off the South American mainland (Stock, 1979): Aruba, Curaçao, Bonaire, Margarita and Los Testigos. It has been assumed that they reached these islands somehow from the South American plate.

The absence of males makes a cladistic comparison of the Bermudian taxon impossible. However, the female morphology seems to point to close relationship with the above category 3, the coastal/interstitial group.

Description of the new taxa

**Bogidiella (Antillogidiella) bermudensis** n. sp. (figs. 1-26)


2 ♀ ♀, same locality, in washings from gravelly sediments from the border of the pool, 20 Apr. 1979. Leg. T. Iliffe, in collection B. Sket.

1 ♀. Roadside Cave (grid ref. 33877 357982), washed from coarse sediments on the border of the terminal cave pool; salinity at surface 1.8‰, at 1 m 20.62‰; 4 Oct. 1984 (ZMA).

Description. — Body length 1.5-2.0 mm (♀), 1.5 mm (♂). Blind, unpigmented.

First antenna (fig. 1) short, about 1/3 of the body length; segment 1 of pedunculus with 1 ventral spine; peduncle segment 2 about 2/3 of the length of segment 1; segment 3 slightly more than half as long as segment 2. Accessory flagellum (fig. 1, detail) 2-segmented; segment 1 long and slender. Flagellum 7-segmented, with very long aesthetes on segments 3, 5, and 6.

Second antenna (fig. 2) shorter than first; flagellum 5-segmented.

Mouthparts minute. Upper lip (fig. 3) very wide. Mandibles asymmetrical in pars incisiva: left lacinia small (fig. 4), right lacinia overreaching the incisor (fig. 5). Pars molaris reduced to a wide lobe bearing 4 spinules. Palp 3-segmented (fig. 6); segment 2 with 1 seta; segment 3 as long as 2, with 3 (sub)terminal setae.

Lower lip (fig. 7) with fused inner lobes, separated in the midline by a V-shaped incision. First maxilla (fig. 9) with 2-segmented palp; outer lobe with 7 spines, 3 of which finely denticulated, the remaining 4 with 2 medial teeth; inner lobe rounded, rather wide, with 2 distal setules. Second maxilla (fig. 8) consisting of 2 lobes, each with 5 or 6 distal setae.

Maxilliped (fig. 10) with 4-segmented palp; segment 3 hardly swollen, claw long. Inner lobe short, with 3 distal, bifid spines (fig. 11). Outer lobe narrow, with 2 simple distal spines (fig. 12).

Coxal plates wider than long, armed with 1 or 2 setules, non-lobate (fig. 13).

First gnathopod (fig. 19): Basis with 1 long and 1 short seta on posterior margin, anterior margin with 1 short seta. Merus produced into an obtuse point, posterior margin with 2 patches of spinules. Carpus strongly produced into a sharp point. Propodus elongate-oval; palmar index (sensu Ruffo, 1973) 0.41; posterior margin with 2 spines; palmar margin with 5 setuliferous spines.