

Fig. 1. *Ostrea plicatula* Gmel., X 1.
 Fig. 2. *Hinnites* cf. *leufroy* Scrrs and *Turritella* sp., X 1.25.
 Fig. 3. cf. *Lutraria sanna* Bast., X 1.
 Fig. 4. *Pholadomya* sp., X 1.07.
 Fig. 5, 5a. cf. *Iphigenia lacunosa tumida* (Brocchi), X 1.09.

A WOOLLY RHINOCEROS (*PERISSODACTYLA*, *MAMMALIA*) REMAIN FROM BIHOR MOUNTAINS

V. CODREA*, T. LÁZÁR*

ABSTRACT. A woolly rhinoceros (*Coelodonta antiquitatis*) upper molar was discovered in the aven Petit Tibi, located in the vicinity of Chișcău locality (Bihor Mountains, Apuseni). Most peculiar is the altitude of the point where it was discovered. The age of the fossil is probably Late Pleistocene.

KEY WORDS: Perissodactyla, Pleistocene, Western Romania.

The Triassic formations from Bihor Mountains host a most interesting endokarst. A series of caves and avens of real interest are situated here. In this sense, it is sufficient to mention the Fagului Cave, once exceling in aragonitic concretions, unfortunately destroyed nowadays, or the Urșilor Cave from Chișcău, an exceptional palaeontological reservation and tourism objectif in our country.

After the first mining works in the Fagului Cave, started in 1973, the natives noticed the presence of a ventilation in a place called "windy hole", an opening of limited dimensions, impenetrable till that moment. The unrocking works carried out in 1992 by some amateur speleologists from the Crysis Oradea and Dijon-Spéléo clubs evidenced an aven called by the authors of the discovery, Petit Tibi. This aven is situated on the right slope of the Prelucilor Valley (tributary to the hydrographic basin of Crăiasa Valley), at the absolute altitude of 960m. Administratively, the aven is situated in the area of Pietroasa commune (Bihor district), at a distance of approximately 3.5 km East from Chișcău village.

In fig. 1 the profile of the aven is presented as it was mapped in 1994.

The morphology of the aven indicates a genesis determined by the tectonic premise, the infiltration waters completing the enlargement of minimal resistance ways which were tectonically generated.

From a palaeontological viewpoint, the occurrence of a woolly rhinoceros tooth is extremely interesting. It was found amidst some rock blocks in the hall called "Rhinoceros", situated at - 34m as related to the hight of the entrance. It is indicated by the letter "F" in fig. 1.

*„Babeș-Bolyai“ University, Departament of Geology-Palaeontology, 1 Kogălniceanu St., 3400 Cluj-Napoca, Romania

