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## The land crabs of the *Discoplax longipes* A. Milne-Edwards, 1867 species group, with description of a new species from Guam (Crustacea: Decapoda: Brachyura: Gecarcinidae)

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### Abstract

Specimens of the gecarcinid land crab *Discoplax longipes* A. Milne-Edwards, 1867, from the western Pacific, can be separated into two distinct groups on the basis of DNA (mitochondrial 16S rDNA and cytochrome oxidase subunit I) and structure of the male first gonopod. On the basis of this data, the material that occurs from the Loyalty Islands to French Polynesia is shown to be *D. longipes* s. str., whereas specimens from Guam are here referred to a new pseudocryptic species, *D. michalis* n. sp. The two species are described and figured; and a revised key to the long-legged *Discoplax* species is provided.

**Key words:** Land crabs, systematics, Gecarcinidae, *Discoplax*, new species, Guam, South Pacific, DNA, 16S rDNA, COI

### Introduction

The Indo-West Pacific land crabs of the family Gecarcinidae MacLeay, 1838, are currently represented by four genera: *Cardisoma* Latreille, 1828, *Discoplax* A. Milne-Edwards, 1867, *Gecarcoidea* H. Milne Edwards, 1837, and *Epigrapsus* Heller, 1862 (Ng *et al.* 2008). *Discoplax* had been synonymised under *Cardisoma* for many years, but studies by Türkay (1987) and Guinot (1985, 1988, 1994) have suggested that the genus was valid. It was formally treated as a full genus, redefined and revised by Ng & Guinot (2001) and currently has five species: *D. celeste* Ng & Davie, 2012, *D. gracilipes* Ng & Guinot, 2001, *D. hirtipes* (Dana, 1851), *D. longipes* A. Milne-Edwards, 1867 (type species), *D. magna* Ng & Shih, 2014, and *D. rotunda* (Quoy & Gaimard, 1824) (Ng *et al.* 2008; Ng & Davie 2012; Ng & Shih 2014).

With regards to the taxonomy of the two species with long ambulatory legs, *D. longipes* A. Milne-Edwards, 1867 (South Pacific) and *D. gracilipes* Ng & Guinot, 2001 (Philippines), a genetic study of a series of specimens from Loyalty Islands, Guam, Philippines, and Niue unexpectedly produced three distinct clades. The population originally identified as “*D. longipes*” from Guam by Ng & Guinot (2001) formed a distinct clade, sister to both *D. gracilipes* from the Philippines and *D. longipes* s. str. from the Loyalty Islands. This discovery necessitated a re-examination of all available specimens previously identified as *D. longipes* from Loyalty Islands, Guam, Niue, and French Polynesia. This material can be separated into two morphological groups. *Discoplax longipes* A. Milne-Edwards, 1867 s. str. is redefined, with the species occurring from the Loyalty Islands to French Polynesia, whereas material from Guam is described as a new pseudocryptic species, *D. michalis* n. sp..

### Material and methods

Specimens examined are deposited in the following institutions: QM (Queensland Museum, Brisbane, Australia);