

***Andegameryx andegaviensis* Ginsburg, 1971 (Artiodactyla, Ruminantia,) from the early Miocene site of Estrepouy (MN3, France)**

Andegameryx andegaviensis Ginsburg, 1971 (Artiodactyla,
Ruminantia,) del Mioceno inferior de Estrepouy (MN3, Francia)

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RESUMEN

En esta nota describimos algunos de los restos del yacimiento del Mioceno inferior de Estrepouy (MN3, Francia) atribuidos por Roman & Viret (1934) a *Amphitragulus aruelianensis*, cambiando su asignación a *Andegameryx andegaviensis* Ginsburg, 1971. El reestudio del material y su comparación con los restos de *A. andegaviensis* de otras localidades europeas del Mioceno inferior, incluyendo la localidad tipo de la especie, permiten confirmar su presencia entre la fauna de rumiantes fósiles de Estrepouy.

Palabras clave: *Andegameryx*, Ruminantia, Mioceno inferior, Estrepouy, France

ABSTRACT

Several dental remains from the Early Miocene of Estrepouy (MN3, France) previously reported as *Amphitragulus aurelianensis* by Roman & Viret (1934) are described in this work and assigned to *Andegameryx andegaviensis* Ginsburg, 1971. The re-study of this material and the comparison with other remains of *A. andegaviensis* from several european localities of the early Miocene, including the type locality of the species, have permitted us to confirm the presence of *A. andegaviensis* in the ruminant fauna from Estrepouy.

Key words: *Andegameryx*, Ruminantia, Early Miocene, Estrepouy, France

Introduction

The genus *Andegameryx* Ginsburg, 1971 is a hornless Pecora known from the Early Miocene (MN2-MN3) faunas of Western and Central Europe (Ginsburg, 1971, 1999; Morales & Soria, 1984; Ginsburg & Morales, 1989; Ginsburg *et al.*, 1994; Quiralte & Morales, 2006). The genus *Andegameryx* was established by Ginsburg (1971), with the type species *A. andegaviensis* from the French locality of Pontigné (MN3). The main diagnostic features of *Andegameryx* are referred to the dentition, which is brachyodont-selenodont and relatively simple. The species *A. andegaviensis* also

occurs in other localities in France (Ginsburg, 1971, 1989, 2005; Ginsburg *et al.*, 1985, 2000). In Spain *A. andegaviensis* is known in the Agenian locality of Cetina de Aragón (Ginsburg *et al.*, 1994). A form close to *A. andegameryx* is probably present in other Spanish sites (Quiralte in prep.) There are two other species included in the genus *Andegameryx*: *A. laugnacensis*, which is a bit larger and more brachyodont than the type species and typically occurs in the MN2 zone in France (Ginsburg & Morales, 1989; Ginsburg, 1999) and *A. serus* (= *A. serum*) known in its type locality Wintershof-West in Germany (MN3; Ginsburg, 1971, 1999; Rössner, 1995).

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The introduction to the location, discovery, geology and paleontological studies of Estrepouy are commented in Ginsburg (this volume). Ginsburg (1999) and Ginsburg & Bulot (2000) presented an updated list of large-mammals recorded in Estrepouy with changes related to the ruminant fauna, now including *Andegameryx*. Such material, although scarce, is good enough to be morphologically described and to provide the record of *A. andegaviensis* in Estrepouy. In this work we will refer only to the study of these dental remains from Estrepouy originally assigned to *Amphitragulus aurelianensis* by Roman & Viret (1934).

The nomenclature for dentition is based on Hamilton (1973), Azanza (2000) and Rössner (1995). The measurements are provided in millimetres (mm). The original pieces are stored in the Faculté des Sciences de Lyon. In addition, we located some casts of this material in the collections of Paleontology of the Muséum National d'Histoire Naturelle in Paris (see figure 1).

