Abstract

The work summarizes the biology (life histories) of the family Geotrupidae. Historical findings are confronted with current knowledge. The study is focused mainly on food strategies within the family Geotrupidae, their evolutionary origin, differences across taxa within the family and the existence of certain trends within different taxa and family as a whole. The nutritional strategies of adults and larvae are compared, as well as the conditions that can lead to a changes in feeding strategies. The general section parts are devoted to taxonomy and phylogeny of the subfamilies within the family Geotrupidae, adult morphology and larvae and their geographical distribution. In the section part dedicated to the biology of individual subfamily, in addition to the feeding strategies, the biotopes of individual taxa, the presence or absence of parental care, and the knowledge of nesting behavior of beetles are listed.

The primary nutritional strategy of the family is coprophagy, but the change in food strategies has occurred in this family several times independently. No trend within the family was traced. Changing the feeding strategy from cognition to phytophagy occurred only once in evolution, and in adults of the subfamily Lethrinae. Both obligatory and facultative saprophagies have evolved in the evolution of this group several times independently of each other in both larvae and adults.

Key words: Coleoptera, Geotrupidae, ecology, feeding strategy, parental care, nesting behaviour.