

MIOCENE-PLIOCENE TRANSITIONAL MAMMALIAN FAUNA OF DEVELI (TURKEY)

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Clastic continental deposits near the village of Develi (Manisa, western Turkey) has been shown to contain the Late Miocene (MN12-13) large mammals since the work of Ozansoy (1960). Arslan (1982, 1984), and O.Kaya et al. (1998) contributed to the megamammal material. The small mammal fauna of Develi was first studied in detail by Sen et al. (1989). The fauna was shown to include *Prolagus michauxi*, *Occitanomys debriujni*, *Apodemus* sp., *Pseudomeriones* sp., *Spermophilinus* sp.

O.Kaya et al. (1998) described the geology of the Develi type section and pointed out that the fluvial carbonate Urla Fm, which yielded the large and small mammals in two adjacent levels in the upper part of the sequence, is dated to latest Miocene – earliest Pliocene.

In the framework of the joint Turkish-Russian project we revised the large mammal material of Prof. Ozansoy and several subsequent records of large mammals, and small mammal samples stored in the Ege University.

The megamammal fauna awaits revision and only some preliminary results are available at this stage of the study. The proboscidean record previously assigned to *Tetralopodon longirostris* is redetermined as *Anancus* cf. *turoliensis* (Mayda et al., 2014). The hunting hyaenas reported as *Lycyaena* and *Crocota eximia* are believed to represent a new form of *Chasmaporthetes*. *Gazella deperdita* and *G. gaudryi* of old lists are transferred to *Gazella* nov. sp. Two giraffid forms are represented by *Palaeotragus* sp. and the large-sized form of a peculiar Sivatherine. Bovids are represented by Boselaphine similar to Late Miocene forms of *Tragoportax* sp., and cf. *Parabos* sp. *Hipparion* is tentatively assigned to *Cremohipparion* cf. *matthewi*. A single molar of a small suid is similar to *Propotamochoerus* sp. The open-savanna environment is indicated by the single tooth of aardvark (*Orycteropus* sp.), and aquatic habitats, by the beaver *Castor* cf. *praefiber* (Tan, 2010).

The Canidae fauna of Develi includes two taxa: the raccoon dog *Nyctereutes* sp. and the small canid *Eucyon debonisi*. The Miocene-Pliocene transition corresponds to a period of rapid taxonomic diversification in the Eurasian members of Caninae. In Central Asia, finds of Miocene-Pliocene transition *Eucyon* are known only from Mongolia (Late Miocene Khirgiz-Nur and Early Pliocene Chono-Khariakh). The rare latest Miocene *Eucyon* in Europe are known from Spain and southern Italy (Sotnikova, Rook, 2010).

The reports of raccoon dogs from Miocene-Pliocene transition are extremely scarce. In Asia, in the Yushe basin of China, *Nyctereutes* (*N. tingi*) appeared shortly after 5 Ma. In Europe the genus *Nyctereutes* has been cited only from Venta del Moro in Spain, but now this material is reassigned to *Eucyon* (Montoya et al., 2009). Thus the Develi *Nyctereutes* sp. is among the earliest records of the raccoon dog in Eurasia. The only coeval confirmed record is that of Lissasfa locality in North Africa (Geraads, 2011).

The small mammal assemblage from Develi and the near by section of Halitpasa both come from the upper part of the Urla Fm. According to our analysis, the composition of the fossil fauna is similar to that reported by Sen et al. (1989). Our material is dominated by remains of murids *Occitanomys debriujni*, *Apodemus* sp., and also contain teeth of undefined soricid, lagomorphs *Prolagus* and *Ochotona*, sciurids *Spermophilinus* sp., glirids *Miomimus* sp., and gerbils *Pseudomeriones*. The most important addition to the fauna is the subdominant *Microtodon-Promimomys* transitional form. The evolutionary level of this cricetid is more primitive than in early Ruscinian *Promimomys insuliferus*, and close to that known for *Microtodon admirabilis* from latest Miocene lower Pontian deposits of southern Ukraine and to *Microtodon komanensis* from the Early Pliocene Ptolemais formation in Greece (Hordijk, de Bruijn, 2009).

In the light of the new data, we assign the Develi mammalian fauna to the Miocene-

Pliocene transition (MN13/MN14). The further study of the material and the geology of the section will elucidate the position of the fauna in biochronological and chronostratigraphic scales.

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