

**New record of the marine littoral ant, *Odontomachus malignus*  
Smith, F. 1859, in Palau**

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## Scientific Note

### New record of the marine littoral ant, *Odontomachus malignus* Smith, F. 1859, in Palau

*Odontomachus malignus* Smith, F. 1859 (Formicidae: Ponerinae) is associated with marine littoral habitats in the Indian and Pacific Oceans (Brown 1976). I recently discovered *O. malignus* in the intertidal zones of limestone island localities known as Lee Marvin Island and Techiyebakl Island, in Palau's southern lagoon. This is a new record and the first published record of this species from Micronesia (cf. Clouse 2007). Subsequently, specimens of *O. malignus* were collected from the intertidal zones of two additional limestone islands in the southern lagoon, Carp Island and Ulebsechel Island.

On Lee Marvin and Techiyebakl, a total of ten *Odontomachus malignus* nest entrances were located by following workers carrying prey. All nest entrances were in sheer vertical bare limestone below the high tide mark. All entrances were inundated during the high tides, which ranged from 5.7 to 6.2 ft (1.7–1.9 m). As a receding tide exposed a nest entrance, workers emerged to hunt for prey on exposed rocks, coral rubble and sand in the intertidal zone. Prey included amphipods, clams, crabs, insects and polychaetes. Workers were observed in the intertidal zone at low tides during the day and at night. Forty-two workers were collected at low tide from the intertidal zones below three of the nest entrances.

At high tide, siftings of leaf litter from dry land directly above an inundated nest entrance of *Odontomachus malignus* on Techiyebakl Island yielded no *O. malignus* specimens but workers of a congener—*Odontomachus simillimus* Smith, F. 1858—were found in the siftings. At the same location at low tide, a transect of 20 protein bait (a piece of hot dog) stations was laid from the leaf litter into the intertidal zone. The lower eight of ten baits in the intertidal zone attracted *O. malignus*. At two stations, groups of four and five *O. malignus* workers were observed carrying the piece of bait. Group transport has not been previously reported for *Odontomachus* spp. (cf. Hölldobler & Wilson 1990). After one hour, baits in the intertidal zone had recruited only *O. malignus* ants while baits above high tide recruited various ants including *O. simillimus*, but not *O. malignus*. At this locality, it appeared that *O. malignus* and *O. simillimus* may occupy mutually exclusive ecological niches, respectively below and above the high tide mark.

*Material Examined.*—*Odontomachus malignus*: LEE MARVIN ISLAND, PALAU. 7°18.059' N 134°29.377' W Intertidal zone; 11-VIII-2007, 19 workers, AR Olsen. TECHIYEBAKL ISLAND, PALAU. 7°18.308' N 134°29.814' W Intertidal zone; 9-IX-2007, 12 workers, AR Olsen. TECHIYEBAKL ISLAND, PALAU. 7°18.316' N 134°29.847' W Intertidal zone; 24-XI-2007, 11 workers, AR Olsen. CARP ISLAND, PALAU. 7°5.294' N 134°16.437' W Intertidal zone; 24-VII-2008, 4 workers, W Law. ULEBSECHEL ISLAND, PALAU. ca. 7°19.7' N 134°30.8' W Intertidal zone; 3-XI-2007, 1 worker, J Czekanski-Moir. ULEBSECHEL ISLAND, PALAU. ca. 7°19.6' N 134°30.4' W Intertidal zone; 16-X-2008, 4 workers, J Czekanski-Moir.

—*Odontomachus simillimus*: TECHIYEBAKL ISLAND, PALAU. 7°18.316' N 134°29.847' W Leaf litter above high tide over *O. malignus* nest site, 24-XI-2007, 10 workers, AR Olsen.

Voucher specimens deposited at Belau National Museum, Field Museum and Harvard Museum of Comparative Zoology.

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