

## WOOLY MAMMOTH SCATTERED FINDINGS FROM THE DANUBE RIVERBED NEAR CĂLĂRAȘI

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**Abstract.** *Several teeth (tusk fragments and cheek teeth) were unearthed from the Danube riverbed, not far from Călărași, due to the drag works commonly carried on for deepening the river channel. All belong to evolved woolly mammoth specimens. The rocks these fossils are originating from are löess and löess-like deposits. These rocks occurring in the South Bărăgan Plain are Late Pleistocene (Weichsel).*

**Keywords:** *Pleistocene, Danube, woolly mammoth.*

**Rezumat.** *Descoperiri de mamut din albia Dunării, în apropiere de Călărași. Câteva fragmente de fildeși și jugali ai unor mamuți au fost recuperați din albia Dunării, în apropiere de Călărași, prin lucrări de dragare efectuate pentru adâncirea canalului navigabil. Caracterele morfologice dentare indică forme evoluat de mamuți. Depozitele din care aceste fosile provin, sunt löessurile și rocile löessoide care apar în Câmpia Bărăganului de Sud. Ambele categorii de depozite revin Pleistocenului terminal (Weichsel).*

**Cuvinte cheie:** *Pleistocen, Dunăre, mamut.*

### INTRODUCTION

The woolly mammoth is by far the commonest large herbivore found in the south Romania Pleistocene formations (APOSTOL, 1968). It is reported from several dozen of sites, all located on the Moesian Platform. The majority of them originate from löess and löess-like deposits, as well as from gravel and sand accumulated in various river terraces.

However, in this region less usual findings are the ones from the Danube riverbed. They refer to fossils extracted from the riverbed rocks during the systematic drag works carried out for the channel deepening. Antipa (1912) seems to be the first one to report such a discovery in Sulina-Channel (Tulcea district). The Pleistocene large mammals teeth he mentioned (*Mammuthus primigenius*, *Coelodonta antiquitatis*, *Equus* sp.) had been collected during drags at 3-7 m in depth, at mile # 12. These fossils probably originated from the löess underlying the recent Danube Delta alluvia.

Recently, similar findings had been done near Călărași, at Danube mile # 390. All teeth and bones fragments refer to woolly mammoth. The engineer Dionisie Agache collected these fossils and later donated them to the Galați Natural Science Museum Complex (abbreviated GNSM). After this, the teeth and bones had been prepared in the Laboratory of Paleotheriology and Quaternary Geology (Babeș-Bolyai University Cluj-Napoca).

### SYSTEMATIC PALEONTOLOGY

Class Mammalia  
Order Proboscidea ILLINGER 1811  
Family Elephantidae GRAY 1821  
Subfamily Mammuthinae SIMPSON 1845  
Genus *Mammuthus* BURNETT 1830

*Mammuthus primigenius* (BLUMENBACH 1799)

GNSM 83721 (Plate I, figs. 1 a-c) refers to a tusk apical fragment, broken on its both sides. Its typical internal structure (guilloche) is exposed on these broken areas (Fig. 1 c). A strong wear mark occurs on its lateral side (Fig. 1 b).

Dimensions (mm): length – 214; maximum distal diameter – 91; maximum proximal diameter – 105.

GNSM 83722 (Plate I, fig. 2) is another fragment, probably originating from the same tusk. The wear mark is less obvious.

Dimensions (mm): length – 192; maximum distal diameter – 113; maximum proximal diameter – 119.

GNSM 83723 (Plate I, figs. 3a-b) is an entire upper left M3. The wear is incomplete, but implies more than half of plates (x18x;  $N_F = 13$ ,  $N_F$  = number of ridge-plates of the grinding surface; wear stage B4 according BEDEN, 1979). In occlusal view, the attrition surface has a distal arched outline (“distal bogenförmig”, in MUSIL, 1968, Abb. 12, 7).

Dimensions (mm): length of crown (L) – 226; length of grinding surface ( $L_F$ ) = 178; width (l) – 96 ( $l_7$ ); height (H) = 158; enamel thickness – 1.6; lamellar frequency (DLI) – 8;  $L/l = 2.35$ ;  $L/N = 12.55$ ;  $H/l = 1.65$

GNSM 83726 (Plate II, figs. 1 a-b) refers to a right lower m3 fragment. There are 16 enamel ridge plates, all from its mesial part (16-). Only nine of these plates were abraded ( $N_F = 9$ ).

