

## ***Dinaromys allegranzii* n. sp. (Mammalia, Rodentia) from Rivoli Veronese (northeastern Italy) in a Villanyian association**

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**Abstract.** The first well documented Villanyian faunal assemblage found in Italy comes from a karst fissure at Rivoli Veronese (Venetia, northeastern Italy). It is represented by four Insectivora and fourteen Rodentia, among which is a new species of *Dinaromys*. This species is based on fifteen M/1 belonging to individuals of different ages, and a few other teeth. The description of the new *Dinaromys* and a comparison with other species are presented here. *Dinaromys topachevskii* NESIN & SKORIK, 1989 most likely has an M/1 of similar shape and size, but differs in some characters. *Dinaromys allegranzii* n. sp. seems to conserve paedomorphic features in the teeth.

**Key words:** Mammalia, Rodentia, systematics, Villanyian, northeastern Italy.

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### **I. INTRODUCTION**

In an abandoned quarry near Rivoli Veronese (Verona, Venetia, Northeastern Italy), the sediments of a karst fissure have preserved a rich faunal assemblage represented by *Erinaceus*, *Beremendia*, *Sorex*, *Talpa*, *Apodemus* (two species), *Muscardinus*, *Eliomys*, *Glis*, *Sciurus*, one flying squirrel, *Ungaromys*, cf. *Ellobius*, *Villanyia* cf. *exilis*, *Mimomys* cf. *pliocaenicus*, *Mimomys pitymyoides*, *Mimomys tornensis* and a new species of *Dinaromys*. The latter is the subject of this note.

Fossil remains of the genus *Dinaromys* are present in the Carpathians, the Balkans (JÁNOSSY 1969; KORMOS 1931; KOWALSKI 1958; MALEZ & RABEDER 1984; VAN DE WEERD 1973) and northern Italy in some micromammal associations from the early to the late Pleistocene. The Italian remains have all been referred to the extant *Dinaromys bogdanovi* V. & E. MARTINO, 1922 of the Dinaric Alps (TODOROVIĆ 1956) and were found in Biharian and Toringian associations (BARTOLOMEI 1970; SALA 1990).

In contrast, the faunal assemblage from Rivoli Veronese is older and can be referred to the Villanyian (= late Villanyian in FEJFAR & HEINRICH 1990) (SALA et al. 1994).

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## II. SYSTEMATIC PALAEOLOGY

Family Cricetidae ROCHEBRUNE, 1883

Sub-family Microtinae COPE, 1891

Genus *Dinaromys* KRETZOI, 1955

*Dinaromys allegranzi* n. sp.

**D e r i v a t i o n o m i n i s.** The species is dedicated to Mr. Aldo ALLEGRAZI, for about thirty years president of Gruppo Grotte G. Trevisiol of Club Alpino Italiano of Vicenza and a keen amateur who, for about sixty years, has devoted himself to naturalistic investigation in the Venetia, discovering many paleontological and prehistoric deposits and contributing to field research.

**H o l o t y p e.** First right lower molar RV 3 (Fig. 1: 1).

**P a r a t y p e s.** Fourteen first lower molars, two first and four third upper molars from the type locality.

**T y p e l o c a l i t y.** South of Monte Rocca at Rivoli Veronese, commune of Caprino, near Verona, Venetia, northeastern Italy.

**M a m m a l a g e.** Late Villanyian (MN 17).

**R e p o s i t o r y.** The faunal assemblage from Rivoli Veronese is preserved in the Museum of Natural History of Verona.

**D i a g n o s i s.** Size medium. Length of M/1 2.4-3.1 mm (n = 11), M1/ 1.9-2.0 mm (n = 2), M3/ 1.4-1.7 (n = 4). M1/ with three roots. Trigonid of M/1 with first and second triangles (T1 and T2) partially confluent; anteroconid with T4 and T5 confluent; anterior cap rounded, short, with strangled base, lacking enamel on the mesial side in worn specimens. Cement deposition in

