

## The Ants of the Genus *Odontomachus* (Insecta: Hymenoptera: Formicidae) in Japan

Masashi Yoshimura<sup>1,2</sup>, Keiichi Onoyama<sup>2,3</sup> and Kazuo Ogata<sup>1</sup>

<sup>1</sup>*Institute of Tropical Agriculture, Kyushu University, Fukuoka, 812-8581 Japan*  
*E-mail: myoshimura@ant-database.org*

<sup>2</sup>*Course of Biotic Environment, the United Graduate School of Agricultural Sciences, Iwate University, Department of Agro-Environmental Science, Graduate School of Obihiro University, Inada-cho, Obihiro, Hokkaido, 080-8555 Japan*

<sup>3</sup>*Nishi 21, Minami 4-11-9, Obihiro, Hokkaido, 080-2471 Japan (present address)*

(Received 22 May 2006; Accepted 18 January 2007)

Species of the ant genus *Odontomachus* in Japan are revised. Type comparison and detailed morphological analysis show that *O. kuroiwae* (Matsumura, 1912) is an independent species from *O. monticola* Emery, 1892 and that the former species is distributed in Okinawa Island and Okinoerabu Island in the Ryukyu Islands. Lectotypes of both species are designated. All three castes of *O. kuroiwae* and *O. monticola* are characterized. All castes of *O. kuroiwae*, and the worker and male of *O. monticola*, are illustrated with scanning electron micrographs and light micrographs. The queen of *O. kuroiwae* is described for the first time. *Odontomachus kuroiwae* and *O. monticola* are morphologically distinguished and taxonomically discussed. Our morphological analysis suggested that *O. monticola* consists of a complex of several species. Additional notes on the morphology and distribution of both species in Japan are also given.

**Key Words:** Insecta, Hymenoptera, Formicidae, *Odontomachus kuroiwae*, *Odontomachus monticola*, worker, queen, male, taxonomy.

### Introduction

The genus *Odontomachus* contains large-sized ants belonging to the tribe Ponerini of the subfamily Ponerinae (Bolton 2003). The genus is characterized by linear mandibles, a nuchal carina running on the posterior dorsal surface of the head, a slender body, and a conical petiole. These ants are rather common on the floor of tropical forests (Ward 2000). Brown (1976) made a world-wide taxonomic revision of the genus and listed 51 valid species. Bolton (1995) cited 60 species and two fossil species in his catalogue. The latest list of Japanese ants (Terayama 2004) showed two species of the genus in Japan, *O. monticola* Emery, 1892 and *O. kuroiwae* (Matsumura, 1912).

The first record of *Odontomachus* in Japan was made by Matsumura (1912) from Okinawa Island in the Ryukyu Islands. He described the material as a new species, *Myrtoteras kuroiwae* Matsumura, 1912, the generic name being a misspelling of *Myrmoteras*, as the author later acknowledged (Matsumura and Uchida 1926). This species was later synonymized under *O. monticola formosae* Forel, 1912 (Teranishi 1940). Up until now this genus has been recorded in the southern part of