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Alain raymondi, a new species of deepwater pinnotherid crab (Crustacea: Decapoda: Brachyura) from the Philippines, commensal with holothurians

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Abstract

The second species of the deepwater holothuriophilus pinnotherid genus, *Alain* Manning, 1998, *A. raymondi* **sp. nov**., is described from the Philippines. *Alain* was originally, but erroneously diagnosed as having a 6-segmented male abdomen. All species of *Alain*, however, have a 7-segmented abdomen in both sexes; the generic diagnosis is emended. An unusual feature of species of *Alain* is male androgyny, a phenomenon otherwise known among pinnotherids only from *Nepinnotheres androgynous* Manning, 1993b. We also take the opportunity to report the first case of male androgyny in *Pinnotheres novaezelandiae* Filhol, 1885, a New Zealand species that is herein transferred to *Nepinnotheres*. Among pinnotherids, androgynous males are now known from four species in two genera. Little is known of the biology of most pinnotherids, and androgyny may be significantly more prevalent than currently recognized.

Key Words: Crustacea, Brachyura, Pinnotheridae, *Alain raymondi*, new species, androgyny

Introduction

Most pinnotherids have a 7-segmented abdomen in both sexes. Manning (1998) described a new genus and species of pinnotherid crab from Indonesia, *Alain crosnieri*, commensal with deepwater holothurians. An unusual feature reported for males of *Alain* was a 6-segmented abdomen, derived from apparent the fusion of somites 2 and 3. The only other pinnotherid genera known to have a 6-segmented abdomen are *Ernestotheres* Manning, 1993b (somites 5 and 6 fused), and *Juxtafabia* Campos, 1993b (somites 4 and 5 fused), and some species of *Fabia* Dana, 1851 (see Campos 1996).

The PANGLAO 2005 expedition to the Bohol Sea and the eastern Sulu Sea margin, organized chiefly by the Muséum national d'Histoire naturelle, Paris (MNHN), and the Philippines Bureau of Fisheries (see Richer de Forges *et al.* in press), collected a new species of pinnotherid closely resembling, and apparently congeneric with *Alain crosnieri*, also androgynous and also associated with deep-water holothurians. To our surprise, however, the abdomen of the new species comprised seven rather than the diagnosed six segments, prompting a re-evaluation of the generic characters of *Alain*. In October 2006, Joelle Lai (National University of Singapore) kindly re-examined type material of *A. crosnieri* on our behalf at the Muséum national d'Histoire naturelle, Paris: the abdomen is indeed 7- rather than 6-segmented. The first abdominal somite was evidently overlooked in the original account of *A. crosnieri*, with the second somite mistaken for the first. With the generic affinities of the new species now clarified, it is described herein as the second species of the rediagnosed genus *Alain*.

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