



## Biological synopsis of *Photocryptus* Viereck (Hymenoptera, Ichneumonidae, Cryptinae), with eight new host records and fourteen new geographic records

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### Abstract

The host records of *Photocryptus* Viereck are revised. Nine species from seven genera and four families, all aculeate Hymenoptera, are recognized as hosts for species of *Photocryptus*. Published host records were compiled for three species, and eight new records are provided for four species, as follows: *P. concinnus* (Brullé) is parasitoid of *Auplopus militaris* (Lynch-Arribalzaga) (Pompilidae, Pepsinae) **new record**, *Sceliphron assimile* (Dahlbom) (Sphecidae, Sceliphrinae), **new record**, and *Trypoxylon maidli* Richards (Crabronidae, Trypoxyloninae), **new record**; *P. fumatus* (Hancock) is parasitoid of *Santamenes novarae* (Saussure) (Vespidae, Eumeninae), and *Sceliphron assimile*, **new record**; *P. pachymenae* (Cresson) is parasitoid of *Pachymenes* sp. (Vespidae, Eumeninae), and *Sceliphron fistularium* (Dahlbom); *P. photomorphus* Viereck is parasitoid of *Sceliphron* sp. and *Brachymenes dyscherus* (Saussure) (Vespidae, Eumeninae); *P. testaceoniger* (Taschenberg) is parasitoid of *Sceliphron fistularium*, **new record**; *P. testaceus* (Taschenberg) is parasitoid of *Sceliphron fistularium*, **new record**, *Trypoxylon albitarse* Fabricius, **new record**, and *T. nitidum* F. Smith, **new record**. A non-identified species of *Photocryptus* is recorded in the literature parasitizing *Trigonopsis violascens* Dalla Torre (Sphecidae, Sceliphrinae). Original data provides the first evidence of two species of *Photocryptus* attacking the same host nest, namely *P. testaceoniger* and *P. testaceus* on a nest of *S. fistularium*; ovipositor length vs. nest dimensions are also compared for these species, suggesting either incidental attack or avoidance of confrontation behavior. Fourteen new geographic records are provided for seven species.

**Key words:** Nematopodiina, Osprynchotina, Phygadeuontinae, Sphecidae, Vespidae, Pompilidae, Crabronidae

### Introduction

*Photocryptus* Viereck (Hymenoptera: Ichneumonidae) is the only exclusively Neotropical genus of Osprynchotina, with ten known species occurring from Mexico to Paraguay. This genus is characterized by the long mandible, about 4.5 as long as median width, first metasomal tergite long and slender, about 4.0 as long as wide, cell 1+2Rs (areolet) pentagonal, large (0.6–0.8 as high as crossvein 2m-cu) and a long ovipositor, at least as long as length of hind tibia, with the tip distinctly depressed. All known species are brightly colored in hues of yellow, black, and white, and some have a distinct spot at the tip of the fore wing (see Fig. 1).

Townes & Townes (1966) list five host records for three from ten species of the genus. In Yu (1998), however, only one host record is listed, from Hancock (1926): *Santamenes novarae* (Saussure) (Vespidae) as host of *P. fumatus* Hancock. Some other hosts have already been documented for the genus, but always without specific determination of the parasitoid: *Trypoxylon albitarse* Fabricius (= *paliditarse* Saussure) (Crabronidae) in Freeman (1981), *Auplopus militaris* (Pompilidae) in Gonçalves *et al.* (2004) and Loyola & Martins (2006), and *Trigonopsis violascens* (Dalla Torre) (Sphecidae) in Hook (2006).

The paucity of precise, specific information about the biology of *Photocryptus* can be partially due to the