

Pilosity: Fine, loose semi-appressed white pubescence on head, mesosoma and petiole; gaster void of pubescence (some isolated hairs may occur), legs and antennae with dense white pubescence. Head with two standing setae, pronotum with some standing setae (2 - 3), setae on gaster increasing in number and length towards apex of abdomen.

Colour: Almost uniformly reddish brown, only head slightly lighter than rest.

**Distribution** (Philippines: Fig. 47): Widely distributed in the Western Pacific area, with records from Borneo, Philippines, Sulawesi, Palau, New Guinea, New Britain, and Solomon Islands (WILSON 1959, BROWN 1976, OLSEN 2009). BROWN (1976) presents the first records from the Philippines: Tawi-Tawi and Jolo Island in the country's extreme south. Here we present more northern records from the central Philippines, i.e., Bantayan and Bohol.

**Habitats:** WILSON (1959), BROWN (1976), and OLSEN (2009) describe the unusual habitat preference of *O. malignus* in intertidal zones. On Bantayan Island, the second author observed foraging workers in the intertidal zone of coral reef flats during low tide. On Bohol Island, one nest entrance was found in a mangrove close to the open sea.

**Notes:** This is a unique species, morphologically defined by group characters, and ecologically defined by living in intertidal zones.

#### *Odontomachus rixosus* species group

**Diagnosis:** Palp formula: 4, 4. Subapical teeth of mandibles short and truncate (*O. latidens*, *O. monticola*) or only slightly truncate and long (*O. rixosus*). Posterior portion of head tends to be fairly broad. Petiolar node tending to height reduction.

**Diversity and distribution:** BROWN (1976) includes three species: *Odontomachus latidens* MAYR, 1867, *O. monticola* EMERY, 1892, and *O. rixosus* SMITH, 1857. The group comprises those Oriental species with truncate subapical teeth of the mandibles, except *O. simillimus*, which belongs to the *O. haematodus* group (with palp formula 4, 3). *Odontomachus monticola* is distributed from northeastern India to southern China and Vietnam; *O. latidens* from Peninsular Malaysia to Borneo, Sumatra and Java; and *O. rixosus* from southeast Asia to Java, Borneo, and the southern Philippines (BROWN 1976, and this study). *Odontomachus monticola* is strongly varying (see BROWN 1976: pp. 157-159), but some of its synonyms are probably valid species.

In its present concept, the *O. rixosus* group is almost complementary biogeographically to the *O. infandus* group, with one exception: an overlap on the island of Mindanao.

#### *Odontomachus rixosus* SMITH, 1857 (Figs. 40 - 42, 47)

*Odontomachus rixosus* SMITH, 1857: 64 (description of worker; type locality: Singapore).

*Odontomachus rixosus* var. *obscurior* FOREL, 1900: STITZ 1925: 115 (distribution: Binaluan, Palawan) (syn. BROWN 1976).

**Material from the Philippines examined** (34 workers; CSW, NHMW, UPLB): **Palawan:** Mt. Mantalingajan, Pinigisan, 600 m, 11.IX.1961, Noona Dan Expedition, 1 ♀. **Mindanao:** Surigao del Norte: SW Bacuag, Payapag, Little Baguio Waterfalls, 6.II.2000, leg. S. Schödl (9), 33 ♂♂.

**Material from other countries examined:** 105 workers, 9 gynes (CZW, NHMW) from Myanmar (Tenasse-

rim), Thailand, (North, East, Central, South), Malaysia (Peninsular, Sarawak, Sabah), and Indonesia (Sumatra, Mentawai).

**Description of worker:** Measurements: worker with smallest HW: CI 71, HL 2.38, HW 1.68, MdI 57, MdL 1.37, MsL 3.33, PnW 1.05, PtH 0.78, PtL 0.77, PtW 0.42, SI 145, SL 2.43, TL 10.31; worker with largest HW: CI 76, HL 2.57, HW 1.95, MdI 56, MdL 1.43, MsL 3.62, PnW 1.17, PtH 0.84, PtL 0.92, PtW 0.48, SI 131, SL 2.63, TL 12.94.

**Structures:** Mandibles long, with ca. 6 basal denticles (widely separated from each) and three apical teeth: proximate tooth truncated, intercalary tooth only slightly shorter than apical. Head rectangular, broadest at level of eyes. Striation on head until ocular ridge, some more striation between ocular and temporal ridge, rest of head smooth and shiny. Microsculpture on head with fine isodiametric reticulum. Mesosoma elongate, slender and low, broadest at level of pronotum. Pronotum rounded, metanotal groove in lateral view present. Coarse rounded sculpture on pronotum (closed circles visible in dorsal view), metanotum and propodeum with coarse transverse sculpture. Petiole short, smooth and shiny, almost conical, with very short petiolar spine, which is rarely absent in small specimens (for example, *O. rixosus* var. *conifera* FOREL, 1913).

Pilosity: Fine loose semi-appressed white pubescence on head, mesosoma and petiole; distance between hairs approximately their length. Head with two standing setae, tergite 1 without setae, tergite 2 with a few setae, number of setae and length increasing towards apex of abdomen.

Colour: Medium brown, mesosoma slightly darker than head, petiole and gaster.

**Distribution:** (Philippines: Fig. 47) Southeast Asian mainland (Myanmar, Thailand, Peninsular Malaysia, Singapore), Sumatra, Mentawai Islands, Java, Borneo (BROWN 1976, and new material listed above). BROWN (1976) specifically noted the absence of *O. rixosus* from the Philippines, but overlooked the record of *O. rixosus* var. *obscurior* – a taxonomically insignificant colour variation – by STITZ (1925) from Palawan. This record is also lacking in BALTAZAR'S (1966) catalogue. In the material we examined we found more specimens from Palawan and one record from northeastern Mindanao.

**Habitats:** The only encounter in the Philippines by the senior author was at a waterfall area in a slightly degraded dipterocarp forest. Observations from Borneo confirm that *O. rixosus* is a forest species.

**Notes:** There is considerable variation in *O. rixosus*, especially in size and colour, but it seems unconnected with certain geographical populations. This includes the var. *obscurior*, described from Myanmar and Thailand (FOREL 1900), and later recorded from Palawan by STITZ (1925).

In the Philippines, *O. rixosus* can be recognized by group characters, especially by the elongate and truncate subapical tooth of the mandible.

#### *Odontomachus haematodus* species group

**Diagnosis:** Palp formula 4, 3 (one labial palp segment lost by fusion; unique in *Odontomachus*, see BROWN 1976). Head broad. Mandibles stout and relatively short, with short, blunt teeth; apical and especially subapical tooth short, tooth is scarcely or not at all projecting beyond the inner mandibular border (in callow workers, consists of two