Dimensions (mm): length of fragment ( $L_{fr}$ ) – 218; length of grinding surface ( $L_F$ ) = 104; maximum width of fragment ( $I_{fr}$  [ $I_8$ ]) – 84; maximum height of fragment ( $H_{fr}$ ) = 147; enamel thickness – 1.7; lamellar frequency (DLI) – 8.

GNSM 83724 (Plate II, figs. 2 a-b) concerns a distal left upper molar fragment (probably M3), composed of 13 enamel plates only (-13-). Only six of these plates are exposing incipient worn, the remaining ones being pristine (wear stage B4 can be estimated for this molar too).

Dimensions (mm): length of fragment ( $L_{fr}$ ) – 123; maximum width of fragment ( $I_{fr}$ ) – 78; maximum height of fragment ( $H_{fr}$ ) = 170; enamel thickness – 1.5; lamellar frequency (DLI) – 9.

GNSM 83725 (Plate II, figs. 3 a-b) is a small distal fragment of an left upper molar, still keeping seven enamel plates ridges (-7x), all pristine.

Dimensions (mm): length of fragment ( $L_{fr}$ ) – 108; maximum width of fragment ( $I_{fr}$ ) – 87

## CONCLUSION

All teeth unearthed from the Danube riverbed by the drag works carried on near Călărași belong to evolved woolly mammoth specimens. They refer to various individuals, all adults. The teeth are originating from the löess and löess-like rocks, both very common on the South Bărăgan Plain (APOSTOL, 1985; IONESI, 1994). All deposits are Late Pleistocene (Weichsel; GHENEA et al., 1971; SZAKÁCS & SEGHEDI, 1998).

In the same area, but on the right Danube bank, in terrace gravel and sand a mammoth jaw fragment was recently mentioned (CURLIȘCĂ & CODREA, 2007). Obviously, the mammoth was widespread in this area in the Late Pleistocene, being the commonest large herbivore documenting the Weichsel cold stages.

## REFERENCES

- ANTIPA GR. 1912. *Das überschwemmungsgebiet der Unteren Donau*. Anuarul Institutului Geologic al României. București. **4**(2): 225-496.
- APOSTOL L. 1968. *Particularité morphologiques des molaires de proboscidiens fossils quaternaries de Roumanie, conservées dans la collection du Musée d'Histoire Naturelle „Grigore Antipa”*. Travaux du Muséum d'Histoire Naturelle „Grigore Antipa”. București. **9**: 581-616.
- APOSTOL L. 1985. *Les dépôts quaternaries du sud-est de la Plaine Roumaine et leur importance pour les études paléogéographiques*. Travaux du Muséum d'Histoire naturelle "Grigore Antipa" București. **27**: 347-356.
- BEDEN M. 1979. *Les Éléphants (loxodonta et elephas) d'Afrique Orientale: systématique, phylogénie, intérêt biochronologique*. Thèse doctorale. Université de Poitiers. **I**: 223 p. + XXXIX annexes. Poitiers.
- CURLIȘCĂ A., CODREA V. 2007. *A new mammoth finding in Dobrogea*. Oltenia. Studii și comunicări. Științele Naturii. Craiova. **23**: 187-189.
- GHENEA C., BANDRABUR T., MIHĂILĂ N., GHENEA A., GIURGEA P. 1971. *Harta Cuaternarului din România, scara 1:1.000.000*. Institutul Geologic București.
- IONESI L. 1994. *Geologia unităților de platformă și a orogenului Nord-Dobrogean*. Edit. Tehnică București: 280 pp.
- MUSIL R. 1968. *Die Mammutmolaren von Předmosti (ČSSR)*. Paläontologische Abhandlungen, Abteilung A, Paläozoologie. Berlin **3**(1): 192 S.
- SZAKÁCS AL., SEGHEDI I. 1998. *Premises of tephrological investigation of the Quaternary in Romania*. Romanian Journal of Stratigraphy București. **77**(4): 85-90.

