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Genus *Cyptophania* Banks (Psocodea: 'Psocoptera': Lepidopsocidae): unique features, augmented description of the generotype, and descriptions of three new species

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Abstract

We define the genus *Cyptophania* with characters that clearly separate it from other genera of the Family Lepidopsocidae in which wing reduction has occurred. We redescribe the generotype, *C. hirsuta* Banks (Hawaii, presumably introduced), and describe three new species, *C. australica* n.sp. (Queensland, Australia), *C. costalis* n.sp. (Gulf of Mexico and Caribbean), and *C. pakaratii* n.sp. (Rapa Nui = Easter Island, probably endemic). The latter species is described from both sexes and presents the first males known for the genus. One female of this species presents a large spermatophore protruding from the genital chamber, thus indicating the mode of sperm transfer in sexual members of this genus. A key to the known species is included. All of the species of *Cyptophania* are highly neotenic, but differences in the level of neoteny are noted among the species studied. We question the synonymy of the genus *Ptenocorium* Enderlein with *Cyptophania* on the basis of several characters illustrated in the original description of *Ptenocorium*. We note similarities of *Cyptophania* to the entirely macropterous genus *Lepidopsocus* Enderlein and suggest a possible close relationship between the two genera.

Key words: New species, neoteny, Pacific Basin, Easter Island, Hawaii, Queensland, Gulf and Caribbean

Introduction

In the Psocodean Family Lepidopsocidae, several genera have been proposed based on forms in which the wings are reduced, often with various degrees of loss of venation, and in some cases with complete loss of hind wings. Most of these genera have been established on the basis of very few characters, and it is sometimes difficult to decide where to place particular infrageneric taxa.

The genus *Cyptophania* Banks (1931) is one of these genera with reduced wings. It is a small group with only a few known species, restricted to tropical and subtropical parts of the world and found mostly on islands and continental seashores. The group must be viewed as poorly known at present. Descriptions of the known species have been extremely superficial. In this paper we provide new characters for recognition of the genus, clearly separating it from other lepidopsocid taxa with reduced wings. We also provide an evaluation of characters for species recognition, redescribe the generotype, *Cyptophania hirsuta* Banks, and describe three new species. Some of the most important characters for separating species have proven to be structures not ordinarily examined in detail in the Psocoptera, such as the collar of the spermathecal duct, internal and surface features of the spermathecal sac, and several characters of the hind leg.

One of our new species, *C. pakaratii* n. sp., is the first *Cyptophania* to be represented by both sexes, thus first revealing male characters. This species has a much larger and less wrinkled spermathecal sac than the other species studied, and on that account (and for lack of males), we suspect that all of the others are parthenogenetic.