FIRST RECORDS OF THE TWO CARIDEAN FAMILIES, GNATHOPHYLLIDAE DANA, 1852 AND HYMENOCERIDAE ORTMANN, 1890 (DECAPODA, PALAEMONOIDEA) FROM TAIWAN

BY

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ABSTRACT

The two caridean families, Gnathophyllidae Dana, 1852 and Hymenoceridae Ortmann, 1890, are reported for the first time from Taiwan with three species. One of these, Phyllognathea simplex Fujino, 1973, is herein recorded from the only male known for this species. The two other species, Gnathophyllum americanum Guérin-Méneville, 1855 and Hymenocera picta Dana, 1852, are widely known circumtropical species, but recently controversy arose if these two species are truly cosmopolitan or represent species complexes. The morphological characters and coloration of the Taiwanese material of these three species are described and illustrated.

RÉSUMÉ


INTRODUCTION

Gnathophyllidae Dana, 1852 and Hymenoceridae Ortmann, 1890 are species-poor families. Nevertheless, some species are well-known by their striking coloration and are highly valued in the aquarium trade (Chan, 1998; Calado et al.,

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Although photographs of shrimp belonging to these two families have appeared earlier in some local underwater guide books (Bai & Shia, 1989; Jeng, 1998), Gnathophyllidae and Hymenoceridae have not formally been reported from Taiwan. In the ongoing extensive survey on the decapod crustaceans of Taiwan, three species belonging to these two families were collected. Two are widely known species, *Gnathophyllum americanum* Guérin-Méneville, 1855 and *Hymenocera picta* Dana, 1852. The other is a rare species, *Phyllognathea simplex* Fujuno, 1973, previously known only from females. The specimen of *P. simplex* collected from Taiwan is a male. These two families and three species are reported herein, with their characters and coloration illustrated. The specimens are deposited in the National Taiwan Ocean University, Keelung (NTOU), National Museum of Natural Science, Taichung (NMNS), and the Academia Sinica, Taipei (ASIZ). Postorbital carapace length (cl) and total length (tl, postorbital margin to end of telson) are used for indicating specimen size. The synonymy provided is restricted to important works of the species and to local reports, including field guides.

**SYSTEMATIC ACCOUNT**

**Family GNATHOPYLLIDAE** Dana, 1852

**Gnathophyllum americanum** Guérin-Méneville, 1855

(figs. 1a-c, 2)


*Gnathophyllum zebra* Richters, 1880: 161, pl. 17 figs. 18-20, 22 [type locality: Ilot Fouquets, Mauritius].

*Gnathophyllum pallidum* Ortmann, 1890: 537 [type locality: Tahiti].

*Gnathophyllum tridens* Nobili, 1906: 259 [type locality: Rikitea, Tuamotu Archipelago].

*Gnathophyllum minuscularium* Armstrong, 1940: 9, fig. 4C-K [type locality: The Reach, St. George Island, Bermuda].

Material examined. — Taipei County, Ma-Gang, 27 April 1990, 7 males (cl 3.7-4.7 mm; tl 14.1-16.5 mm), 1 female (cl 5.1 mm; tl 16.7 mm), 1 ovig. female (cl 4.9 mm; tl 15.5 mm), NTOU; 2 June 1992, 1 male (cl 4.3 mm; tl 16.3 mm), 1 ovig. female (cl 5.3 mm; tl 17.8 mm), NTOU. — Kaohsiung County, Shan Jhu Gou, Siao Liou Ciou, 26 May 1999, 1 ovig. female (cl 4.4 mm; tl 13.9 mm), NMNS; Peng-Hu (Pescadores), 1993, 1 male (cl 3.4 mm; tl 13.1 mm), NTOU. — Ping-Tung County, Kenting, Hong-Chai-Keng, 23 March 2005, 1 ovig. female (cl 4.1 mm; tl 13.5 mm), NTOU; Nanwan, March 1997, 1 male (cl 3.5 mm; tl 11.9 mm), 1 ovig. female (cl 3.4 mm; tl 11.3 mm), ASIZ.

Description. — Rostrum (fig. 2a) not overreaching basal segment of antennular peduncle, with 4-6 teeth on entire dorsal margin, with or without minute subdistal