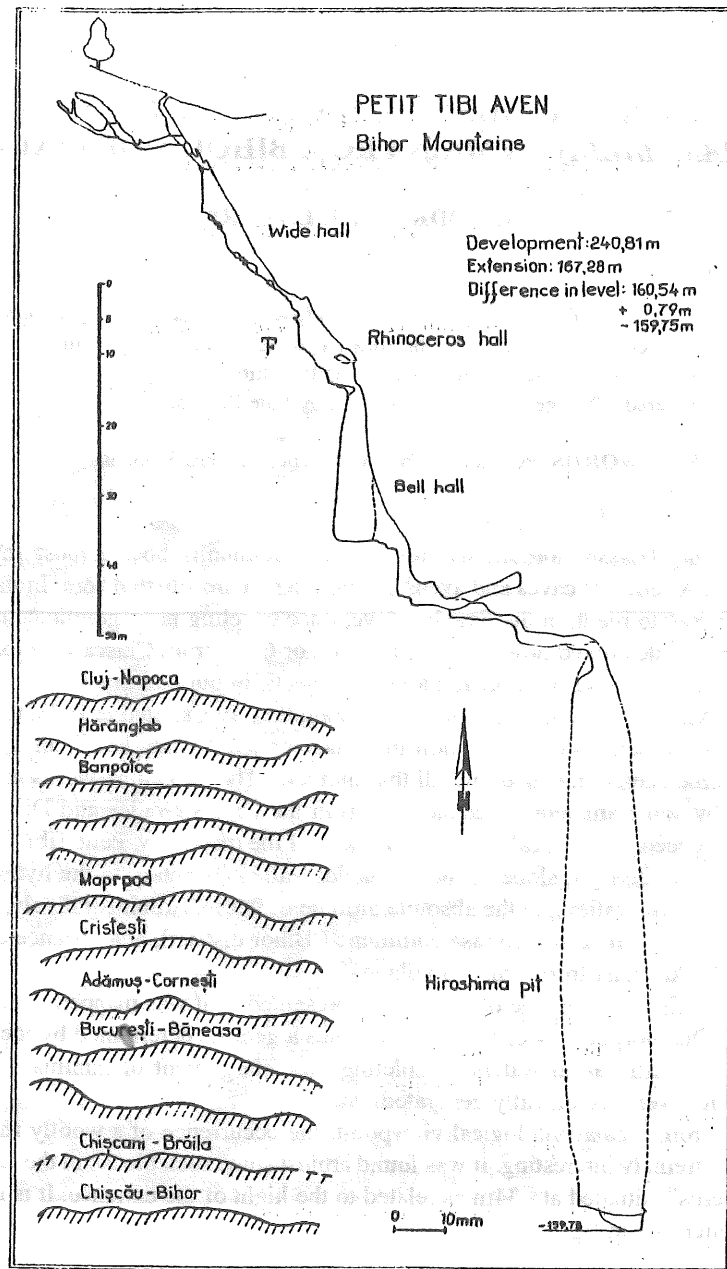


Fig. 1: Longitudinal profile of the Petit Tibi Aven; F is the place where the fossil was found; compared ectoloph profiles of *Coelodonta antiquitatis* from different occurrences from Romania.

The tooth is curated at Transilvanian Basin Museum, University of Cluj (abr.TBM), inventory number 41.

Order *Perissodactyla* OWEN 1848
 Family *Rhinocerotidae* OWEN 1845
 Subtribe *Dicerorhinina* RINGSTRÖM 1924
Coelodonta antiquitatis (BLUMENBACH 1799)

Material: M2/ sin.

Description: The cheek tooth is well preserved, except some small damages in the enamel of the proto-loph and the metaloph foreside as well as of the posterior-external root which also shows a recent break.

The tooth shows all typical features for the species. The ectoloph is strongly waved, having a sharp and divergent parastyl, followed by a large, clearly outlined fold of the paracone as well as by another, also large one of the metacone and by a moderate divergent metastyl.

The medifossete is closed due the fusion of crochet and crista. The anticrochet is absent. The protocone has a weak constriction. Thus, only the posterior groove of the constriction is visible, being quite evident.

The cingulum is completely absent on both palatal and labial sides. The base of the end of proto-loph reaches the metaloph. Thus, the opening of the median valley is obstructed until at a height of approximately 15 mm above the basis of the crown.

The depth of the median valley exceeds those ones of the medio- and post-fossete.

The cement is present on every internal fold, maximal quantity occurring in the post-fossete. The ectoloph is very rugged, except those zones which were affected by wearing.

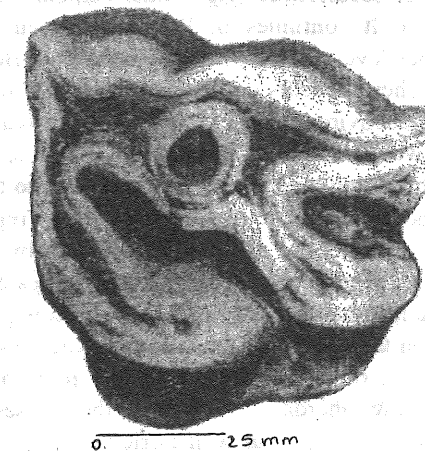


Fig. 2: *Coelodonta antiquitatis*, left M2/. Petit Tibi Aven. Bihor M-ts; TBM41.

