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First record of the genus *Baptista* Distant, 1903 (Heteroptera: Veliidae) from China, with descriptions of two new species

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Abstract

The genus *Baptista* Distant, 1903, is recorded for the first time from China. Four species are treated in this paper, with *B. digitata* Andersen, 1989 and *B. hoedli* Zettel, 2004 newly recorded from China and two additional species, *B. curvicornis* sp. n. and *B. obtusa* sp. n., described as new to science. Photographs of the male and female dorsal habitus, male fore legs, male abdominal sternites, and male genitalic structures are provided, accompanied by line drawings of the male fore tibial details, male paramere, habitat photographs, and a distribution map for all *Baptista* species. A key to all four species occurring in China is also provided to assist in future identification.

Key words: Hemiptera, Veliidae, *Baptista*, new species, new records, China

Introduction

The Oriental genus *Baptista* was established by Distant in the *Fauna of British India* with the type species *B. gestroi* Distant, 1903 from Burma. Andersen (1989) revised this genus and described three new species, *B. femoralis* (Thailand, West Malaysia), *B. digitata* (Thailand), and *B. angulata* (southern India). In the same paper, an apparently closely related genus, *Lathriovelina* Andersen, 1989 was described as new, containing two species from the Malay Peninsula, *L. capitata* and *L. collaris*. Later, Kovac & Yang (2000) added *L. rickmersi*, revised the genus *Lathriovelina*, and transferred *L. collaris* to *Baptista*; they also defined the *B. femoralis* species group, containing all species except *B. gestroi* Distant, 1903. Zettel (2004) described a new species *B. hoedli* from Laos and also defined the *B. collaris* species group, containing *B. collaris* and *B. hoedli*. Gupta and Khandelwal (2005) described a new species *B. sushmae* from India. Zettel (2011) also described an extinct new species *B. vetai* from Eocene Baltic amber.

In the present paper, the genus *Baptista* is recorded for the first time from China. Two previously described species *B. digitata* Andersen, 1989 and *B. hoedli* Zettel, 2004, are newly recorded from China, and two additional new species, *B. curvicornis* sp. n. and *B. obtusa* sp. n., are described. With these additions, there are now 10 described species worldwide (including the extinct species *B. vetai*). Photographs of the male and female dorsal habitus, male fore legs, male abdominal sternites, and male genitalic structures are provided, accompanied by line drawings of the male fore tibial details, male paramere, habitat photographs, and a distribution map for all *Baptista* species. A key to all four species occurring in China is also provided to assist in future identification.

Depository, material and methods

All the specimens examined during this study are deposited in the Institute of Entomology, College of Life Sciences, Nankai University, Tianjin, China (NKUM) except for the holotype of *Baptista collaris* (Andersen, 1989), which is deposited in the Smithsonian Institution, Washington, DC, USA (USNM) now. The genitalic

Key to *Baptista* species of China (males)

1. Fore femur highly modified, strongly bent on apical third, ventral surface with large pilose tumescence before apex (Fig 14); abdominal ventrite VI produced posterolaterally on each side into a pilose, fingerlike, posteriorly-directed projection (Fig 10); paramere falciform, apex pointed (Figs 27, 28) *B. digitata*
- Fore femur not modified as above (Figs. 15–17); abdominal ventrite VI normal, lacking fingerlike projection pleurally; paramere not falciform, shape variable, apical portion often dilated to varying degrees 2
2. Head yellow dorsally (Fig 6); fore tibia with conspicuous row of short, stout, black protuberances ventrally (Fig 19); abdominal ventrite VII with posterior margin bearing a deep, angular incision medially, this incision separating a pair (1+1) of posteriorly-directed, apically concave projections which contact a similar pair of anteriorly-directed projections arising from abdominal ventrite VIII (Fig 12). *B. curvicornis* **sp. n.**
- Head blackish dorsally; fore tibia with conspicuous row of short, black spines ventrally (Figs 18, 20); abdominal ventrite VII with posterior margin medially incised, but lacking a pair of projections as above (Figs 11, 13). 3
3. Legs relatively slender; fore tibia straight (Fig 15); abdominal ventrite VII with posterior margin bearing a V-shaped incision posteromedially (Fig 11); segment VIII and proctiger as illustrated (Figs 22, 29); paramere distally widened, apex curved, acute (Figs 30, 31). *B. hoedli*
- Legs relatively stout; fore tibia slightly curved (Fig 17); abdominal ventrite VII with posterior margin bearing a U-shaped incision posteromedially (Fig 13); segment VIII and proctiger as illustrated (Figs 23, 35); paramere slightly curved on central portion, apex rounded, blunt (Figs 36, 37). *B. obtusa* **sp. n.**

Discussion

The genus *Baptista* is widely distributed in the Oriental Region, having now been recorded from Burma, Laos, India, Thailand, Peninsular Malaysia, and Southwest China. Our understanding of this genus is limited partly because of its secluded and cryptic habitats. *Baptista digitata* of the *B. femoralis* species group was collected in small, dark water-filled holes at the foot of rock seeps (Figs 40, 41, 42), and *B. obtusa* **sp. n.** of the *B. collaris* species group was collected between gravel and rocks along stream banks (Figs 43, 44, 45) (personal observation of the first author).

The genus *Baptista* includes three putative clades, consisting of *B. gestroi*, the *B. femoralis* species group (Kovac & Yang 2000.), and the *B. collaris* species group (Zettel 2004). In this paper, we redescribe *B. digitata* and *B. hoedli*, and add *B. curvicornis* **sp. n.** and *B. obtusa* **sp. n.** to the *B. collaris* species group. In addition, we have also re-examined the holotype of *B. collaris* (Figs 38, 39), thereby allowing us to evaluate comparatively the character states of all species held within the *B. collaris* species group. Based on our analysis, the characters used by Zettel (2004) to define the *B. collaris* species group are not consistent with the character states seen in the holotype of *B. collaris*, and this species group will therefore need to be redefined. In addition, careful morphological and molecular studies are needed to establish an accurate pattern of relationship between the *B. collaris* species group and the remaining species in *Baptista*. This matter will be dealt with in greater detail in a subsequent paper.

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