



## ***Gammaropsis (Podocerosopsis) grasslei* (Amphipoda: Photidae) a new species of commensal amphipod of the deep-water lithodid *Neolithodes diomedea* from the Guaymas Basin, Gulf of California**

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### **Abstract**

A new species of commensal amphipod from the hydrothermal vent system of Guaymas Basin is described. *Gammaropsis (Podocerosopsis) grasslei* was recovered from the carapace of the deep-water lithodid *Neolithodes diomedea*. It differs from other *Gammaropsis (Podocerosopsis)* in exhibiting a longer palm of the second gnathopod of male, a highly ornamented entire and fleshy telson and the dense ornamentation of the maxillas.

**Key words:** commensal amphipod, new deepwater amphipod, Guaymas Basin

### **Introduction**

Recent exploration of extreme deep-sea environments has revealed some of the most intriguing forms of life. One of such extreme environments is the Guaymas Basin, located at the center of the Gulf of California (Soto, 2004). This area represents one of the segments of the dispersion center of the oceanic floor located along the meso-oceanic mountain ridge of the Eastern Pacific. Along this mountain ridge at least 7 different places with hydrothermal activity have been discovered at average depths of 2500 m. A non-vent inhabitant in this environmental setting is the large lithodid crab *Neolithodes diomedea* (Benedict, 1894). The crab is a scavenger frequently observed in the area surrounding the hydrothermal vents in Guaymas Basin, displaying random spatial pattern in the abyssal plain though tending to be aggregative in non-active sites (Soto, 1996). This lithodid is an active scavenger carrying on its spinose carapace a significant number of commensal amphipods, mostly gammarids, clinging to its hairy dorsal and branchial carapace surface. One of such amphipods is a new species of *Gammaropsis* here described.

### **Materials and methods**

Amphipods were sampled during two DSRV/ALVIN dives (3207 and 3208) conducted on April–May 1998 at two sites known as Mount Everest and Rebecca's Roost, respectively, at depths between 2000–2100 m. A total of 19 gammarids were recovered from the carapace of a juvenile male and a female lithodid crab; 13 of these specimens corresponded to the new species herein described and the other six belonged to the genus *Ischyrocerus* sp. Seven specimens preserved in 70 % alcohol (dive 3207) were later dissected, and appendages