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## **New species of *Latreillopsis* Henderson, 1888 (Brachyura: Homolidae) and *Neopalicus* Moosa & Serène, 1981 (Brachyura: Palicidae) from the Hawaiian Islands**

PETER CASTRO<sup>1</sup> & TOHRU NARUSE<sup>2</sup>

<sup>1</sup>Biological Sciences Department, California State Polytechnic University, Pomona, California 91768–4032, USA.

E-mail: [pcastro@csupomona.edu](mailto:pcastro@csupomona.edu)

<sup>2</sup>Tropical Biosphere Research Center, Iriomote Station, University of the Ryukyus, 870 Uehara, Taketomi, Okinawa 907-1541, Japan.

E-mail: [naruse@lab.u-ryukyu.ac.jp](mailto:naruse@lab.u-ryukyu.ac.jp)

### **Abstract**

Two new species of brachyuran crabs belonging to *Latreillopsis* Henderson, 1888 (Homolidae) and *Neopalicus* Moosa & Serène, 1981 (Palicidae) respectively are described from Maui, Hawai‘i. The new species of *Latreillopsis* is distinguished from its nine congeners by a granular carapace and pereopods, a triangular G1, and by the distinctive ornamentation of its carapace and third maxillipeds; the new species of *Neopalicus* from its three congeners by the presence of three triangular anterolateral teeth, absence of extensions on the outer margins of the P3 and P4 propodi, dentate inner margins of the P3, P4 dactyli, and absence of ridges on the female abdomen. Also listed is *Latreillia metanesa* Williams, 1982 (Latreilliidae), recorded for the first time from the archipelago since its description from *Albatross* material collected in 1902.

**Key words:** Brachyura, Homolidae, Latreilliidae, Palicidae, new species, Hawaiian Islands

### **Introduction**

A collection of brachyuran crabs dredged from 91 m off the southwestern coast of Maui, Hawai‘i included specimens belonging to species of *Latreillopsis* Henderson, 1888 (Homolidae) and *Neopalicus* Moosa & Serène, 1981 (Palicidae) that proved to be new. Both species, which are described herein, are so far only known from the Hawaiian Islands, bringing to 42 (15% of a total of 285 reliably known species; see Castro 2011: table 2) the number of brachyuran species known to be endemic to the archipelago.

The terminology used follows the revisions of Homolidae (Guinot & Richer de Forges 1995) and Palicidae (Castro 2000). Paired structures are referred to in the singular in the descriptions of the new species. Carapace measurements, in millimeters, are given as carapace length × width. Carapace length measurements for homolids include the rostrum unless otherwise specified. The following abbreviations are used: cl, carapace length; cw, carapace width; G1, G2, male first and second gonopods. The material is deposited in the United States Natural History Museum (Smithsonian Institution) (USNM) and Zoological Reference Collection of the Raffles Museum of Biodiversity Research, National University of Singapore (ZRC).

### **Taxonomy**

#### **Section Podotremata Guinot, 1977**

#### **Superfamily Homoloidea H. Milne Edwards, 1837**

#### **Family Homolidae H. Milne Edwards, 1837**

denticles (Fig. 4a) (two high, rounded tubercles and no crest in *N. simulus*; Castro 2010: fig. 1A); dorsal, outer margin of cheliped carpus with a conspicuous, high, rounded tubercle (Fig. 4a) (smooth in *N. simulus*; Castro 2010: fig. 1A); outer margins of P3 and P4 carpi with tooth-like tubercles and denticles (Fig. 4a), inner margin dentate (outer margin with rounded tubercles, smooth inner margin in *N. simulus*; Castro 2010: fig. 1A); outer margins of P4 propodi with microscopic tubercles (entire, with wide, convex, carina-like extension in *N. simulus*); inner margins of P3 and P4 dactyli dentate (Fig. 5c) (entire in *N. simulus*; Castro 2010: fig. 1A); and smooth female abdomen, without transversal ridges (transversal ridge along each somite 1–4, less pronounced in other somites in *N. simulus*).

The male of the new species remains unknown. Males of the three congeners are characterized by having elongated abdomens with all somites freely articulating, and a long and slender G1 with sinuous basal portion but very different terminal portions (see Castro 2000: fig. 41a–c for *N. contractus* and *N. jukesii*; 2010: fig. 1D for *N. simulus*). Although some of the differences between the chelipeds of the new species and *N. simulus* may be sex related, the characters of the female holotype alone are distinctive enough to warrant its description as a separate species of *Neopalicus*.

*Neopalicus contractus* is known from across the Indian (type locality: Maldives) and western Pacific oceans (Philippines to New Caledonia and the Marshall Islands). The distribution of *N. jukesii* (type locality: Queensland, Australia) is close to that of *N. contractus* except that *N. jukesii* is also known from the Red Sea and Japan but not from the central Pacific (Castro 2000: fig. 49, 588). Both *N. simulus* and *N. halihali* **n. sp.** are known only from the eastern limits of the Indo-West Pacific region, *N. simulus* from the Austral Islands, French Polynesia, and *N. halihali* **n. sp.** from the Hawaiian Islands. *Neopalicus contractus* and *N. jukesii* have been collected, sometimes sympatrically, in coarse sand near coral reefs at depths of 10–146 m (see Castro 2000: 587), *N. simulus* from rocky bottoms containing coral rubble at 90–200 m (one specimen from 360–840 m; Castro 2010: 78), and *N. halihali* **n. sp.** from coral rubble at 91 m.

The live holotype of the new species was photographed carrying what appears to be a dead fragment of a filamentous red alga (Fig. 4b). Two other species of palicids have been recorded as carrying fragments of sediment or seaweeds with their reduced, dorsally-placed P5, a behavior known as carrying behavior (see Guinot *et al.* 2013: 246, fig. 54). This behaviour is most probably widespread, even universal, among palicids.

The new species represents the fourth species of Palicidae known from the Hawaiian Islands (see Castro 2011: 10, 54).

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