Systematic Paleontology

Suborder Ruminantia Scopoli, 1777

Infraorder Pecora Linnaeus, 1758

Family *Incertae sedis*

Genus *Andegameryx* Ginsburg, 1971

Andegameryx andegaviensis Ginsburg, 1971

Synonymy: *Amphitragulus aurelianensis* (pro-parte) in Roman & Viret, 1934, p. 48

Material: Left P2 (FSL 320.199); left M1 (FSL 320.200); right m1 (FSL 320.197); right m2 (FSL 320.198). All these specimens were originally figured in Roman & Viret, (1934, pl.VII, figs 13-16).

Description: The P2 is incomplete and moderately worn (Fig.1: a-b). In occlusal view it shows an elongated outline in anterior-posterior direction. The anterior parastyle is sharp and is separated from the paracone by a shallow valley (Fig.1: a). The rest of the labial wall forms an undulation towards the posterior end, with a strong groove between the paracone and the metastyle. A small and anteriorly placed protocone can be seen in the lingual wall. The labial rib of the paracone is strong and wide (Fig.1: b). In the posterior end of the labial wall there are two small tubercles, next to the base of the metastyle.

The M1 is complete and well preserved (Fig.1: c-d). It is rectangular-shaped in occlusal view (Fig.1: c). The four main cusps are conical, with wide bases. The lingual cones are lingual-labially elongated. The labial stiles are developed, with a strong rounded mesostyle and a smaller metastyle (Fig.1: d). There are not accessory folds of enamel neither in the protocone nor in the metaconule. The postprotocrista is shorter than the premetaconulecrista and it does not reach the labial wall. The labial rib

of paracone is developed, wide, but not very protuberant. In contrary, the labial wall of the metacone is quite flat, with a very weak rib (Fig.1: d). The entostyle is small and two basal lingual cingula are present in the anterior and posterior ends of the molar. A weak and incomplete lingual cingulum can be seen at the base of protocone (Fig.1: c).

The morphology of the two lower molars is similar (Fig.1: e-j). The m1 shows an early wear stage while the m2 is almost unworn (Fig.1: e, h). The lingual conids and their cristids are quite aligned, in more degree in m1. In both molars the lingual wall is inflated and there is no trace of the ribs of metaconid and entoconid (Fig.1: f, i). There is a weak metastylid in m2, but it does not exist in m1. The postentocristid is short in both specimens (Fig. 1: f, i) and does not join the postypocristid, which is very long and reach the lingual side (Fig.1: e, h). The paleomeryx-fold is absent, but the ectostylids are quite strong (Fig.1: g, j). There are also an anterior and posterior basal cingulids.

Measurements: The measurements of the material are shown in Table 1.

Table 1.—Measurements of upper and lower dentition of *Andegameryx andegaviensis* from Estrepouy

| Number | Element | L | A |
|-------------|---------|------|-------|
| FSL 320.199 | P2 | 8,9 | 5,3 |
| FSL 320.200 | M1 | 9,8 | 11,05 |
| FSL 320.197 | m1 | 9,3 | 6,4 |
| FSL 320.198 | m2 | 10,9 | 7,1 |

Discussion

The four remains have a general brachyodont-bunodont dental pattern which is characteristic of the genus *Andegameryx*, being morphologically identical to that of *A. andegameryx* from Pontigné and other localities like Cetina de Aragón. The simple morphology of P2, with a very small protocone, is also typical of this genus and contrasts with that of *Amphitragulus*. In the upper molar the flat labial wall of metacone and the absence of protoconal-fold and an accessory fold in the metaconule are shared with all the specimens of *Andegameryx* revised. The morphology of lower molars from Estrepouy is particularly very characteristic of *Andegameryx*: bunodont lingual wall, weak metastylid, weak or absent palaeomeryx-fold, short entocristid.

Regarding their dimensions, molars are among the smallest values registered for specimens of *A. andegameryx* from Pontigné and La Brosse. The upper premolar is, however, similar to that of *A. andegameryx* from Cetina de Aragón.

