SUBFAMILY HELCONINAE

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**INTRODUCTION.** Helconinae is treated here as synonymous with the tribe Helconini following Sharanowski et al. (2011) who showed that the wider concept of Helconinae, including Diospilini and Brachistini, is not monophyletic. Helconinae is worldwide in distribution and contains 14 genera, three of which are found in the New World. Yu et al. (2016) cataloged the World species of Helconini. The monotypic genus *Eumacrocentrus* Ashmead is almost certainly a derived member of *Helcon* Nees but formal synonymy requires a detailed cladistic analysis. There are no identification keys to New World species.

**PHYLOGENY.** Sharanowski et al. (2011) showed that showed that the wider concept of Helconinae, used in the Manual of New World Genera (Wharton et al., 1997) is not monophyletic and that it *Topaldios* is a member. There have been no attempts at a detailed molecular phylogenetic analysis of the genera of Helconinae, and the monophyly of most genera is suspect.

**BIOLOGY.** Members of the Helconini are solitary endoparasitoids of cerambycid beetle larvae and possibly other wood-boring beetles (Tobias, 1967; Shaw and Huddleston, 1991).

**COMMON GENERA.** *Wroughtonia* Cameron is the only genus routinely collected.

**DISTRIBUTION.** Cosmopolitan. In the New World, members appear to be restricted to temperate areas. In North America two species are found as far south as Mexico, and in South America some species of *Helcon* are found as far north as the Brazilian state of Paraña.

**DISTINGUISHING FEATURES.** Members of Helconinae are rather large and robust and may be recognized by the following combination of characters: second submarginal cell of fore wing narrowed anteriorly; clypeus rugose dorsally and smooth ventrally; 2a of forewing present; lateral (outer) apex of foretibia with a distinct sclerotized lamella (van Achterberg, 1987).
KEY TO THE NEW WORLD GENERA OF THE SUBFAMILY HELCONINAE

1.  A. Hind femur with ventral tooth or strong rugose ridge. .......................... *Wroughtonia* Cameron
    - B. Hind femur lacking ventral tooth or strong rugose ridge ........................................ 2

2(1). A. Propodeum smooth with a large, wide, central cell. ................................. *Topaldios* Papp
    B. Propodeum rugose and usually lacking a central cell, if cell present it is longer than wide with rough sculpture. ................................................................. 3

3(1). A. Fore wing with one “a” crossvein. .......................................................... *Eumacrocentrus* Ashmead
    B. Fore wing with two “a” crossveins. ........................................................................... 4

4(3). A. Metasomal terga 2-3 smooth, widespread. ................................................. *Helcon* Nees
    B. Metasomal terga 2-3 sculptured, southern South America. .........................*Vervoortihelcon* Achterberg
**GENERIC TREATMENTS**

*Eumacrocentrus* Ashmead, 1900

**Diagnosis.** Tooth lacking on ventral side of hind femur; ovipositor much longer than body. Forewing lacking second “a” crossvein.

**Biology.** Unknown, probably an endoparasitoid of larval Cerambycidae (Marsh, 1979).

**Diversity.** One described species.

**Distribution.** Nearctic, eastern U.S.A.


![Image of Eumacrocentrus americanus Cresson, 1873.](Image)

*Figure 1. Eumacrocentrus americanus* Cresson, 1873.
**Helcon** Nees, 1812

**Diagnosis.** Forewing with 2 ‘a’ crossveins; hind femur lacking a ventral tooth.


**Diversity.** 4 described Nearctic species, many undescribed Neotropical species.

**Distribution.** Holarctic and Neotropical, widespread in temperate and subtropical New World.

**Publications.** No key exists for New World species.

![Helcon tardator Nees, 1812.](image)

Figure 2. *Helcon tardator* Nees, 1812.
*Topaldios* Papp, 1995

**Diagnosis.** Propodeum with a large, wide cell medially

**Biology.** Unknown.

**Diversity.** 2 described species from Argentina, many more undescribed.

**Distribution.** Southern South America.

**Publications.** Papp (1995) described two species.

![Figure 3. *Topaldios* sp.](image)
**Vervoorthelcon** Achterberg, 1998

**Diagnosis.** Metasomal terga 2-5 heavily sculptured.

**Biology.** Unknown.

**Diversity.** One described species, few if any others.

**Distribution.** Known only from Chile.

**Publications.** Achterberg (1998) described the sole species.

Figure 4. *Vervoorthelcon scaramozzinoi* (from van Achterberg, 1998)
**Wroughtonia** Cameron, 1899

**Diagnosis.** Hind femur with ventral peg(s) or spine(s); female antenna often with white band at midlength.

**Biology.** Endoparasitoids of larval Cerambycidae (Marsh, 1979; van Achterberg, 1987).

**Diversity.** Six described Nearctic species

**Distribution.** Holarctic.

**Publications.** The Nearctic species are in scattered publications. There is not a key to Nearctic species.

**Note.** Van Achterberg (1987) treats *Helconidea* Viereck as a genus distinct from *Wroughtonia*, whereas here they are treated as subjective synonyms. Specimens of *Helconidea* do not have a white band on the flagellum.

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*Figure 5. Wroughtonia* sp.
REFERENCES


