

Ants of the genus *Myrmica* (Hymenoptera: Formicidae) from Vietnam, with a description of a new species

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Abstract

Myrmica schoedli sp.n. is described from workers and a single queen collected on the mountains of northern Vietnam, and its taxonomic position is discussed. A first record of *M. angulata* in Vietnam is reported and a first description of its queen is given. A short review of the *Myrmica* species known from Vietnam and a key for their identification are provided. It is proposed that *M. draco*, *M. yamanei* and *M. schoedli* sp.n. should be placed in the *M. draco* complex (a new complex in the *M. rita*e species group) based on their unusual combination of morphological features.

Key words: Ants, Formicidae, *Myrmica schoedli*, taxonomy, new species, key, Vietnam.

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Introduction

The majority of *Myrmica* species live in the Temperate Zone of the Holarctic Region, but some also live on high mountains in the northern parts of the Oriental Region. The latter mostly belong to the *M. rita*e species group that ranges from Taiwan to the Himalayas, including southern China, northern Burma, Thailand, and Vietnam (RADCHENKO & ELMES 1998, 1999, 2001b, ELMES & RADCHENKO 1998, RADCHENKO & al. 2001). The *M. rita*e group contains unusual *Myrmica* species represented by the specimens found in Baltic Amber from the late Eocene (RADCHENKO & al. in press). The female castes differ from other Palaearctic *Myrmica* in a variety of morphological features, particularly in the very long propodeal spines, long and low petiole, fig-shaped postpetiole and long antennal scape, which is weakly curved at the base and is usually longer than the head. Only a few males of *M. rita*e group species are in the different World ant collections, and males of most species are unknown.

We think some species of the *M. rita*e group have been fairly well conserved since the Eocene, surviving in the mountains of Southeast Asia where they have given rise to many local endemics (RADCHENKO & al. in press). Therefore when Katsuyuki Eguchi (Kagoshima University, Japan) and one of us (BTV) investigated the ant fauna of the mountains of North Vietnam, it was no surprise that they collected specimens of species belonging to the *M. rita*e group (RADCHENKO & ELMES 2001a). More recently they made further collections of *Myrmica* in these mountains and took specimens of a new species, *Myrmica schoedli* sp.n., and a queen of *M. angulata* RADCHENKO & al., 2001 for the first time. Here we describe the new

species and the queen, review the *Myrmica* fauna of Vietnam and provide a key to the Vietnamese species.

Materials and methods

This review is based on examination of the types of previously known Vietnamese *Myrmica* species and on additional material collected by B.T. Viet and K. Eguchi. The type material examined is deposited in the following Museums and collections: The Natural History Museum, London, UK (BMNH); Museum of Comparative Zoology at Harvard University, USA (MCZ); Institute of Zoology of the Ukrainian National Academy of Sciences, Kiev, Ukraine (IZK); collections of Seiki Yamane, Kagoshima University, Japan (YAMANE), Graham W. Elmes, Centre for Ecology and Hydrology, UK (ELMES), and B.T. Viet, Institute of Ecology and Biological Resources, Vietnam (VIET).

Measurements of specimens were made for each caste (accurate to 0.01 mm) and these were used to calculate various indices:

Morphometrics:

- HL Maximum length of head in dorsal view, measured in a straight line from the anteriormost point of clypeus (including any carinae or rugae, if they protrude over the anterior margin) to the mid-point of the occipital margin.
- HW Maximum width of head in dorsal view behind (above) the eyes.
- FW Minimum width of frons between the frontal carinae.