



# Article

## The genus *Processa* in the vicinity of Carrie Bow Cay (Belize) with description of a new species (Crustacea: Decapoda: Processidae)

SAMMY DE GRAVE<sup>1</sup> & DARRYL L. FELDER<sup>2</sup>

<sup>1</sup>Oxford University Museum of Natural History, Parks Road Oxford OX1 3PW, U.K. E-mail: sammy.degrave@oum.ox.ac.uk

<sup>2</sup>Department of Biology, University of Louisiana, Lafayette, Louisiana, 70504, USA. E-mail: dfelder@louisiana.edu.

### Abstract

Three species of the genus *Processa* are reported from shallow waters of Belize. *Processa manningi*, **sp. nov.**, a new member of the burrow-dwelling group, was most commonly found in burrows of the callianassid *Neocallichirus grandimana* on a lower intertidal unvegetated sand flat. Both sexes of the new species, sometimes as mated pairs, were obtained along with the host during sampling of burrows with yabby pumps. *Processa bermudensis* (Rankin) and *Processa fimbriata* Manning & Chace occurred frequently in sweep net samples taken nocturnally in seagrass beds, but were also taken occasionally from interstices of eroded conch shells and other shallow rubble collected in daylight. Coloration is documented, and its utility as a character discussed. The genus has not been previously reported from Belize.

**Key words:** *Processa*, new species, Processidae, Belize

### Introduction

The genus *Processa* Leach, 1815 is the most speciose of the family Processidae, having a near worldwide distribution, although with few species in colder waters. Overall, the genus contains 49 species, of which 11 occur in the western Atlantic (Manning & Chace, 1971; Christoffersen, 1979; Manning, 1992; Manning & Hart, 1991). Despite the fact that many of these species exhibit wide geographical distributions and are commonly encountered in sampling from shallow seagrass or coralline rubble samples, none have thus far been recorded from Belize where typical habitats abound.

Among shallow water western Atlantic species, many are an important component of the nocturnal shrimp community in tropical seagrass beds (De Grave *et al.*, 2006). Exceptions to this are two burrow-dwelling species, *Processa famelica* Manning & Hart, 1991 from Bermuda and *Processa vossi* Manning, 1992 from Florida. Both species were collected by yabby pump extraction from burrows of callianassid shrimps on shallow sandy flats devoid of seagrasses. The hosts for both these species remain unknown, as indeed does the host for *Ambidexter panamensis* Abele, 1972, another processid reported from burrows in shallow sandy flats (Abele, 1972). Recently, specimens of *A. symmetricus* Manning & Chace, 1971 were also collected by yabby pump from burrows in Bocas del Toro Province, Caribbean Panama (A. Anker, pers. comm.), but as numerous specimens of this species have been reported from seagrass beds and other habitats (Manning & Chace, 1971), the possible occurrence in a host burrow may be an instance of facultative association.

Here we report on three species from Belize, one of which is a new species of burrow-dweller. Material is deposited in the Smithsonian Institution (USNM), Oxford University Museum of Natural History (OUMNH.ZC) and the University of Louisiana at Lafayette (ULLZ). Postorbital carapace length (pocl) is used as the standard measurement of size and indicated in mm; fcn is the unique field collection number; terminology and style of description generally follow Manning & Chace (1971).