

MACIEJ WOJTOŃ – „Evolution of superfamily Anisopodoidea Knab, 1912 (Diptera, Nematocera)”

ABSTRACT

Diptera, currently comprising about 160,000 species, appeared on the Earth about 245 million years ago, in the Triassic. In the Mesozoic there was a huge acceleration in evolutionary radiation, leading to increment of Diptera species diversity. Flies grouped in the superfamily Anisopodoidea Knab, 1912 (Diptera: Nematocera) is a contemporary cosmopolitan but relatively small group of insects that survived from the Triassic.

The research materials preserved in the Jurassic sediments and Cretaceous resins have been of key importance for understanding the potential pathways of Anisopodoidea evolution. In the Jurassic and the Cretaceous, Anisopodoidea were significantly differentiated in terms of species numbers.

During the research carried out as part of this doctoral thesis, 15 new taxa species were identified and described – *Mycetobia connexa* Meunier was redescribed and its formerly proposed by Edwards in 1928 synonymy with *Mycetobia callida* Meunier, 1904 was confirmed. Additional descriptions of the already known fossil species were presented – *Sylvicola splendida* Meunier, 1780, *Sylvicola thiriona* Meunier, 1907. The stratigraphic range of the genus *Mycetobia*, from Eocene (Priabonian, 37.2-33.9 Ma) for late Cretaceous (early Cenomanian, 99.7-94.3 Ma). Comparative studies of fossil and modern Anisopodoidea performed with the use of scanning electron microscopy enabled the identification of taxonomically significant features of morphological structures in fossil material. Potential directions of Anisopodoidea evolutionary changes that have occurred since the Jurassic period were determined.

Maciej Wojton