

THE VENOMOUS EXTINCT EULIPOTYPHLS

KRZYSZTOF KOWALSKI, KATARZYNA DUK

*Adam Mickiewicz University, Faculty of Biology, Department of Systematic Zoology, Umultowska 89, 61-614 Poznań,
e-mail: kowalski.biol@gmail.com, katarzyna.duk@op.pl*

Summary

The occurrence of venoms in mammals, both fossil and extant ones, is not widespread. Nevertheless, there is a strong belief that some of the Mesozoic mammals could be originally venomous. On the other hand, the opposite theory assumes that the ability of venom production is a newly acquired feature that evolved among extant Eulipotyphla at least three times independently. In present paper, we review the fossil Eulipotyphla which are suspected to produce a venom. Venomous could be three species of the giant shrews of the genus *Beremendia* (*B. fissidens*, *B. minor* and *B. pohaiensis*) living in Eurasia, *Dolinasorex glyphodon* – endemic species from Iberian peninsula, Thai *Siamosorex debonisi*, two species of the genus *Neomys* living in Eurasia: *N. newtoni* and *N. browni*, as well as two species of solenodons: *Solenodon arredondoi* and *S. marcanoi*, and, closely related to them, endemic species of the genus *Nesophontes* from the Caribbean. Less probably, venomous could be *Lunanosorex lii* from Asia. Presumed ability of producing venom in above-mentioned species is based on (i) special dental features, such as incisors (or canines of *Nesophontes*) provided with a deep groove enabling delivery of venom from salivary glands, and (ii) relatedness to the extant venomous Eulipotyphla. As the function of mentioned modifications is not clear, because grooves are also present in canine teeth of non-venomous mammals, such as lemurs and coati, and enamel covering the teeth and the grooves can only play the reinforcing role of the tooth, the second criterion, relatedness, is required for speculating about the abilities of producing venom among fossil Eulipotyphla. Probably, scientists will never be able to confirm or deny the ability of producing venom among those mammals unambiguously, especially basing on their dental features. However, it is possible that some of the fossil Eulipotyphla could be venomous.