

***The bovid from the Carriça clay-pit (Côja):  
a discussion***

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#### RESUMO

*Palavras-chave:* *Bos taurus* — *Modernol Actual* — *Côja* — *Portugal*.

Esclarece-se que o dente de bovídeo citado na literatura como proveniente da mesma localidade que deu mamíferos do Eocénico superior pertence a um boi doméstico (*Bos taurus*) moderno, actual, não fossilizado, que não deve ter sido encontrado *in situ*. Como pode induzir em confusão, não deve voltar a ser tido em conta em trabalhos de Estratigrafia e Paleontologia.

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#### RÉSUMÉ

*Mots-clés:* *Bos taurus* — *Modernel Actuel* — *Côja* — *Portugal*.

La dent de Bovidé mentionnée dans la littérature comme provenant du gisement de Côja à mammifères de l' Eocène supérieur appartient à un *Bos taurus* (boeuf domestique); la pièce n'est même pas fossilisée et n'a sûrement pas été récoltée *in situ*. Comme elle peut induire en confusion, on ne doit plus tenir compte de la dent en cause en de futurs travaux concernant la Stratigraphie et la Paléontologie.

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#### ABSTRACT

*Key-words:* *Bos taurus* — *Modern/ Contemporary* — *Côja* — *Portugal*.

A Bovid tooth referred to in the litterature as from the same locality that yielded upper Eocene mammals belongs to a modern or probably contemporary *Bos taurus* (domestic cattle); it is not a fossil and certainly was not found *in situ*. As it may induce in confusion, it must not anymore be taken into account in future paleontological and stratigraphic work.



## INTRODUCTION

Well after his first paper on the discovery of mammalian fossils found in the clay quarry at Carriça, near Côja, G. ZBYSZEWSKI (1965, p. 219) referred to a Bovid tooth which was given him (at the same time and together with the remaining fossils) by Mr. L.S. Filipe. The former specimen would have been found in the same formation where teeth and bones (later recognized by ANTUNES, 1964 as upper Eocene in age) came from (ZBYSZEWSKI, *ibid.*). This author recognized then that fossilization was different, i.e. the tooth could have come from another bed (ZBYSZEWSKI, *ibid.*).

Having observed summarily the Bovid tooth, we were convinced that it was not a fossil at all, and hence that it was meaningless. For this reason no reference to it was made in our papers until much later (ANTUNES, 1979, p.162). We stressed also the fact that its exact provenience remained unknown (*loc. cit.*).

Anyway the tooth had entered the literature and became a source of confusion, even more so because at Côja and elsewhere in this region there are several sedimentary units apparently devoid of fossils and badly in need of a more accurate dating. Some of these units are Quaternary and it would be tempting to regard the Bovid tooth as an evidence of this.

Much work has been done about the regional lithostratigraphy. There has been a distinctly uncritical approach in some studies as regards paleontological evidence, data being more or less assembled as if they had the same scientific significance. Thus, at the Côja site, the Bovid tooth would not compare in stratigraphic value with the typical Ludian fauna.

The situation is prone to confusion. In order to prevent it and settle the matter for once and for good we reexamined the controversial specimen as follows.

## DESCRIPTION AND IDENTIFICATION

### Description

The tooth referred to by Zbyszewski and kept at the collection of the "Serviços Geológicos de Portugal", number 5772, is an upper left first molar ( $M^1$ ). The crown is very much abraded by use but otherwise preservation is good, even if there is a small fracture at the vestibulo-distal corner. Roots are well preserved except for the vestibulo-distal one, which is broken in such a way (with an oblique, nearly plate surface) that it may suggest a butchering mark during the process of tearing apart of the head. Cement is well preserved too.

The dentine shows, mainly on the occlusal surface, some minor cracks underlined by a pink colour; cracks also affected enamel and the cement coating. This may suggest that the specimen was fired to a moderate degree.

As a final remark, the dark, yellowish patina we saw through window glass where it is displayed is but a thick varnish cover. There is no significant patina at all.

Dimensions: maximum mesio-distal length x max. vestibulo-lingual breadth at the crown base are approximately 24.7 x 24.5 mm.

### Identification

Form and size of the tooth point out to an highly evolute, post-Pliocene, moderately-sized Bovine.

One may recognize, even at the first glance, that it is definitely much smaller than in *Bison* (an

unprobable hypothesis since this genus remains unknown in Portugal, even if there are quite a number of important quaternary localities), as well as than the well-represented *Bos primigenius*. Hence it can be assigned to domestic cattle, *Bos taurus* and to a rather small-sized race, as it was the normal situation in Portugal - moreover in the hinterland, where larger, beef races were introduced much later.

## CONCLUSIONS

This study leads to the following conclusions:

1 - The bovid tooth referred to in the literature as having been found in the locality of Côja, well

known for the occurrence of a late Eocene fauna, belongs to a rather small-sized *Bos taurus* (domestic cattle).

2 - The specimen does not appear to have been fossilized at all; it is perfectly preserved.

3 - The same tooth shows some cracks that suggest it was (moderately) fired; one of the roots is uncomplete, with a flat and oblique surface that indicates it was probably severed during butchering in order to tear apart the head.

4 - The specimen, whose exact origin is unknown, should not have been referred in the literature and is definitely to be discarded as stratigraphic or paleontological evidence.

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