FIRST *RHIPIDIA* MEIGEN, 1818 (DIPTERA, LIMONIIDAE) FROM BALTIC AMBER (EOCENE)

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Abstract

A new fossil species of *Rhipidia* MEIGEN, 1818 crane flies (Diptera, Limoniidae), *Rh.* (? subgen.) *zyza sp. nov.*, is described from Baltic amber (Eocene). Its affinities with other recent and fossil *Rhipidia* are discussed.

Résumé: *Un premier Rhipidia MEIGEN, 1818 (Diptera, Limoniidae) de l'ambre de la Baltique (Eocène).*

Une nouvelle espèce fossile de *Rhipidia* (Diptera, Limoniidae), *Rh.* (? subgen.) *zyza sp. nov.*, est décrite. Ses affinités avec les autres *Rhipidia* actuels et fossiles sont discutées.

INTRODUCTION

Species of *Rhipidia* Meigen, 1818 were unknown from Baltic amber so far (EVENHUIS, 1994). The only species described from a fossil resin is *Rh. mira* Podenas & Poinar, 1999 found in Dominican amber (PODENAS & POINAR, 1999). Four other fossil species are listed by EVENHUIS (1994): 1 from England (Eocene/Oligocene) and 3 from Croatia (Miocene). There are more than 200 extant species belonging to this genus which are distributed in all zoogeographical regions (SAVCHENKO, 1989). The genus is characterized by the pectinate antennae of males. Two subgenera: *Eurhipidia* Alexander, 1965 and *Rhipidia* Meigen, 1818 are recognized among recent species. In the collections of fossils of the Muséum d'histoire Naturelle, Neuchâtel, Switzerland, one specimen of *Rhipidia* was found. This is the first representative of the genus in Baltic amber. It shows some features which are used to separate both recent subgenera.

MATERIALS AND METHODS

The amber piece was polished to reveal taxonomic details of the preserved specimen. It was studied with a MBS 9 and Leica MZ125 dissecting microscopes. Drawings were completed by the author. The fossil in amber was studied at the Muséum d'histoire Naturelle, Neuchâtel, Switzerland where the type of the new species is deposited.

Terminology of morphological features generally follows that of MCALPINE *et al.* (1981), systematical arrangement that of SAVCHENKO (1989).

SYSTEMATICS

Order DIPTERA, Family LIMONIIDAE, Subfamily LIMONIINAE

Rhipidia (? subgen.) zyza spec. nov.
(figs. 1-3)

Material examined. – HOLOTYPE, Sembian Peninsula, Kaliningrad Region, Russia, Baltic amber, Eocene, male, MHNN 1786.

Diagnosis. - Small crane fly, body length 3.0 mm, wing length 4.1 mm. Antenna (fig. 2) uni-pectinate, 14-segmented, branches covered with abundant pubescence giving feather-like appearance. Legs with white tarsi. Wing (fig. 1) transparent without any dark markings except stigma. Wing venation: Sc_1 comparatively short, ending opposite to middle of *Rs*; Sc_2 near its tip; discal cell closed; basal deflection of CuA_1 at the branching point of *M*. Male genitalia (fig. 3): rostrum of inner gonostylus with two clearly expressed spines which are located on a tubercle; inner gonostylus egg-shaped.

Description. - Male. Head rounded, brown. Antenna (fig. 2) uni-pectinate, 14-segmented, brown, 1.1 mm long, if bent backwards reaching base of wing; pedicel cylindrical, nearly three times as long as wide, scape short, pear-shaped, basal flagellomere short, other flagellomeres elongate, first through ninth flagellomeres with one long branch which is approximately twice as long as respective segment, 10th and 11th flagellomeres having branches approximately of the same length as respective segment, last (12th) flagellomere elongate, not branched. Each branch of flagellomeres covered with dense pubescence giving them a feather-like appearance. Verticils approximately of the same length as respective segments.

Thorax dark brown. Wing (fig. 1) transparent, without any dark markings except stigma. Wing venation: Sc_1 comparatively short, ending opposite to middle of *Rs*; Sc_2 near its tip; R_2 close to tip of R_1; R_3 and R_{4+5} nearly parallel; discal cell closed, twice as long as wide; basal deflection of CuA_1 at the branching point of *M*; both anal veins long and nearly straight. Legs brown, tarsus brown at base only, then white.

