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Talitridae (Crustacea: Amphipoda) from the Northern Mariana Islands, Micronesia

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Abstract Two talitrid species of the genus *Floresorchestia*, *F. anomala* and *F.* sp., are recorded from the northern Mariana Islands for the first time. Preliminary comments on these species are given from taxonomical and zoogeographical viewpoints.

Key words: Taxonomy, zoogeography, northern Mariana Islands, Talitridae, *Floresorchestia*.

The northern Mariana Islands, situated in the northernmost part of Micronesia, compose the southern section of a long chain of archipelagoes which runs longitudinally from Izu, via the Ogasawara (Bonin) Islands. The talitrid fauna has been studied on several islands of Micronesia (Barnard, 1960) and the Ogasawaras (Morino, 1991), but that on the Mariana Islands has not yet been investigated. The present report is the first on this group of animals from this region.

Materials and Methods

The terrestrial Talitridae from the northern Mariana Islands assigned to me for identification consisted of 7 lots of samples. They were obtained from 5 localities on 4 Islands: Agrihan, Pagan, Alamagan and Sarigan. The samples from Pagan and Alamagan were represented by a single specimen; most specimens from Agrihan were in bad condition. At least one specimen was selected from each locality and dissected for close examination. See Kurozumi (1994) for the locality code and detailed information on each sampling point. All the material studied is deposited in the collection of the Natural History Museum and Institute, Chiba.

Results

Family Talitridae

1. *Floresorchestia anomala* (Chevreux, 1901)

Specimens examined. AGRIHAN (Ag-3), forest on the northwest coast (vegetation: *Barringtonia asiatica*), 10 m alt., male (4.5-mm slide mount) CBM-ZC-248, mature female (4.6-mm slide mount) CBM-ZC-249, 1 male and 2 females CBM-ZC-250; 31 May 1992, coll. T. Kurozumi. PAGAN (P-3), forest on the southwest coast (vegetation: *Pandanus tectorius* and *Hibiscus tiliaceus*), 10 m alt., mature female (5.0-mm slide mount) CBM-ZC-251, 25 May 1992, coll. T. Kurozumi. ALAMAGAN southwest slope, immature female (5.2-mm slide mount) CBM-ZC-252, 19 May 1992. coll. T. Kurozumi.

Remarks. The present material well accords with the figures and description of *F. anomala* given by Bousfield (1971), except that the male gnathopod 1 lacks a pellucid lobe on article 4, and the anterior lobe of the coxa on pereopod 5 is shallow. These features may be due to the smaller size compared with Bousfield's material (male 7.5 mm, female 6.5 mm).

Distribution. This species is widely known from the Seychelles, Indian Ocean Islands, Indonesia, Melanesia, to Micronesia (Bousfield, 1971). In Micronesia, Barnard (1960) recorded it from Palau, Yap, Caroline Atolls, Kusaie and Gilbert Islands.

2. *Floresorchestia* sp.

Specimens examined. The west of SARIGAN (S-2), small valley, 270 m alt., mature female (8.5-mm slide mount) CBM-ZC-253, 3 males and 5 females CBM-ZC-254; 15 May 1992, coll. T. Kurozumi. The center of SARIGAN (S-3), inside of the crater (vegetation: *Artocarpus altilis*), 300 m alt., male (6.0-mm slide mount)

CBM-ZC-255, immature female (5.2-mm slide mount) CBM-ZC-256, 1 male and 2 females CBM-ZC-257; 15 May 1992, coll. T. Kurozumi.

Remarks. The present material resembles *Floresorchestia anoquesana* from Marquesas Island (Bousfield, 1971). It is distinguished from the latter in the following points: 1) the male gnathopod 1 has a distinct pellucid lobe on article 4, 2) the anterior lobe of the coxa on pereopod 5 is deep, 3) the rami of pleopod 3 are much shorter than half of the peduncle (24.0–30.0%), 4) the basis of gnathopod 2 in the mature female is expanded anteriorly, and 5) article 4 of gnathopod 2 in the mature female has a strongly expanded pellucid lobe. Also *Floresorchestia* sp. resembles an "atypical" specimen of *F. floresiana floresiana* described from material from Fiji by Barnard (1960) in that the latter has a distinct pellucid lobe on article 4 of both the male gnathopod 1 and the female gnathopod 2. The antennae and uropod 3 of the latter specimen was also not different from that of the Mariana material. However the former is distinguished from the latter in the longer rami of pleopod 3 (60% of the peduncle).

Discussion

The present study revealed the occurrence of *Floresorchestia* from the coastal to mountain forests of the northern Mariana Islands. This genus is known widely from the Carribean region, South Africa, and the tropical Indo-Pacific Islands (Bousfield, 1984). From the Caroline Island Group located south of the Mariana Islands, seven talitrid species are known (Barnard, 1960), and these belong to the genera *Floresorchestia*, *Brevitalitrus*, *Talorchestia*, "*Orchestia*" and "*Talitrus*". Since the talitrids in the Ogasawara Islands are represented by *Platorchestia* and *Paciforchestia* (Morino, 1991), there is a geographical boundary between the Mariana and the Ogasawara Islands, which separates the tropical Indo-Pacific elements from the Japan-Ogasawara elements of the terrestrial talitrids, along the Izu-Mariana Archipelago chain.

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