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Pheidole (Insecta: Hymenoptera: Formicidae: Myrmicinae)**

KATSUYUKI EGUCHI



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A revision of Northern Vietnamese species of the ant genus *Pheidole* (Insecta: Hymenoptera: Formicidae: Myrmicinae)

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Abstract

Northern Vietnamese species of the ant genus *Pheidole* (Myrmicinae: Pheidolini) were revised, and 31 species including six new species were recognized: *capellinii* Emery, *colpigaleata* Eguchi, *dugasi* Forel, *elongicephala* **sp.n.**, *fervens* F. Smith, *fervida* F. Smith, *fortis* Eguchi, *foveolata* Eguchi, *gatesi* (Wheeler), *hongkongensis* Wheeler, *indosinensis* Wheeler **stat.n.**, *laevicolor* Eguchi, *laevithorax* **sp.n.**, *magna* Eguchi, *megacephala* (Fabricius), *noda* F. Smith, *ochracea* **sp.n.**, *parva* Mayr, *pieli* Santschi, *plagiaria* F. Smith, *planifrons* Santschi, *rabo* Forel, *rugithorax* **sp.n.**, *smythiesii* Forel, *taipoana* Wheeler, *tjibodana* Forel, *tumida* **sp.n.**, *vieti* **sp.n.**, *vulgaris* Eguchi, *yeensis* Forel, *zoceana* Santschi. The following cases of synonymy were resolved: *Myrmica agilis* F. Smith as a junior synonym of *Pheidole megacephala*; *Pheidole rhombinoda* var. *stella* Forel, *P. rhombinoda* var. *formosensis* Forel, *P. rhombinoda* var. *taprobanae* Forel, and *P. nodus* var. *flebilis* Santschi as junior synonyms of *P. noda*; *Pheidole peguensis* r. *yomensis* as a junior synonym of *P. plagiaria*; and *Pheidole smythiesii* var. *bengalensis* Forel and *P. bhavanae* Bingham as junior synonyms of *P. smythiesii*. The lectotype was designated for the following species: *Pheidole dugasi*, *P. rhombinoda* var. *stella*, *P. peguensis* r. *yomensis* and *P. sulcaticeps* r. *yeensis*. A key to N. Vietnamese species of *Pheidole* based on the worker caste is given.

Key words: *Pheidole*, Indo-China, Vietnam, taxonomy, regional revision

Introduction

The ant genus *Pheidole*, belonging to the tribe Pheidolini in the subfamily Myrmicinae, contains 957 named species in the world (Bolton *et al.* 2006) and is hyperdiverse, especially in tropical/subtropical regions (Wilson 2003). The genus is one of the most abundant ant genera in natural forest ecosystems (Ward 2000), and it is considered a key-stone taxon because its members are predators, scavengers, seed dispersers, seed predators, prey for other animals, and soil-mixing agents. Some *Pheidole* species are common in rural and urban areas, agroecosystems and other man-made habitats. For example, *Pheidole megacephala* (Fabricius), an African native, is now one of the most famous invasive ants. Widespread in the world tropics and subtropics, *P. megacephala* not only strongly affects the native faunas (Wetterer 1998, Hoffmann *et al.* 1999, Vanderwoude *et al.* 2000) but also causes serious agricultural losses. The species attends and decreases the mortality of honeydew-producing homopteran pests which often cause diseases of crops (Petty & Tustin 1993, Reimer *et al.* 1993, Campbell 1994, González-Hernández *et al.* 1999). On the other hand, some *Pheidole* species (including *P. megacephala*) act as major predators of small herbivorous pests in some cropping systems (Godfrey *et al.* 1989, van den Berg *et al.* 1997, Goebel *et al.* 1999, Way & Khoo 1992, Mansfield *et al.* 2003, Stuart *et al.* 2003).

In comparison with the New World fauna of the genus (e.g., Gregg 1959; Wilson 2003), the Oriental fauna has so far been poorly studied. Since Ogata's revision of Japanese species (Ogata 1982), however, valuable taxonomic and faunistic studies of Chinese species have been provided by Xu *et al.* (1998), Zhou & Zheng (1999) and Zhou (2001), and those of other Oriental species by Eguchi (1999, 2000, 2001a, b, 2003, 2004a, 2006), Eguchi & Bui (2005) and Eguchi, Yamane & Zhou (2007). In the present study, I revise the taxonomy of *Pheidole* species of Northern Vietnam in order to contribute to our better understanding of the myrmecofauna of Indochina, a part of the great "Green Corridor" connecting tropical rain forests in Southeast Asia with temperate deciduous and northern conifer forests in East/Far East Asia.