

***Gomphotherium angustidens* (Mammalia: Proboscidea) in Bulgaria**

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Abstract. All finds from Bulgaria referred by previous authors to *G. angustidens* are misidentified. A hitherto unpublished lower second molar, presumably from Seltsi, South Bulgaria, is the only find from Bulgaria that might belong to *G. angustidens*, although the identification of an isolated lower molar cannot be certain. The specimen, described here, is one of the rare Bulgarian finds attributable to pre-Turolian taxa.

Key words: Proboscidea, Elephantoidea, *Gomphotherium*, Miocene, Bulgaria

Introduction

Numerous finds from Bulgaria have been attributed to *Gomphotherium angustidens* by previous authors (see e.g. BAKALOV & NIKOLOV, 1962; NIKOLOV, 1985; etc.). Without exception, all are misidentified (MARKOV, 2004a, 2004b). Most belong to *Choerolophodon pentelici* (see TASSY, 1983 for materials described by BAKALOV & NIKOLOV, 1962); several specimens are referable to *Anancus* (MARKOV, 2004b). NMNH FM1960, a hitherto unpublished lower second molar, is the only find known so far from Bulgaria that might indeed represent *G. angustidens*.

Institutional abbreviations

MNHN: Museum National d'Histoire Naturelle, Paris.

NMNH: National Museum of Natural History – BAS, Sofia

Material

NMNH FM1960, m2 dext; presumably from Seltsi (Plovdiv region, South Bulgaria: see Fig. 1 for a map).

Description and discussion

The specimen (Fig. 2) is very well preserved, with three lophids and a strong posterior cingulum, built of two cuspids. Wear on first two lophids, dentine not yet revealed on the second. Slight traces of cement in the interlophids. Mesoconelets are rather weak. Posterior pretrite

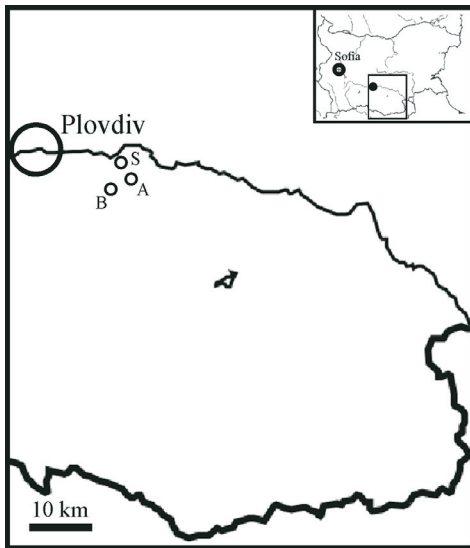


Fig. 1. Map of the area including Seltsi and nearby localities. S: Seltsi; B: Bogdanitsa; A: Ahmatovo

Lower molars of the amebelodontid *Archaeobelodon filholi* are extremely similar to those of *G. angustidens* (TASSY, 1984, 1985). However, the asymmetrical pretrite trefoil, the fusion of pretrite anterior conules and mesoconelets, and the absence of additional posttrite conules are tendencies that seem to characterize *G. angustidens* rather than *A. filholi* (TASSY, 1985). Thus, while the identification of an isolated lower molar cannot be certain, FM1960's morphology fits better with *Gomphotherium angustidens*.

NMNH FM1960 had an old label with the text "A tooth of MASTODON, Seltsi, Plovdiv district". Seltsi is situated along the river Cherkezitsa, close to the villages Ahmatovo and Bogdanitsa: an area that has yielded numerous proboscidean remains of Turolian age (MARKOV, 2004b). A find of *G. angustidens* would indicate much earlier layers (MN5 to MN9) but prospects in the area found no potential outcrops of pre-Turolian age (Tz. Tzankov, pers. comm. 2002). If the information on FM1960's old label is correct, pre-Turolian outcrops are yet to be found in the area around Cherkezitsa river. Two other possibilities are purely hypothetical: one is a late survival of *G. angustidens*; the other would involve an unknown Turolian trilophodont gomphothere. While both are certainly far-fetched, the second reminds the situation with KNM-LT 26324, a trilophodont right m1 from the Upper Nawata (Lothagam, Kenya), described and discussed by TASSY (2003, Figs. 8.2[5], 8.3). Upper Nawata and the fossiliferous area along Cherkezitsa are broadly contemporaneous, and one might further hypothesize on faunal exchanges between East Africa and the Balkans in the latest Miocene. Attractive as it may look, this possibility involves more fiction than science, and is supported by no evidence – at least at the present state of knowledge. Lastly, the locality data on FM1960's label could simply be wrong¹.

¹ It might be worth noting that a village in Varna region, Priseltsi, is situated close to Galata, one of the few Bulgarian pre-Turolian proboscidean localities (MARKOV, 2004b), and that "pri Seltsi" happens to mean "near Seltsi" in Bulgarian.

conules are visibly stronger than the anterior; no additional cusps on the posttrite side. Length: 109 mm; width: 47/54/57; height: 43 mm.

The tooth displays the general morphology of a trilophodont bunodont mastodon, and in the absence of any other remains (tusks, mandible fragments etc.), as well as any accompanying fauna, the identification can only be tentative.