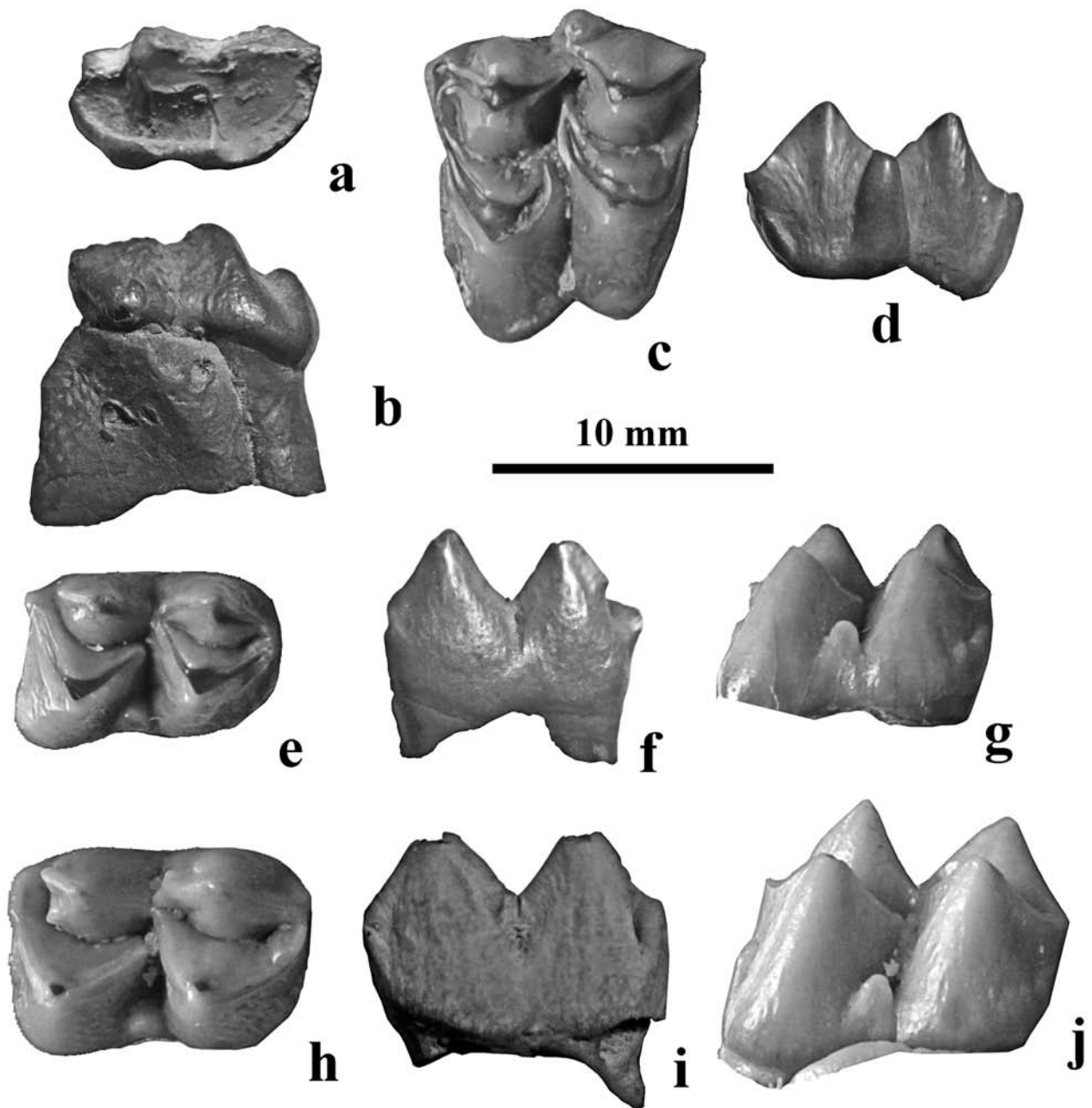


Fig. 1.—*Andegameryx andegaviensis* from Estrepouy. Cast of left P2 FSL 320.199, a) occlusal view; b) labial view. Left M1 FSL 320.200, c) occlusal view (original); d) labial view (cast). Right m1 FSL 320.197, e) occlusal view (original); f) lingual view (cast); g) labial view (original). Right m2 FSL 320.198, h) occlusal view (original); i) lingual view (cast); j) labial view (original).

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