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***Probittacomorpha brisaci* n. sp. (Ptychopteridae, Bittacomorphinae) from the Late Miocene of Montagne d'Andance, Saint Bauzile, Ardèche (France)**

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Abstract

A new species of phantom crane flies (Ptychopteridae: Bittacomorphinae), *Probittacomorpha brisaci* n. sp., is described based on a single specimen from the Late Miocene volcano-sedimentary paleolake of Montagne d'Andance (Saint Bauzile, Ardèche, France). This is the second known species of the fossil genus *Probittacomorpha*. Previously described species has been found in the Paleocene-Eocene Fur-Formation (Moler) of Denmark.

Key words: Diptera, Ptychopteridae, Bittacomorphinae, *Probittacomorpha*, Cenozoic, Late Miocene, France, fossil insects

Introduction

The subfamily Bittacomorphinae is one of two recent subfamilies of the family Ptychopteridae comprising of approximately 70 species. This group is widespread but absent in the Australian and Antarctic regions (Krzeminski & Zwick 1993).

Nine recent species of the subfamily are known from the Nearctic, East Palaearctic and Oriental regions, and belong to two genera, *Bittacomorphella* Alexander, 1916 and *Bittacomorpha* Westwood, 1835 (Nakamura & Saigusa 2009). Bittacomorphinae differ from the Ptychopterinae in the more elongated antennae (18 - 19 segments of flagellum); wing length, which is about half the body length; presence of two medial veins; and more simple construction of male terminalia (Alexander 1927; Peus 1958; Krzeminski & Zwick 1993; Nakamura & Saigusa 2009).

The present-day Bittacomorphinae (*Bittacomorpha* and *Bittacomorphella*) have no fossil record. *Bittacomorpha miocenica* Cockerell, 1910 appeared to belong to the genus *Ptychoptera* (subfamily Ptychopterinae; Lukashevich *et al.* 2001). Information about extant and extinct ptychopterid subfamilies is to be found in Lukashevich (2008) and in Krzeminski and Prokop (2011). The subfamily Bittacomorphinae includes four genera: *Zhiganka*, *Probittacomorpha*, *Bittacomorphella*, and *Bittacomorpha*; two former are extinct.

The genus *Probittacomorpha* with one species *P. christenseni* was described by Freiwald and Willmann (1992) from the Paleocene-Eocene of Denmark. Ansorge & Schröder (1999) described new specimens from Denmark, and proposed a phylogenetic tree of the Bittacomorphinae including *Probittacomorpha*. The fossil genus *Zhiganka* currently comprises two Early Cretaceous species *Z. comitans* Lukashevich, 1995 (Yakutia, Russia) and *Z. woolgari* Lukashevich, Coram & Jarzembowski, 2001 (Wealden-UK).

The present paper describes the second species of the genus *Probittacomorpha* from the Late Miocene of Montagne d'Andance, Saint Bauzile, Ardèche (France).