Dimensions (mm): length - 57.2; mesial breadth - 59.0; distal breadth - 53.0.

Comparisons: Considering the dimensional variation interval specified by Guérin (1980) for the species in discussion (i.e., 47.0-65.5 mm), the length of the cheek is approximately equivalent to the average value. It is shorter than similar teeth discovered in the travertins at Banpotoc, Hunedoara district (58.0-61.5 mm; unpublished material, in the collections of the Dacian and Roman Civilisation Museum from Deva, inventory number 496 and without inventory), Hărănglab (61.0 mm; TBM 2294), Cluj (Szentpétery, 1914; TBM 1503-1505), București-Băneasa (Apostol, 1967; Grigore Antipa Museum 1101/39), Marpod-Sibiu (unpublished; Brukental Museum 56276-56277) or Adămuș-Mureș (Fuchs & Kónya, 1967; Tîrnăveni Museum 46/77). It is closer to a similar tooth discovered by Kónya at Cristești-Mureș in 1967, unpublished (56.0 mm; Tg. Mureș Museum 246). The ectoloph conformation situates the tooth in the vicinity of the pieces known from Banpotoc, Cluj and Chișcani-Brăila, as opposed to the excessively waved aspect of the pieces from Adămuș-Cornești or of those with a more divergent metastyl (Hărănglab, București-Băneasa partim). Compared ectoloph profiles of M2/ from Romania are presented in fig. 1.

Discussions: In Guérin's opinion (1980) the second upper molar has no diagnosis value for the species' evolutionary tendencies, except the hypsodonty which grows in a sensible manner in the case of more evolved forms. This one is a not accesible mark-point in the piece from the Apuseni M-ts. As a consequence, it is difficult to establish the exact age of the specimen in the absence of other skeletal parts or of an additional fauna. However, if Samson & Kovacs (1970) observations are really applicable as a rule for the older specimens, this one from Bihor M-ts is nearer to würmian forms.

The genus occurs on Romanian territory already in Mindel (Kovács, 1981), as observed in several occurrences (e.g., Araci-Fântâna Fagului, Ghidfalău-Vajna, Araci-Kreccsen, a.s.o.). It continues in Riss (Rădulescu & Samson, 1985; e.g., Ghidfalău-Vajna upper level, Sf. Gheorghe-Cariera Sud, Bodoc I-Cărămidărie) and especially in Würm when it occurs on the entire territory of Romania.

From a palaeoenvironmental viewpoint, both Kubiak (1977) and Guérin (1980) consider the woolly rhino an extremely versatile species which managed to adapt itself to both lower and heigh vegetale cover. Due to trophic requirements this rhinoceros had the possibility to retreat even to higher regions, traversing several mountains. Kubiak's remarks are verified in Romania by several discoveries. We mention here those from Bulz-Bihor (Toula, 1882; Codrea & Gherdan, 1990) which offer the proof for the fact that the Crișului Repede narrow path constituted a passage used by the species on the way from the eastern to the western part of the Apuseni M-ts or from the Aven of Rîșteț, located in the parts of Colești-Bihor locality (Jurcsák, 1974; Codrea & Gherdan, 1990). In all these cases, we have in fact isolated skeletal remains which might be as well carried to those karst holes by carnivores. Even in this context, we should avoid exaggerating the distance on which the corpse pieces might have been transported, as there is the supposition that the animals lived

at short distance, i.e., in the mountains. The aven Petit Tibi is, by its altitude, one of the most high places in Romania where the species is recorded.

