

## Summary

The presented PhD thesis consists of two parts. The first part concerns the fossil record of the hydrophiloid beetles. Its introductory chapter summarizes the current author's knowledge of the topic, based on the review of all available literature and his published and unpublished data. Historical review is provided, problems concerning the study of the hydrophiloid fossil taxa and the relevance of the fossil record are discussed. Two published papers and two manuscripts concerning the systematics and taxonomy of selected hydrophilid beetles from European Cenozoic deposits are attached. As a part of these results, the diversification of the greater hydrophilines lineage of the subtribe Hydrophilina is dated back to the middle Eocene and the occurrence of the currently tropical genus *Hydrobiomorpha* in Europe is proved from Eocene to the latest Oligocene. The first fossil of the genus *Limnoxenus* (subtribe Hydrobiusina) is recorded from the late Oligocene locality of Aix-en-Provence, its taxonomic placement is tested by the phylogenetic analysis combining modern and fossil taxa and its relevance is discussed.

The second part concerns selected taxa of the terrestrial hydrophilids of the subfamily Sphaeridiinae. Its introductory chapter briefly summarizes the current idea about the evolution of terrestrial habits within the Hydrophiloidea and includes short characteristics of the tribes of the subfamily Sphaeridiinae. Five published papers and four manuscripts concerning the taxonomy, biogeography and phylogeny of the 'Gondwanan' genera of the tribe Megasternini (*Oosternum*, *Sacosternum*, *Cetiocyon*, *Kanala*), the taxonomy and distribution of selected genera of the *Megasternum* group (*Emmidolium* and *Cyrtonion*), and a review of the subfamily Sphaeridiinae of New Caledonia are attached. As a part of these results, the Neotropical genera *Oosternum* and *Sacosternum* are shown to be by far more speciose in the tropical and mountain humid forests than it was supposed originally, and the association with the ecitonine army ants is moreover hypothesized for the genus *Sacosternum*. The genus *Cetiocyon* known so far from New Guinea only is recorded from northern South America (Suriname); phylogenetic analysis of its species is performed and the relevance of its distribution is discussed. Fauna of the terrestrial Hydrophilidae is found highly endemic in the New Caledonia island, consisting of 15 endemic taxa, one indigenous but widely distributed species, and 3-4 introduced taxa; the composite character of the fauna (containing Oriental, Australian and Pacific elements) suggests its relatively recent origin.