A Revision of the Genus Holopsis Broun (Insecta: Coleoptera: Corylophidae) from Japan

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The genus Holopsis Broun, 1883 from Japan is revised. Five species including two newly recorded species and one new species are described: H. punctipennis (Matthews, 1899), H. kirejtshuki Bowestead, 2003 (new record), H. kurilensis Bowestead, 2003 (new record), H. lewisi Bowestead, 2003, and H. ryukyuensis sp. n. Males of H. punctipennis and H. lewisi are described for the first time.

Key Words: Coleoptera, Corylophidae, Holopsis, revision, Japan.

Introduction

Members of the corylophid beetle genus Holopsis Broun, 1883 are characterized mainly by having open procoxal cavities, complete postcoxal lines, and wings with a medial fleck (Ślipiński et al. 2009). More than 30 species of this genus have been described from throughout the world except for the Afrotropical and Antarctic regions; in Japan, however, members of this genus have been poorly researched, and only Holopsis punctipennis (Matthews, 1899) and H. lewisi Bowestead, 2003 have been recorded until now. Both of these species were clearly described with some illustrations by Bowestead (2003), but the descriptions were based only on female specimens. In this paper, I revise the genus Holopsis from Japan based on many specimens from museum collections in Japan; specimens from my private collection are likewise included. Furthermore, I describe and illustrate both male and female morphology for all five represented species.

Materials and Methods

Dried and ethanol-preserved specimens were used. Dissections were carried out mainly in glycerol using a Nikon SMZ800 stereoscopic microscope. Dissected body parts, including aedeagi and spermathecae, were poorly cleaned in 10% KOH solution. Aedeagi and spermathecae were stained with chlorazol black solution. Observations were performed using a Nikon SMZ800 stereoscopic microscope and a Nikon E800 compound light microscope. Photographs were taken using a Nikon DIGITAK SIGHT DS-Fi1, and illustrations were made based on the photographs with Adobe Illustrator CS5. SEM photographs were taken using a Hitachi S-2250N scanning electron microscope.

Measurements were made using a micrometer as follows: body length, from the apical margin of the pronotum to the apex of the elytra along the median line; body width and width of the elytra, across the elytra at their widest part; length of the pronotum, along the median line; width of the pronotum, at its widest part; length of the elytra, along the median line; length of the metaventrite, along the median line; width of the metaventrite, at its widest part.

Dissected parts were covered with euparal on a small slide glass based on the method of Maruyama (2004), or preserved in genitalia tubes or microtubes with glycerol, and pinned under the specimen.

Type specimens were deposited in the following collections. EUMJ: Ehime University, Matsuyama, Japan; SEHU: Systematic Entomology, Hokkaido University, Sapporo, Japan; BMNH: The Natural History Museum, London, United Kingdom; SBCC: S. Bowestead Collection; SMNS: Staatliches Museum für Naturkunde, Stuttgart, Germany; MZH: Finnish Museum of Natural History, Helsinki, Finland; ZIN: Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.

Label data of the type material examined in this study follow the original spellings between quotation marks. A forward slash indicates a subsequent line of the label and a double forward slash indicates separate labels. If label data were written in Japanese, the words are transliterated into Roman characters, followed by the words “in Japanese” between parentheses, and enclosed in square brackets. For type material not examined in this study, only the locality and depository are shown; more detailed information is shown in Bowestead (2003). The terminology in this study follows that of Bowestead (1999) and Ślipiński et al. (2010).

Genus Holopsis Broun, 1883

Holopsis Broun, 1883: 498 [type species: Holopsis nigellus Broun, 1883, designated by Bowestead (1999)].
Corylophodes Matthews, 1885: 160 [type species: Corylophodes punctipennis Matthews, 1899, designated by Paulian (1950)].