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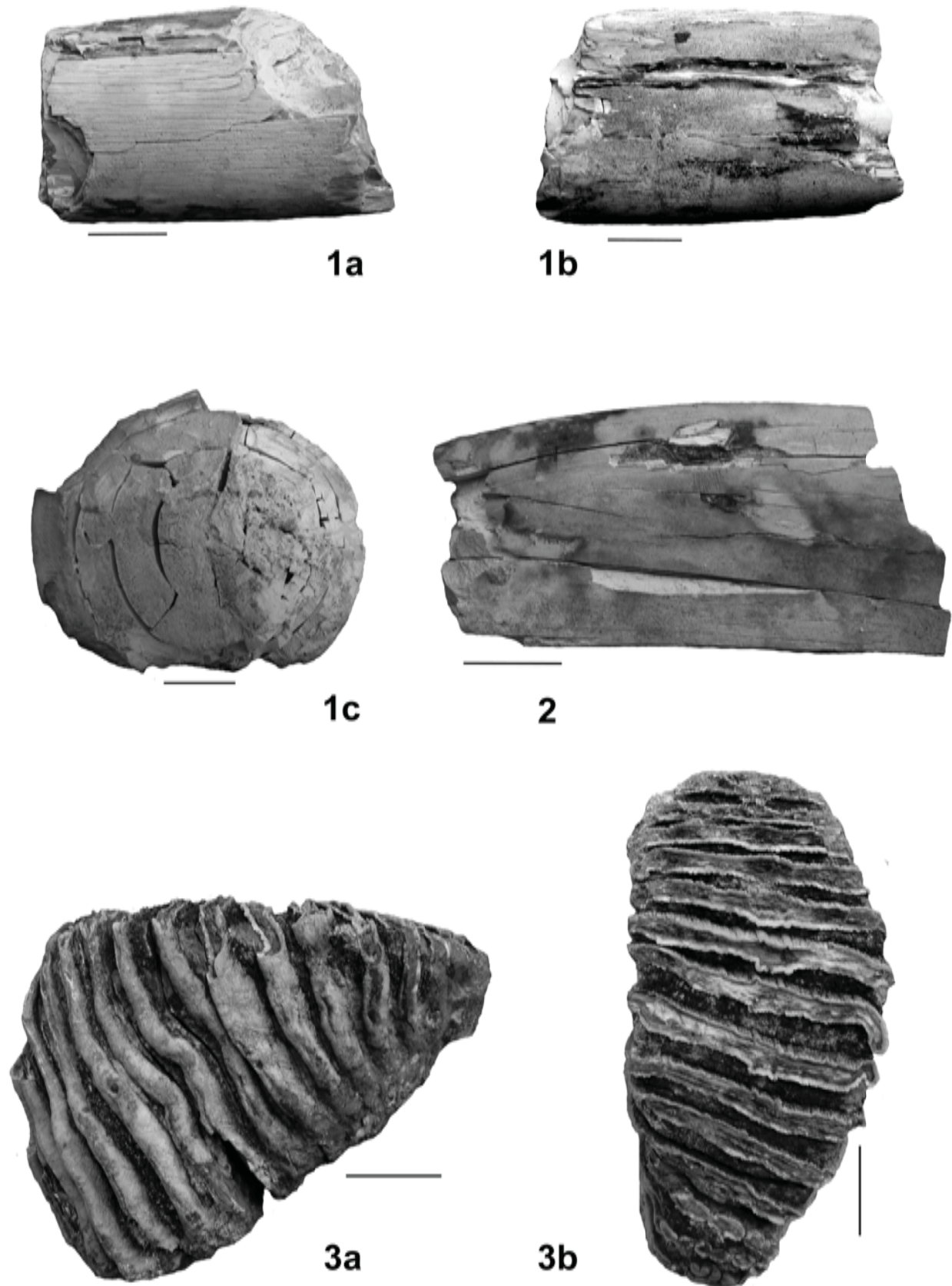


Plate I: *Mammuthus primigenius* from Danube riverbed, near Călărași. Figs. 1 a-c: tusk fragment (GNSM 83721); Fig. 2 – tusk fragment with wear facet (GNSM 83722); Figs. 3 a-b: left M3, a – lateral view, b – occlusal view. Scale bar: 50 mm.

Planșa I: *Mammuthus primigenius* din albia Dunării, în apropiere Călărași. Fig. 1 a-c: fragment de defensă (GNSM 83721); Fig. 2 – fragment de defensă cu fațetă de uzură (GNSM 83722); Fig. 3 a-b: M3 sin, a – vedere laterală, b – vedere ocluzală. Scala: 50 mm.

