

# Six campoplegines new to Germany, including first record of *Breviterebra Kusigemati*, 1982 (Campopleginae, Ichneumonidae, Hymenoptera) from the Western Palearctic

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Haraldseide, H. 2023. Six campoplegines new to Germany, including first record of *Breviterebra Kusigemati*, 1982 (Campopleginae, Ichneumonidae, Hymenoptera) from the Western Palearctic. *Norwegian Journal of Entomology* 70, 6–9.

*Breviterebra laticlypeata* Kusigemati, 1982, *Casinaria krieckbaumeri* (Costa, 1884), *Cymodusa ambigua* Dbar, 1984, *Nepiesta jugicola* Strobl, 1904, *Macrulus areolaris* Horstmann, 1978 and *Meloboris pseudocollector* Haraldseide, 2021 are reported from Germany.

Key words: Hymenoptera, Ichneumonidae, Campopleginae, *Breviterebra*, Germany, Europe.

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## Introduction

Campopleginae is a species rich subfamily in the very large hymenopteran family Ichneumonidae. There are currently 838 species of Campopleginae known from Europe including the species reported below (Klopfstein *et al.* (2022), Riedel (2022)). In the current paper six species are reported new to Germany, including notes on identification and distribution of the genus *Breviterebra* Kusigemati, 1982 which is recorded from the Western Palearctic for the first time.

## Material and methods

The author was given the opportunity to study ichneumonid wasps from the German Alps collected in Malaise traps in 2015 by D. Doczkal and J. Voith. The material included several interesting specimens and new records for Germany. Most of the specimens treated here have been DNA barcoded and are available in the Barcode of Life Database (Ratnasingham & Hebert (2007, 2013)). BOLD Sample IDs

are included under their respective records. Photographs of *Breviterebra* type material and photographs of a specimen from the Townes collection have been seen. Terminology follows Broad *et al.* (2018). Figure 2 is modified from *Where on earth* in Taxapad (Yu *et al.* (2016)).

## *Breviterebra laticlypeata* Kusigemati, 1982

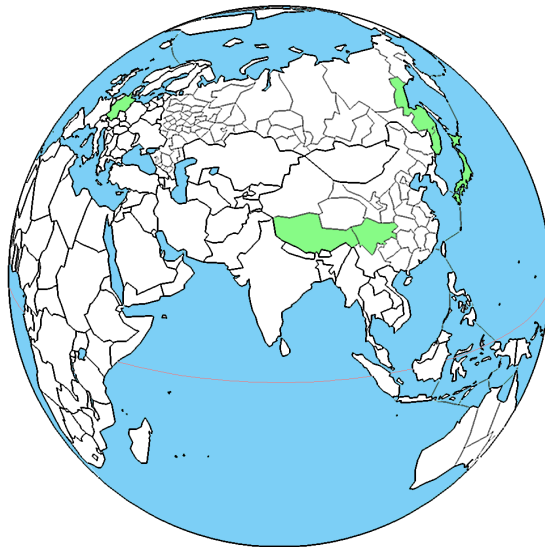
### Figure 1

*Breviterebra* is a small genus that up to recently included only the type species *Breviterebra laticlypeata* Kusigemati, 1982. *Breviterebra apicocrinis* Han, Achterberg & Chen, 2022 was recently described from China (Han *et al.* 2022). *Breviterebra laticlypeata* is known from Japan (Kusigemati (1982)) and the Russian Far East (Kasparyan & Dbar (1985)), the newly discovered German specimen is the first record of the genus outside the Eastern Palearctic and Oriental regions (Figure 2).

Although distinct and readily identifiable (at least in a Western Palearctic context), recognition of *Breviterebra* is difficult because Townes (1970) precedes the description of the genus and Khalaim



**FIGURE 1.** German specimen of *Breviterebra laticlypeata* Kusigemati, 1982. A. Habitus. B. Head in frontal view. C. Propodeum.



**FIGURE 2.** Currently known distribution of *Breviterebra* Kusigemati, 1982

& Kasparyan (2007) did not include it in their key to genera of the Russian Far East.

*Breviterebra* can be recognised by the following combination of characters: Glymmae large, areolet open (vein 3rs-m missing), area superomedia closed, ovipositor short, nervellus (veins 1Cu and cu-a) bent/intercepted, discoidella (vein 2Cu) spectral or in the form of a crease. Hind basitarsus without ventral row of closely set hairs. The two latter characters separates *Breviterebra* from *Eriborus* Förster, 1869 and *Diadegma* Förster, 1869, though both characters can be difficult to interpret and are sometimes ambiguous.

The German specimen matches closely the original description and the photographs seen by the author (see Material and methods). Hind femur 4.3–4.5 times as long as wide and antennae with 25–26 segments in the description, hind femur 3.7 times as long as wide and antennae with 24 segments (22 flagellomeres) in the German specimen.

**Material:** GERMANY: Bavaria, Ammergebirge, Oberstdorf, Saegertal, 47.572N 10.881E, 1430m a.s.l., 26 June–22 July 2015, 1♀ (BOLD Sample ID: CollHH3325), leg. D. Doczkal.

#### *Casinaria krieckbaumeri* (Costa, 1884)

**Material:** GERMANY: Bavaria, Allgäu, Oberstdorf, Engenkopf, 47.394N 10.214E, 1210m a.s.l., 21 August–4 September 2015, 1♂ (BOLD Sample ID: CollHH3466), leg. D. Doczkal & J. Voith.

#### *Cymodusa ambigua* Dbar, 1984

**Material:** GERMANY: Bavaria, Allgäu, Kempten, Duerrenbuehl, 47.706N 10.432E, 920m a.s.l., 22 July–5 August 2015, 1♀ (BOLD Sample ID: CollHH3436), leg. D. Doczkal & J. Voith.

#### *Nepiesta jugicola* Strobl, 1904

**Material:** GERMANY: Bavaria, Ammergebirge, Oberstdorf, Saegertal, 47.572N 10.881E 1430m a.s.l., 26 June–22 July 2015, 2♀♀ (BOLD Sample IDs: CollHH3552, CollHH3553), leg. D. Doczkal.

#### *Macrulus areolaris* Horstmann, 1978

**Material:** GERMANY: Bavaria, Ammergebirge, Oberstdorf, Saegertal, 47.572N 10.881E, 1430m a.s.l., 26 June–22 July 2015, 1♀ (BOLD Sample ID: CollHH3428), leg. D. Doczkal.

#### *Meloboris pseudocollector* Haraldseide, 2021

**Material:** GERMANY: Bavaria, Allgäu, Kempten, Kempter Wald, Schornmoos, 47.740N 10.506E, 805m a.s.l., 12 October–9 November 2015, 1♂, leg. D. Doczkal & J. Voith.

### Discussion

Campopleginae is a notoriously difficult subfamily to work with, but efforts are being made to aid in genus identification through development of an interactive key to European genera (Klopfstein *et al.* 2022), in which *Breviterebra* will be included. As the current paper shows, there are still many discoveries to be done in Europe, and a veritable inventory of European fauna can only be achieved through broad faunistic studies and taxonomic revisions.

**Acknowledgments.** I am grateful to Stefan Schmidt (SNSB, Zoologische Staatssammlung München, Germany) for the opportunity to study material from Germany and for checking the manuscript, Kyohei Watanabe (Kanagawa, Japan) for providing information and photographs of *Breviterebra laticlypeata* types, and to David Wahl (Utah, USA) for information and photographs of a specimen from the Townes collection.

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Received: 31 January 2023

Accepted: 27 March 2023