

Hoffeinsmyiidae, a new extinct family of Schizophora (Diptera) from Baltic amber

[Hoffeinsmyiidae, eine neue Familie fossiler Schizophora (Diptera) aus dem Baltischen Bernstein]

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Abstract A new extinct family, **Hoffeinsmyiidae**, represented by a new genus, *Hoffeinsmyia*, and a new species, *Hoffeinsmyia enigmatica*, is described from a female dipterous insect in a piece of Baltic amber. It is readily assigned to Schizophora, the mega-diverse taxon of “higher” Cyclorrhapha. Beyond that, the new family exhibits an odd combination of plesiomorphic and apomorphic character states that give no clues where to place it among the schizophoran taxa currently ranked as superfamilies.

Key words Baltic amber, fossils, Diptera, Schizophora, new family

Zusammenfassung Eine neue Familie fossiler Dipteren, **Hoffeinsmyiidae**, repräsentiert durch die monotypische Gattung *Hoffeinsmyia* mit der neuen Art, *Hoffeinsmyia enigmatica*, wird anhand eines Weibchens aus dem Baltischen Bernstein beschrieben. Sie kann eindeutig den Schizophora zugeordnet werden, dem mega-diversen Taxon innerhalb der höheren Cyclorrhapha. Darüber hinaus weist die neue Familie eine ungewöhnliche Kombination von ursprünglichen und abgeleiteten Merkmalen auf, die es in ihrer Gesamtheit nicht zulassen sie einer der als Überfamilien organisierten Taxa der Schizophora zuzuordnen.

Stichwörter Baltischer Bernstein, Fossilien, Diptera, Schizophora, neue Familie

Introduction

Baltic amber is believed to come from a resin-producing pine (*Pseudolarix?*, Pinaceae) during early to middle Eocene (55–40 mya). It probably grew in a dense, humid subtropical forest in an area corresponding to present-day central/eastern Fennoscandia (e.g., GRIMALDI & ENGEL 2005). Baltic amber is an extremely prolific source of fossil Diptera (e.g., LARSSON 1978), yet the presently very diverse and species-rich taxon Schizophora is strikingly under-represented in comparison to other dipteran groups favouring humid and sheltered habitats, notably sciaroids, empidoids and phorids. All species of Schizophora reported so far from Baltic amber (e.g., HENNIG 1969, EVENHUIS 1994) are considered as extinct, and most of them are even classified in extinct genera. It has, however, in general been possible to place them unambiguously in recent families. With one exception (MICHELSEN 2000) all Schizophora described from Baltic amber have been assigned to families of Acalyptratae rather than Calyptratae. The present paper reports on a specimen of Schizophora from a piece of Baltic amber that rather exceptionally cannot confidently be assigned to any extant family or even superfamily.

The preservation of the fossil specimen in question, a female entombed in a piece of Baltic amber, is fairly good, allowing examination of most external characters. The presence of a distinct ptilinal fissure delimiting a crescent-shaped lunule above the bases of the antennae readily assigns the specimen to the Schizophora, a mega-diverse taxon of “higher” Cyclorrhapha divided in some 80 families representing over half the family-diversity in Diptera