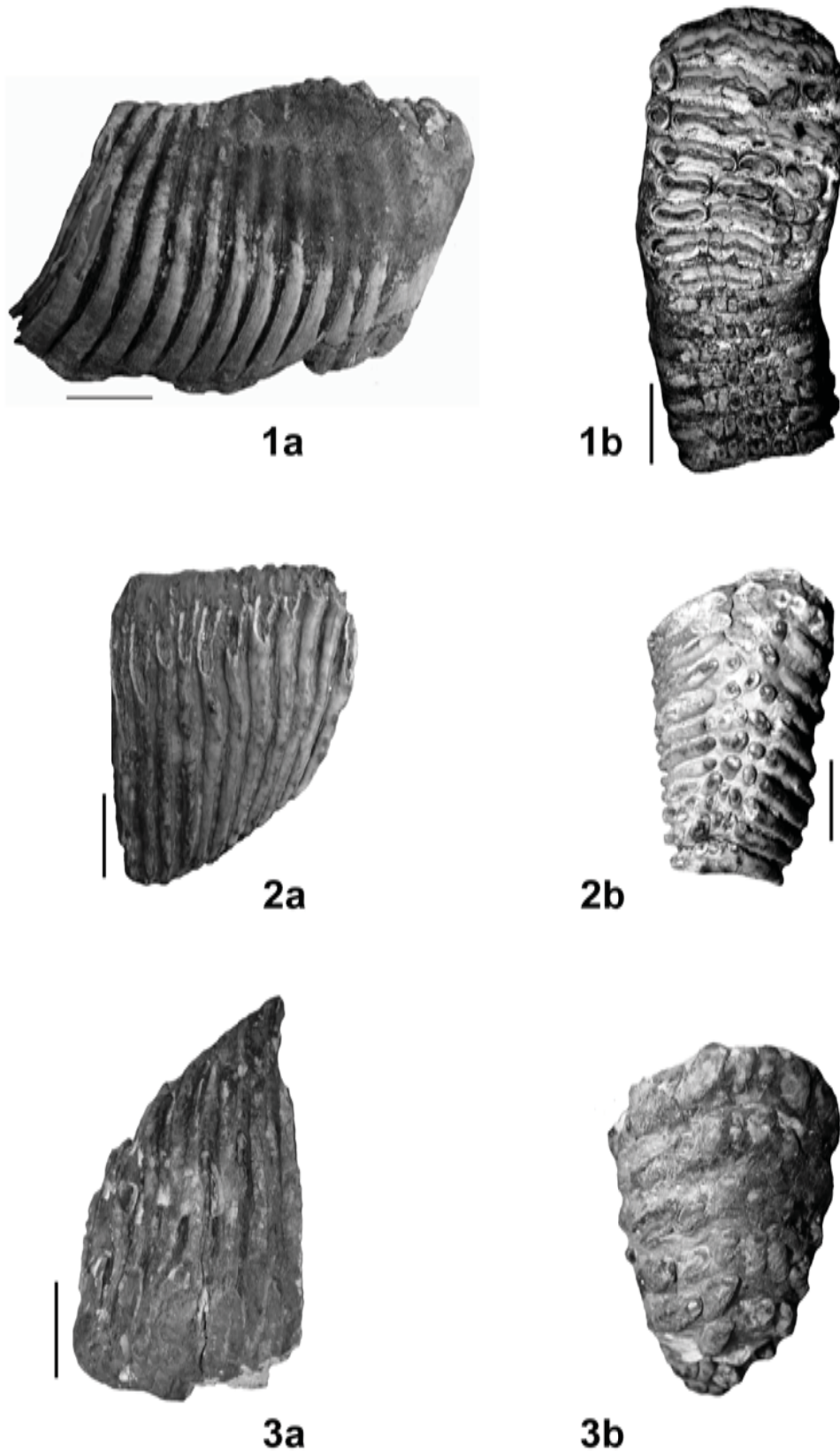


Plate II : *Mammuthus primigenius* from Danube riverbed, near Călărași. Figs. 1 a-b: m 3 fragment (GNSM 83726), a – lateral view, b – occlusal view; Fig. 2 a-b – left ? M3 fragment (GNSM 83724), a – lateral view, b – occlusal view; Figs. 3 a-b: upper molar fragment (GNSM 83725), a – lateral view, b – occlusal view. Scale bar: 50 mm.

Plansa II: *Mammuthus primigenius* din albia Dunării, în apropiere Călărași. Fig. 1 a-b: fragment de m3 (GNSM 83726), a – vedere laterală, b – vedere ocluzală; Fig. 2 a-b – fragment de ?M3 sin (GNSM 83724), a – vedere laterală, b – vedere ocluzală; Fig. 3 a-b: fragment de molar superior (GNSM 83725), a – vedere laterală, b – vedere ocluzală. Scala: 50 mm.