



The snail-case caddisfly subgenus *Helicopsyche* (*Feropsyche*) in Costa Rica, with the description of 3 new species (Trichoptera: Helicopsychidae)

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Abstract

Thirteen species of *Helicopsyche*, subgenus *Feropsyche* (Trichoptera: Helicopsychidae) are recorded from Costa Rica, including 3 new species: *H. alajuela*, n. sp., *H. dorsocurvata*, n. sp., and *H. golfitoensis*, n. sp., as well as 10 previously described species: *H. borealis* (Hagen), *H. chiriquensis* Johanson & Malm, *H. dampfi* Ross, *H. incisa* Ross, *H. lewalleni* Denning & Blickle, *H. mexicana* Banks, *H. rentzi* Denning & Blickle, *H. selanderi* Ross, *H. truncata* Ross, and *H. vergelana* Ross. The male genitalia of the new species are illustrated and distribution maps are provided for all species.

Key words: Trichoptera, Helicopsychidae, *Helicopsyche*, *Feropsyche*, new species, new species records, Costa Rica

Introduction

The snail-case caddisfly genus *Helicopsyche* von Siebold, 1856, is a moderately large genus with about 250 described species (Holzenthal *et al.* 2007, Morse 2008). The genus has been recorded from all major faunal regions, except Antarctica (Johanson 1998) and has the highest species diversity between 5–30°N and 15–45°S (Johanson 1997). With 30 described *Helicopsyche* species (Johanson 2006), the 17,000 km² large New Caledonian mainland has the highest density of species in the world. The 117 described species of New World *Helicopsyche* are included in 2 subgenera, *Cochliopsyche* Müller, 1885, and *Feropsyche* Johanson, 2002 (Flint *et al.* 1999; Flint & Sykora 2004; Johanson 2002, 2003a, 2003b, 2003c; Johanson & Holzenthal 2004; Johanson & Malm 2006). The first record of *Helicopsyche* (*Feropsyche*) from Costa Rica was given by Bueno-Soria & Flint (1978) who listed *H. vergelana* Ross, 1956, but without any locality data. A year later Denning & Blickle (1979) described *H. rentzi* from Guanacaste Province, Costa Rica, and Johanson (2002) presented more data from Costa Rica for that species. Holzenthal (1988) added *H. borealis* (Hagen, 1861) to the Costa Rican fauna and Johanson (2002) added more data including records from Cartago and Guanacaste Provinces. *Helicopsyche piroa* Ross, 1944, and *H. incisa* Ross, 1956, were recorded from Costa Rica for the first time by Johanson (2002), and *Helicopsyche vazquezae* (Flint, 1986) of the subgenus *Cochliopsyche* was recorded for the first time from Costa Rica by Holzenthal (1988) and Monson *et al.* (1988). Except for a work on the *Helicopsyche* of Venezuela (Johanson & Holzenthal 2004) and a treatment of the caddisflies of Hispaniola (Flint & Sykora 2004), there are no previously published data on Neotropical Helicopsychidae on a regional basis

Material and methods

This study is based on specimens housed in the University of Minnesota Insect Collection, St. Paul, Minnesota, USA (UMSP) and the National Museum of Natural History, Smithsonian Institution, Washington,