

Taxonomic notes on the *Volucella pellucens* species group (Diptera: Syrphidae) with a description of one new species from the Eastern Palearctic

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Abstract

Volucella thompsoni n.sp. is described and illustrated. The following characters distinguish it from the other species of the *Volucella pellucens* group: 1) abdominal tergite 2 longer than tergite 3, or at most 2.4x wider than long; 2) male basoflagellomere in lateral view slightly constricted in middle; and 3) surstylus greatly shortened in lateral view. This species was erroneously named as *V. matsumurai* Han et Choi replacing *V. pellucens* var. *japonica* Matsumura for homonymy. Subsequent examination of the holotype of *V. pellucens* var. *japonica* revealed that it was merely a variant of *V. pellucens tabanoides* Motschulsky. In addition, we compared *V. thompsoni* n.sp. with the other known species and subspecies of the *pellucens* species group (*V. inflata*, *V. nigricans*, *V. pellucens pellucens* and *V. pellucens tabanoides*). For *V. pellucens*, we discussed the status of the Asian and European populations, and provided a justification for recognizing them as two subspecies. We also provided a key and diagnoses for the included species with the detailed illustrations of their male genitalia and other body parts.

Key words: Diptera, Syrphidae, Volucellini, *Volucella thompsoni*

Introduction

The genus *Volucella* (Diptera: Syrphidae) includes large and robust flies, which appear to mimic bumblebees or wasps. So far as known, the larvae of these flies are scavengers or predators in the nest of social bees and wasps (Ôhara, 1985a; Rotheray, 1993). The 42 recognized world species of *Volucella* show mainly Palaeo-Oriental distribution, but two widely distributed species extend their ranges to Nearctic and Australasian regions respectively (Knutson et al., 1975; Peck, 1988; Thompson and Rotheray, 1998; Barkalov,