Well-developed posterior cingulum with a distinct third interlophid, marked bunodonta and weak mesoconelets clearly differentiate NMNH FM1960 from the m2 of the primitive *G. sylvaticum* from Artenay, France (TASSY, 1985; pers. observations, MNHN 2005). Marked bunodonta precludes relations to *G. subtapiroideum* (on the status of this species see GÖHLICH, 1998). The rare *G. steinheimense* is characterized by large, brachyodont molars (TASSY, 1985); the lower second molars from Massenhausen, South Germany, referred by GÖHLICH (1998) to *G. steinheimense* are significantly larger and wider than NMNH FM1960.

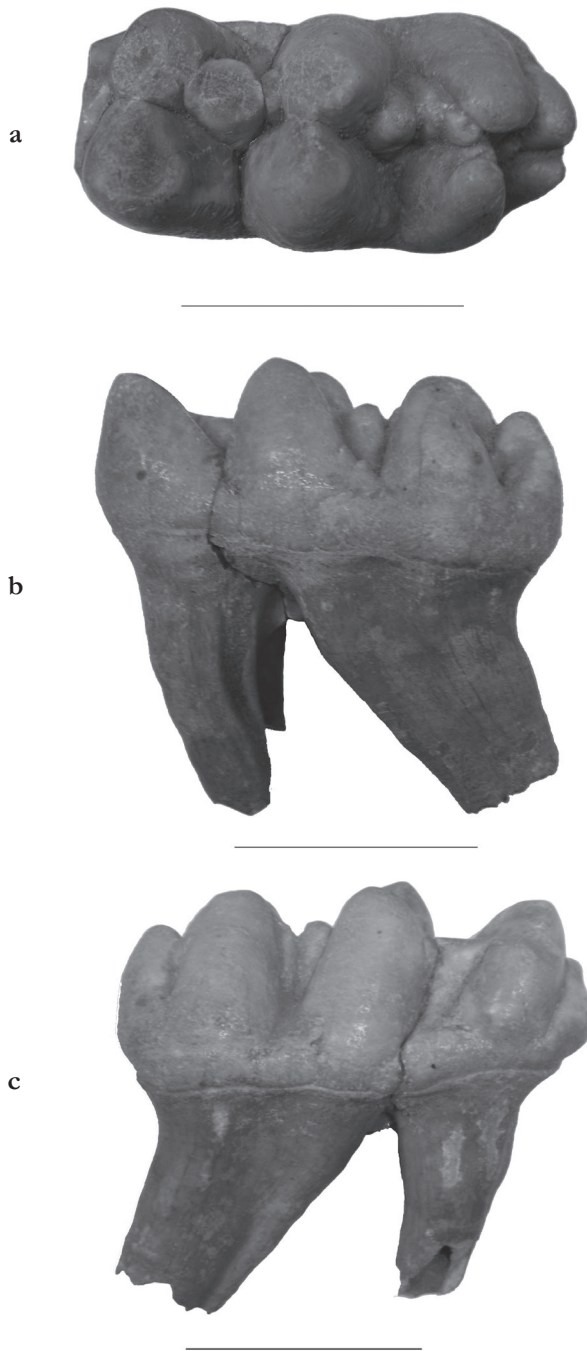


Fig. 2. NMNH FM1960, m2 dext of ?*Gomphotherium angustidens* in (a) occlusal, (b) lingual and (c) buccal view. Scale line: 5 cm

NB: A catalogue of Bulgarian tertiary mammal localities by NIKOLOV (1985) (actually a posthumous compilation based on Nikolov's notes), listed *G. angustidens* from Seltsi together with “*Zygodolophodon borsoni?*”, citing NIKOLOV & BASSAMAKOV (1979). However, according to the latter article, only the hemimandible of “*Z. borsoni?*” was indeed found near Seltsi, while the material referred by these authors to “*Trilophodon angustidens?*” (mandibular fragments) are actually from the nearby sand quarry of Ahmatovo. As in so many other cases, the find (NIKOLOV & BASSAMAKOV, 1979, Pl. III) is misidentified and belongs to *Choerolophodon pentelici*. Nothing links NMNH FM1960 to the Seltsi “*G. angustidens?*” reported by NIKOLOV (1985), and nothing indicates that the molar was ever identified by I. Nikolov, judging from its “Mastodon” label.

Summary and conclusions

With all previously published “*G. angustidens?*” finds from Bulgaria misidentified, NMNH FM1960 is the only specimen known so far which *might* belong to this taxon, and one of the few Bulgarian finds attributable to pre-Turolian proboscidean taxa. The allocation of an isolated lower molar cannot be certain; data on the locality are unequivocal. *Gomphotherium angustidens*, a taxon previously reported from Bulgaria, might indeed be present in the fossil fauna of the country, but further finds are needed to prove its presence with certainty.

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***Gomphotherium angustidens* (Mammalia: Proboscidea) в България**

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(Резюме)

Всички находки от България, отнасяни от предишни автори към *G. angustidens*, са погрешно определени. Един непубликуван до момента втори долен молар с предполагаемо находище Селци (Пловдивско) е единствената находка от страната, която би могла да се отнася към *G. angustidens*, макар че определението на отделен долен молар не може да бъде сигурно. Екземплярът представлява една от редките за България находки на таксон с предтуролска възраст.