Abdomen light brown, covered with scarce short light hairs. Male genitalia (fig. 3): ninth tergum a simple plate, its posterior margin slightly bent inwards. Gonocoxite cylindrical, no lobes are seen in the studied specimen. Inner gonostylus egg-shaped with long rostral lobe. Rostrum with clear tubercle close to apex bearing two rather long spines. Apex of rostrum rounded. Outer gonostylus sclerotized, hook-shaped with darkened apex. Paramere with curved apex. Penis long and slender.

Female unknown.

Discussion.- *Rhipidia* (? subgen.) *zyza spec. nov.* shows some characters which are normally used to discriminate both subgenera of *Rhipidia*. It shares with the species of *Eurhipidia* Alexander (ALEXANDER, 1965) the white tarsi and a rostrum of inner gonostylus bearing two spines. It shares with the species of the subgenus *Rhipidia* Meigen a closed discal cell. This seems to indicate that by the end of the Eocene these subgenera were not differentiated and that divergence of features and thus formation of separate subgenera took place later.

Etymology.- The name of this species is an arbitrary combination of letters having no special meaning.

ACKNOWLEDGMENTS

My warmest thanks go to Dr. Christophe Dufour and Jean-Paul Haenni (Museum d'Histoire Naturelle, Neuchâtel, Switzerland), for their efforts to build up

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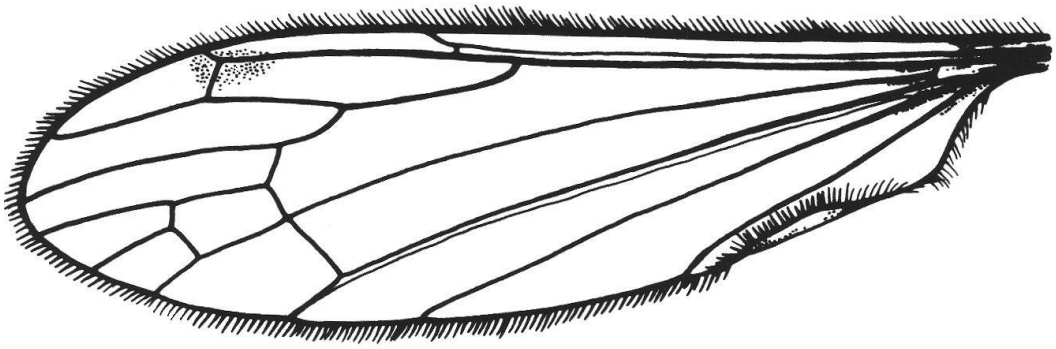

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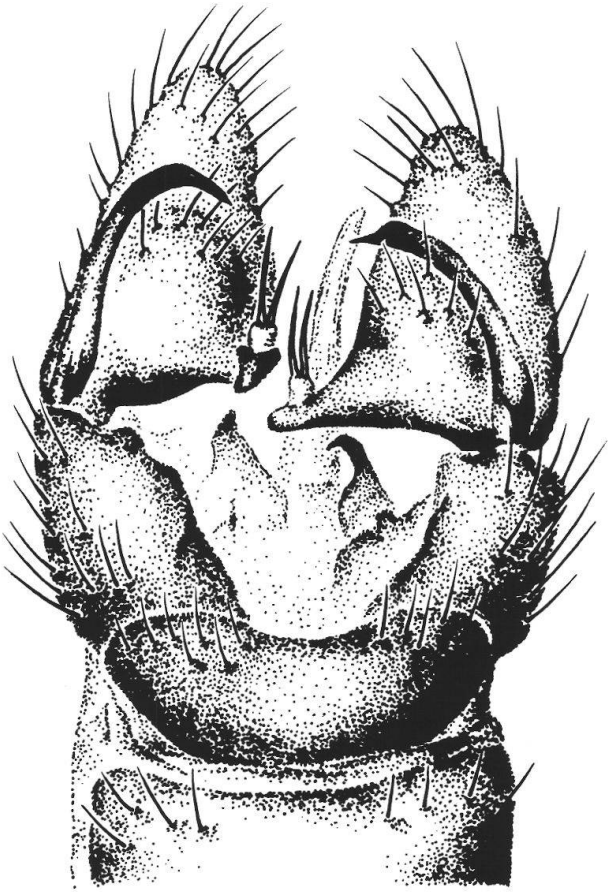

Figures 1-3: *Rhipidia* (? subgen.) *zyza spec. nov.*, holotype: 1. wing venation; 2. antenna; 3. male genitalia, dorsal view.

an amber collection, for the loan of the specimen and for valuable comments and corrections of the text.

The research was partly supported by Lithuanian State Science and Studies Foundation.

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