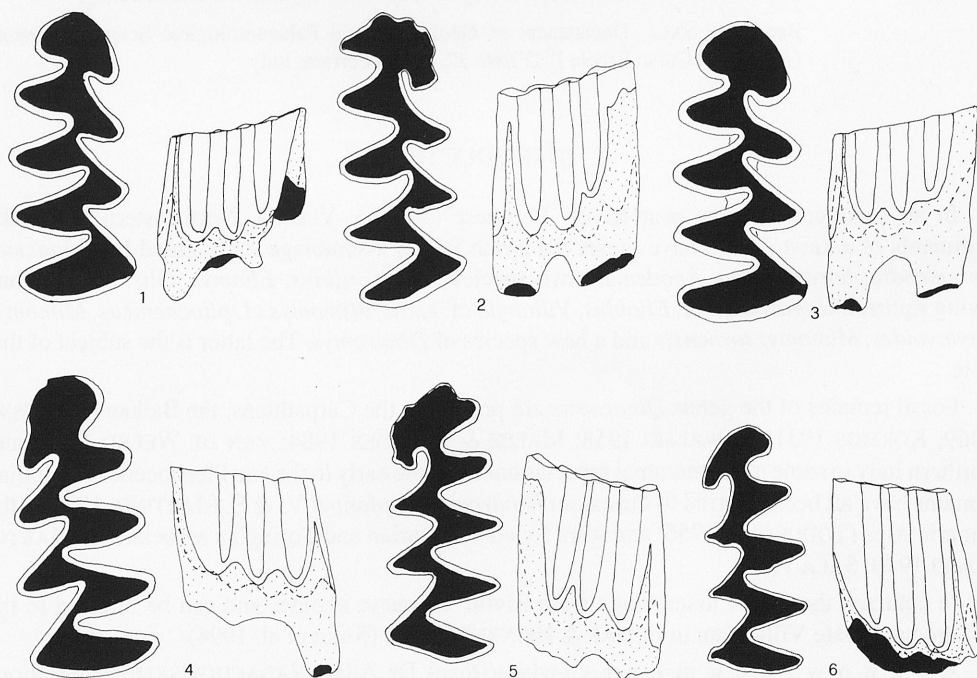


Fig. 1. M/1 of *Dinaromys allegranzi* n. sp.

re-entrant angles slight in very worn specimens, otherwise usually absent. Linea sinuosa with a hyposinuid which exceeds half the height of the unworn tooth, and a shorter hyposinulid.

**Description.** This new species is represented by 15 M/1 of individuals of different ages, and a few other teeth. M1/ has three roots; its protosinus may exceed half the height of the unworn tooth, and the anterosinus is low. M/1 has two roots. The fourth buccal salient angle (BSA4) is sometimes narrow and *Clethrionomys*-like, but is usually large, quadrangular, with the third buccal re-entrant angle (BRA3) very narrow and *Dinaromys bogdanovi*-like. The anterior cap is often pleated in specimens with well developed roots, so preserving a juvenile feature. In occlusal view, the enamel is undifferentiated, and thick only in very worn specimens. Cement deposition is negligible, usually absent, and present only in some very worn specimens. The linea sinuosa is pleated; the hyposinuid frequently exceeds half the height of the tooth; the hyposinulid is always low; the anterosinuid always reaches the occlusal surface, so the enamel is missing on the mesial side of the anterior cap.

**Comparison and discussion.** The M/1 is similar in shape and size to *Dinaromys topachevskii*, but differs from the latter in the usual absence of cement, in having the triangles more confluent, the anterior cap shorter and perhaps larger, and the fourth buccal salient angle (BSA4) narrow or like that of *D. bogdanovi*. The shape of the occlusal surface appears juvenile also in the adult; in contrast, *D. topachevskii* has a more mature shape of the occlusal surface, with the T2 and T4 more quadrangular, and T1, T3 and T5 expanded with respect to the Rivoli Veronese specimens. In the description of *D. topachevskii* given by NESIN & SKORIK (1989) the linea sinuosa is neglected but, in the figure of the holotype, the first lingual salient angle is extensively lacking enamel and therefore the hyposinulid seems to reach the occlusal surface precociously. In *Dinaromys* of Rivoli Veronese the hyposinulid is low and usually does not reach the occlusal surface.

All the listed characters of *Dinaromys allegranzii* n. sp. show a primitive form of *Dinaromys*, more primitive than *D. topachevskii*, which is in any case geologically younger. NESIN & SKORIK (1989) do not provide a list of the faunal assemblage in which *D. topachevskii* is found, but relate it to an early Biharian association of the early Pleistocene (early Tamaian).

The Villanyian faunal assemblage from Rivoli Veronese shows a moment of expansion of some eastern taxa; *Villanyia* cf. *exilis*, *Ungaromys* sp., and cf. *Ellobius* spread westward and show that northeastern Italy was open towards the Pannonian basin (SALA et al. 1994). This door toward the east may also have favoured the migration of taxa from the west and, if *Dinaromys allegranzii* is the ancestral form of the genus, this hypothesis may suggest the arrival in Ukraine of the genus *Dinaromys* from the Adriatic basin.

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