ABSTRACT VOLUME

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NEW INSULAR TAXA FROM THE OLDEST TERRE ROSSE FISSURE FILLING (GARGANO, SOUTHEASTERN ITALY)

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A rich amount of fossil remains of a highly diversified vertebrate fauna, known as "*Mikrotia* fauna", has been retrieved from the red soil deposits (Terre Rosse) which fill the extensive palaeokarst network that affects the Mesozoic limestone along the north-western slopes of Mount Gargano (Southern Italy). The faunal assemblages reveal a rather complex history of bioevents such as dispersals and extinctions, which occurred when the area was isolated. These reconstructions were based on the materials collected during the seventies and the eighties of the last century.

Forty years after its discovery, the Gargano Terre Rosse finally yielded evidence of an older faunal settlement.

The peculiar assemblage of the M013 fissure allows to explain some of the controversial aspects of the Gargano faunal history, namely, the matter of the biochronology of the older fissure fillings and the issue of the arrivals of the taxa in the insular domain.

The taxonomic study of the small mammal assemblage from fissure M013, sampled by a team of the University of Torino during the 2005-09 excavations in the Dell'Erba Quarry (Apricena, Foggia), is here presented. Insectivores include a small-sized endemic Galericinae *Apulogalerix* cf. *pusillus*, together with a Crocidosoricinae, *Lartetium* cf. *dehmi*. Gliridae are well represented by the endemic species *Stertomys simplex* and *S. lyrifer*. Cricetids (l.s.) are represented by a single remain belonging to the endemic *Hattomys* cf. *nazarii*, but also by a new genus and species of an endemic and rather primitive Cricetodontinae. The latter shows a very hypsodont dental crown, stocky cusps and tubercle-like crests. Some of its features are typical of the continental genera of Cricetodontinae (i.e. large size, thick and crenulated enamel), however the very large size and the very high hypsodonty indicate the endemic nature of this taxon. The occlusal pattern appears rather primitive due to the very low, poorly developed, interrupted ectolophs and share some features with the primitive species of the genus *Cricetodon*.

Murids include *Mikrotia parva* together with a second larger species, which is not yet identified. A third Murinae rodent is quite abundant, and belongs to a new genus and species. Its dentition is more brachyodont than in Mikrotia parva, the upper teeth are stephanodont and, accordingly, the transversal crests are joined by a longitudinal crest in the lower molars. Tubercle t7 is absent in the upper molars, t2bis is always present, while t1bis is usually absent in the first upper molar. Tubercle t1 is placed in a distal position respect to the t3, the posterolabial tubercle t12 is well-developed. Tubercles t3, t6 and t9 are roughly equidistant forming a regular pattern: a character that is found in *Mikrotia* and not in the other murid species, in which t6 is closer

to t9. This morphological characters reveal a close relationship with *Mikrotia*, but they do not occur jointly in any of the Late Miocene-Earliest Pliocene European genera of murids, thus the phylogenetic origin of this new genus is still unclear.

The occurrence of this new Murinae and of a Cricetodontinae distinguishes M013 from all the other Terre Rosse fissure fillings of Gargano. *Stertomys lyrifer* and *S. simplex* were previously known only from the very ancient fissure Rinascita 1. Because both taxa characterize M013 and Rinascita 1, the two fissures are believed to be very close chronologically. Also the Crocidosoricinae characterises the older fissure fillings. In contrast, M013 is the only fissure lacking *Apodemus* and *Prolagus*, which are otherwise present in all the other Gargano infillings.

The accumulated evidence indicates M013 as the oldest of Gargano's faunal assemblages, despite the occurrence of *Hattomys* cf. *nazarii*, *Mikrotia* cf. parva and Mikrotia sp1, which most probably results from infiltrations from younger fissure fillings. The M013 assemblage is an absolute novelty for the Abruzzo-Apulian Palaeobioprovince and opens a new perspectives for the timing and mode of dispersal of the forerunners of the Gargano fauna.