

The Ezerovo deinothere

In November 1965, several bones of a huge mammal have been found by the Asenovgrad natural history teacher Dimitar Kovachev and two of his pupils (Ковачев, 1966; Цанков, Николов, 1966) during palaeontological field reconnaissance in the Neogene sand outcrops near the village of Ezerovo, Plovdiv District (Upper Thrace plain). Kovachev immediately evaluated the importance of the find, and sought the help of Ivan Nikolov, scientist with the Geological Institute of the Bulgarian Academy of Sciences. Preliminary conservation has been made *in situ*. Systematic excavations have been performed during the next summer. The bad state of the bones required a thorough conservation *in situ*, with application of water glass, nitrocellulose lacquer, plaster (more than one tone), bandages, iron splints, etc. After this preliminary conservation, the extracted bones have been transported to Sofia.

During the next few years, Ivan Nikolov performed a thorough and tiresome work for the full conservation, study and description of the bones and the mounting of the whole skeleton. Several reports have been written by him (now kept at the funds of the Geological Institute), and they were intended to represent the basis for a monograph publication.

Unfortunately, Ivan Nikolov suddenly died at the age of 55 on October 28, 1982. The principal deed of his life, the mounted *Deinotherium* skeleton, is permanently on exhibit in the main hall of the Museum of Geology and Palaeontology at the Sofia University “St. Kliment Ohridski”, and an exact copy on a 3/4 scale, also prepared by Nikolov, is exhibited in the Palaeontological Branch (Asenovgrad) of the National Natural History Museum. The skeleton is probably the best preserved and found up to now specimen of genus *Deinotherium*, and its detailed description would be of benefit to the palaeontological community. However, this rich material still remained unpublished. Only a few scientists have observed the skeleton. The new species was referred to as *Deinotherium thraciensis* Nikolov in the catalogue (Nikolov, 1985) posthumously published by E. Kojumdjieva but no valid publication of the taxon existed up to now. During the last few years Dimitar Kovachev decided to prepare for publication the descriptions made by Nikolov, thus taking over his shoulders the responsibility for all possible omissions

and flaws in the preparation of this voluminous material.

The Editorial Board of *Geologica Balcanica* is also fully aware of our own responsibility, and of possible ethical problems. None of the members of the Board and of the Editorial Council is an expert in the very specialized field of mammal palaeontology. Most of the material remains in the state left thirty years ago by Nikolov. Obviously neither he nor D. Kovachev could be blamed for any omission or flaw, as well as for the low technical level of preparation of the illustrations.

On the other hand, *verba volent, scripta manent*. The single copies left of the reports scrupulously made by Nikolov are threatened by deterioration and possible disappearance. Serious ethical problems would be met by younger students of fossil Proboscidea who work on deinothere taxonomy and anatomy and would like to use the unpublished descriptions.

In this situation our decision is to take the risk (and a part of the possible blame) to publish the paper as submitted (07.08.2004). It does not take into account many recent publications (some of them are cited in the short reference list below). Some minor technical flaws have been repaired, too.

Many problems remain pendant in respect of the taxonomy and systematics of genus *Deinotherium* and its species. Even the position of the genus in Proboscidea is sometimes still questioned (Gregor et al., 2000), and the specimen described in the paper by Kovachev, Nikolov (2006) as *Deinotherium thraciensis* sp. n. is referred by other authors (Markov, 2004; Марков et al., 2002) to *Deinotherium gigantissimum* Stefanescu. Deinothere remains have been found in the meantime in new localities in Eastern Europe (Lungu, Obada, 2001; Vislobokova, Sotnikova, 2001) and Crete (Athassiou, 2004). The external aspect of deinothere head has been subject of interesting reconstructions (Markov et al., 2001; Марков et al., 2002) based upon the rich Bulgarian and foreign finds. They bear on the ecological specialization of this interesting mammal group, and throw light also on some taxonomic problems, phylogeny, etc. Without any doubt, the almost full (90–92% found of all the bones!) Ezerovo deinothere skeleton should be taken into account by any future deinothere study.

References

- Athanassiou, A. 2004. On a *Deinotherium* (Proboscidea) finding in the Neogene of Crete. — *Carnets de Géologie/Notebooks on Geology*, Brest, Letter 2004/05 (CG2004_L05)
- Gregor, H.-J., Kuhn, R., Storch, D.H. 2000. Gedanken zur taxonomisch-systematischen Stellung von *Deinotherium* auf Grund anatomisch-morphologischer Gegebenheiten. — *Zeitschrift documenta naturae, Muenchen, No 131*, 141 S., 43 Abb., 7 Tab., 6 Taf.
- Kovachev, D., Nikolov, I. 2006. *Deinotherium thraceiense* sp. n. from the Miocene near Ezerovo, Plovdiv District. — *Geologica Balcanica*, 35, 3-4; 5-40.
- Lungu, A., Obada, T. 2001. Contributions to the study of the Neogene representatives of Ordo Proboscidea (Mammalia) from Eastern Europe. — *1st International Congress The World of Elephants*, Rome, Proceedings; 119-121.
- Markov, G. N., Spassov N., Simeonovski V. 2001. A reconstruction of the facial morphology and feeding behaviour of the deinotheres. — In: Cavaretta G., P. Gioia, M. Mussi, M.R. Palombo (eds). *The World of Elephants. Proceedings of the 1st International Congress*. Consiglio Nazionale delle Ricerche — Roma; 652-655.
- Markov G. N. 2004. The fossil proboscideans of Bulgaria and the importance of some Bulgarian finds — a brief review. — *Hist. nat. bulg.*, 16; 139-150.
- Nikolov, I. 1985. Catalogue of the localities of Tertiary Mammals in Bulgaria. — *Палеонт., стратигр. и литол.*, 21; 43-62.
- Spassov, N. 2000. The Turolian *Hipparion*-fauna and the character of the environment in the Late Miocene of West Bulgaria. — *Спис. Бълг. геол. д-во*, 61, 1-3; 47-59.
- Vislobokova, I. A., Sotnikova, M. V. 2001. Pliocene faunas with Proboscideans of the Former Soviet Union. — *1st International Congress The World of Elephants*, Rome, Proceedings; 157-160.
- Ковачев, Д. 1966. Езеровският дейнотериум. — *Природа и знание*, 19, 3; 16-18.
- Марков, Г., Спасов, Н., Симеоновски, В. 2002. Реконструкция на главата на *Deinotherium gigantissimum* Stefanescu, 1892 въз основа на материала от Езерово, Южна България. — *Historia naturalis Bulgariae*, 14; 141-144.
- Цанков, В., Николов, Ив. 1966. Фосилните хоботни и находките им в България. — *Природа и знание*, 19, 5; 16-18.
- Reports of I. Nikolov (in Bulgarian; kept in the funds of the Geological Institute, Bulgarian Academy of Sciences)
- Nikolov, I. 1969. Report on the project "Restoration of the *Deinotherium* skeleton from the village of Ezerovo". MCM 181, 12 pp., 9 plates.
- Nikolov, I. 1972. Taxonomic studies of *Deinotherium thraceiense* sp. n. GF 275; 83 pp., 23 plates, 20 tables.
- Nikolov, I. 1973. Phylogeny of the representatives of Proboscidea in Bulgaria — genus *Deinotherium*. GF 286; 40 pp., 2 plates, 6 tables.

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