

Turtles of the genus *Sakya* (Geoemydidae): new material from the late Miocene of Russia and Ukraine, new taxonomic diversity and expansion of the stratigraphic range

Elena V. Syromyatnikova*¹, Igor G. Danilov¹

(1) Department of Herpetology, Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia.

* esyromyatnikova@gmail.com

Background. *Sakya* Bogachev, 1960 is a genus of geoemydid turtles with unusual scalation of the carapace consisting of 9–10 vertebrals and 8–10 pairs of pleurals. It is known from Neogene localities of Eastern Europe and includes two species: *Sakya riabinini* (Khosatzky, 1946) (= *S. pontica* Bogachev, 1960), from the late Miocene (MN13) to early Pleistocene of Eastern Europe (Moldova, Romania, Russia, and Ukraine) and *Sakya kolakovskii* Chkhikvadze, 1968 from the Pliocene of Abkhazia. Attribution of *Melanochelys etuliensis* Khosatzky and Redkozubov, 1986 from the early Pliocene of Moldova to *Sakya* is poorly corroborated. Here we report new material of *Sakya* from the late Miocene of Russia and Ukraine, which, probably, belongs to one or two new species of this genus and expands its stratigraphic distribution.

Methods. We examined new material of *Sakya*, that includes posterior part of carapace and incomplete plastron from Morskaya 2 locality (MN 13, Rostov Province, Russia), incomplete carapace and plastron from Egorovka locality (MN 12, Odessa Province, Ukraine), and fragmentary shell remains from Fortepianka locality (MN 11, Republic of Adygea, Russia). For comparison we used published data and personal observations on other specimens of *Sakya*.

Results. The specimens from Morskaya 2 and Egorovka are assigned to *Sakya* based on the presence of increased number of vertebrals and pleurals. Both specimens differ from the described species of *Sakya* by reduced number of vertebrals (seven in the Morskaya 2 specimen, and five in the Egorovka specimen), and extension of the posteriormost vertebral onto pygal. In addition, they differ from *S. riabinini* in the presence of eight neurals, longer than wide pleurals, and from *S. kolakovskii* in the presence of two suprapygals and serrated posterior edge of the carapace. The material from Fortepianka is too fragmentary for detailed comparison, but also differs from *S. riabinini* in the reduced number of vertebrals.

Discussion. The reported material may represent one or two new species of *Sakya*. The reduced number of vertebrae in these forms probably represents a primitive condition, whereas the extension of the posteriormost vertebral onto the pygal may be a synapomorphy, which unites the new forms. Thus, the Morskaya 2 and Egorovka specimens of *Sakya* may represent a separate primitive lineage of this genus. In this case, *Sakya kolakovskii* and *Sakya riabinini* form a more advanced clade with increased number of carapacial scales. These issues as well as phylogenetic position of *Sakya* within Geoemydidae will be checked by future phylogenetic analysis. The *Sakya* material from Fortepianka (MN11, late Sarmatian) represents the earliest reliable record of this genus, known previously beginning from MN 12 (Meotic).

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