UN REST DE RINOCER LÂNOS (*PERISSODACTYLA*, MAMMALIA) DIN MUNȚII BIHORULUI

Rezumat

În 1994 cluburile de speologi amatori Crysis Oradea și Dijon-Spéléo au cartat un aven localizat în versantul drept al Văii Prelucilor (tributară bazinului hidrografic al Văii Crăiasa). A fost denumit de descoperitori Avenul Petit Tibi. Dezvoltat în roci carbonatice triasice, are intrarea situată la altitudinea absolută de 960 m, fiind poziționat administrativ în aria comunei Pietroasa, la aproximativ 3.5 km de satul Chișcău (jud. Bihor).

La -34 m față de intrare, printre rocile ce acoperă planșeul unei săli (Fig. 1) a fost descoperit un jugal superior (M2/) de rinocer lânos (*Coelodonta antiquitatis*). Vârsta fosilei este foarte probabil würmiană.

Este una dintre ocurențele cele mai înalte altimetric în care această specie de rinocer a fost întâlnită în România. Alături de alte descoperiri din Bihor, cum sunt cele de la Avenul Rîșteț (Colești) sau Bulz, cea din avenul Petit Tibi demonstrează că rinocerul lânos a fost capabil să traverseze M-ții Apuseni, adaptându-se sub imperiul unor necesități trofice unei diete bazate pe vegetale oferite de pădurile pleistocene de conifere.

REFERENCES

- Apostol L., 1967: Étude du rhinocéros à toison laineuse (*Coelodonta antiquitatis* Blumb.) du quaternaire de la région de Bucharest. Trav. Mus. d'hist. Nat. "Gr. Antipa", VII: 463-473, 2 fig., VI Pl. București.
- Codrea V., Gherdan D., 1990: La signification de quelques restes squelettiques de mammifères rencontrés dans le forage F 1A Avram Iancu (dépt. de Bihor, l'Ouest de la Roumanie). Crisia XX: 553-565, 5 fig., 1 tab., 3 pl. Oradea.
- Fuchs H., Kónya I., 1967: Noi fosile de rinocer lânos (*Coelodonta antiquitatis* Blumenbach) din Cuaternarul văii Tîrnavei Mici. Studii și materiale. II: 1-11. 6 pl., Tg. Mureș.
- Guérin C., 1980: Les rhinocéros (Mammalia, Perissodactyla) du Miocène terminal au Pleistocène supérieur en Europe Occidentale. Comparaison avec les espèces actuelles. Doc. Lab. Géol. Lyon, 79, fasc. 1-3: 1182 pag., 21 pl., 115 fig., 161 tab. Lyon.
- Jurcsák T., 1974: Monumentele naturii. În Repertoriul monumentelor din jud. Bihor: 353-396. Muz. Țării Crișurilor. Oradea.
- Kovács S., 1981: Catalogul colecției de paleontologie (mamifere pliocene și cuaternare) a muzeului Sf. Gheorghe. Aluta: 271-297. Sf. Gheorghe.
- Kubiak H., 1977: On the ecology of pleistocene rhinocerotidae of Eastern Europe. X INQUA Congress, Abstracts, p. 257. Birmingham.
- Rădulescu C., Samson P., 1985: Pliocene and Pleistocene Mammalian Biostratigraphy in southeastern Transylvania (Romania). Trav. Inst. Spéol. "E. Racovitza", XXIV: 85 - 95. 1 table. București.
- Samson P., Kovács AL., 1970: Contributions à la connaissance des faunes de mammifères quaternaires du Bassin de Sf. Gheorghe. Aluta II: 25-62, 14 fig. Sf. Gheorghe.
- Szentpétery Z., 1914: Beiträge zur Kenntniss der pleistocänen Säugetiere von Kolozsvár. Muz. Füzet., II/1 (1913): 21p., tabl. IV-V, 6 szo. Kolozsvár.
- Toula Fr., 1882: Oberkiefer-Backenzähne von *Rhinoceros tichorhinus* Fischer. Verh. d. k.k. Geol. Reich., pag. 279. Wien.