



A key to species of the genus *Hylaeus* (Hymenoptera: Colletidae) from mainland of China with descriptions of new species and new records

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Abstract

The subgenus *Hylaeus* (*Dentigera*) Popov is recorded from East Asia for the first time based on a new species, *Hylaeus luna* **sp. nov.**, from Hubei, China, herein described. *Hylaeus concinnus* Cockerell, *H. dolichocephalus* Morawitz, *H. niger* Bridwell and *H. paulus* Bridwell are recorded from China, as well as *H. dorni* Dathe whose female is described. A key to all species of *Hylaeus* known to occur in mainland China is presented.

Key words: Colletidae, *Hylaeus*, *Dentigera*, new species, China

Introduction

The genus *Hylaeus* Fabricius (Colletidae: Hylaeinae) is widely distributed, occurring in all continents, except Antarctica, and also on many islands (Michener 2000). It is easily identified by the following characters: minute to small; slender, hylaeiform; black or rarely partly red, usually with limited yellow or white integumental markings on face and thorax; the glossa of both sexes is short and subtruncate to weakly bilobed (but with a small median point in males of the subgenus *Hylaeorhiza*), and lacks seriate hairs but has fine hairs on the posterior surface; the mesepisternum normally lacks a strong ridge or spine in front of the middle coxa (although there is a distinct vertical ridge there in the subgenus *Hylaeorhiza*); the apex of the hind tibia, on the outer surface, lacks spines; scopa of female entirely absent (Michener *et al.* 1994; Michener 2000).

In the Palearctic Region, important regional research on the systematics of the genus include those of Méhely (1935), Elfving (1951), Benoist (1959), Dathe (1980a), and Koster (1986) for Europe; Dathe (1993) for the Canary Islands; Ikudome (1989) for Japan; and Dathe (1980b, 1986a) for Iran and Mongolia; Meade-Waldo (1923) catalogued the species of this and other genera of Hylaeinae (Michener 2000), Warncke (1972, 1981, 1984, 1992) for Israel and west-palearctic; Proshchalykin (2003a, 2003b, 2004a, 2004b, 2004c, 2004d, 2005, 2007) and Ignatenko and Proshchalykin (2005) for Russia. However, the genus is still poorly studied taxonomically in China. Prior to this study, only 19 species of this genus had been recorded in China, four of which occur in Taiwan and 15 on the mainland (Cockerell 1911; Dathe 1986a, 2005; He 2004; Hua 2006; Ikudome 1991, 1998; Morawitz 1890; Wang *et al.* 1992; Wu 1965, 1982, 1992). In this paper, we describe one new species, *H. luna* **sp. nov.**, belonging to the subgenus (*Dentigera*) and record five species of *Hylaeus* not previously documented to occur in China: *H. dorni* Dathe, *H. concinnus* Cockerell, *H. dolichocephalus* Morawitz, *H. niger* Bridwell and *H. paulus* Bridwell. In addition, the previously undescribed female of *H. dorni* Dathe is described. A checklist and an identification key to the species of the genus *Hylaeus* from mainland of China are presented.