

Abstract

In this study the sexual and geographical variations in the genus *Miniopterus* were deeply investigated, using multidisciplinary analysis (morphometric cranial, dental, fenetic and shape analysis; molecular analysis of mt gene ND2). Different populations from western Palearctic and adjacent regions were analysed: *Miniopterus schreibersii* (Morocco, West Europe, Pannonia, Balkans, Crete, Near East, Middle East), *Miniopterus natalensis* (Yemen, Ethiopia) a *Miniopterus inflatus* (Ethiopia). Extensive samples of *Miniopterus schreibersii* were tested and existence of sexual dimorphism in cranial constitution was showed: males had generally bigger and relatively higher, shorter and narrower skulls than females; female mandibles were generally bigger than the male ones, females showed also more robust and larger teeth than males. On the other hand, males had markedly bigger canines and relatively higher P₄ (in relation to other premolars). The sexes also differed in shape of P⁴ and upper molars. According to the interpopulation variation found, *Miniopterus schreibersii* samples from West Europe, Pannonia, Balkans, Crete, Sicily, Georgia, coastal Turkish and Moroccan areas belong most probably to the subspecies *M. s. schreibersii* (Kuhl, 1817). The samples from Afganistan, Iran, Azerbaijan, and from localities of central and eastern Turkey belong to the subspecies *M. s. pallidus* Thomas, 1905. Samples from the Near East (southern Anatolia, Cyprus, Lebanon, Syria) belong to the same taxonomic unit as the European populations (*M. s. schreibersii*). The samples from NW Jordan, in contrast to other Levantine samples represents the same form as those of eastern Turkey and the Middle East (*M. s. pallidus*). The level of difference found between the Moroccan and Euro-Levantine samples (except of two samples referred to originate in Agadir, W Morocco) suggests an existence of another subspecies of *M. schreibersii* in NW Africa. The results of molecular genetic analysis showed that the examined samples from Afro-Arabian localities (Yemen, Ethiopia), previously known as *M. schreibersii* and later on as *M. natalensis*, are substantially distinct from the samples of these species from Europe and South Africa and both the names are unavailable for these populations (I suggest to use the name *M. arenarius* Heller, 1912 instead). An identical pattern was shown for the samples of *Miniopterus inflatus* from Ethiopia, which deeply differed from those from Uganda and thus, these two sample groups do not belong to the same species.