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Proboscidea from the middle Miocene hominoid site of Çandır (Turkey)

1 figure, 1 plate

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Abstract.- There are two proboscideans at Çandır: one is a small *Deinotherium*, but the other cannot be definitely identified; it is not unlike a primitive *Choerolophodon*, but we prefer to consider it as close to the Amebelodont *Protanancus*.

Key-words.- middle Miocene, Turkey, Mammals, Proboscidea

## Introduction

Proboscideans are extremely rare at Çandır. SICKENBERG & al. (1975) and GAZIRY (1976) had reported only deinothere and an unidentified mastodont. The MTA material includes only a few teeth, most of them being milk-teeth of animals small enough to be caught by the carnivores.

## Materials and Methods

### Systematic description

*Deinotherium* sp

AÇHÜ-2426 is a fragment of *Deinotherium* tooth, matching the anterior part of a P3. It is well worn, and lacks the labial enamel, so that its width can only be estimated, at perhaps a little more than 50 mm. This puts this tooth in the size range of *D. bavaricum*, much below those of *Deinotherium levius* or *D. giganteum* (TSOUKALA & MELENTIS 1994, fig.4). Morphologically, it slightly differs from *D. giganteum* by the more oblique orientation of the protoloph, and more rounded antero-lingual corner. Strangely enough, these are similarities with *D. bozasi* from the Pliocene of East Africa (ARAMBOURG 1947, fig.3). Nothing suggests that the Çandır *Deinotherium* is different from that of Paşalar, which is approximately of the same size (TOBIEN 1990).

cf *Protanancus* sp.

We refer provisionally all the non-deinothere material from Çandır to a single taxon. It includes two adult upper incisors, and 4 milk premolars.

The incisors (ÇA-94-25-1) are not well preserved, but one of them is still about 120 cm long. It is only slightly curved, and not flattened. No enamel band is visible, but this absence could be due to poor preservation.

There are 4 milk teeth: two left dp3 and two left DP3. They come from at least 3 individuals (Pl. 1).

Plate 1 about here

One of the dp3 (unnumbered) is unworn. It is small and short, with a second lobe much broader than the first one, with a strong constriction between them. There is no secondary entoflexus, thus no incipient third lobe. The main posttrite tubercle 1 (metaconid) is slightly more posterior than the pretrite tubercle, which is connected to a small central

posterior conule. In the roughly contemporaneous *Choerolophodon ngorora* from Fort Ternan the metaconid is much more posterior than the protoconid, and the posterior conule belongs to the pretrite part. Only one tooth from the Nagri Formation of the Siwaliks, referred by TASSY (1983: 248) to *C. corrugatus*, could be more similar to the Çandır tooth in this respect; it is also smaller and relatively broader than those from the Dhok Pathan Formation (TASSY 1983, tabl.8).

The other dp3 (AÇHÜ-2407) is more worn, and less well preserved. The relative position of the tubercles is the same, but the tooth is slightly larger, and certainly broader, at least anteriorly.

Both DP3, AÇHÜ-2406 and AÇHÜ-2427, are morphologically similar, but the latter is larger and more rectangular. The enamel is strongly wrinkled. The first lobe is narrower than the second one, but the difference is less marked than in the DP3 of *Choerolophodon*, especially those from the upper Miocene, which may be almost as broad as long (figure 1). There is an incipient second entoflexus, but the third lobe is low and short, with a postentoconule much smaller than the main pretrite tubercle of the second lobe (hypocone), and a narrow postero-labial cingulum. In the second lobe, the pretrite tubercle (hypocone) is more anterior than the posttrite one (metacone) but remains almost entirely lingual with respect to it. In *Choerolophodon*, instead, the hypocone stretches labially between the paracone and metacone.

Figure 1 about here

By these features, and by their proportions (especially those of AÇHÜ-2427), the Çandır DP3 are perhaps more like those of Fort Ternan referred by TASSY (1986: 61-62) to cf

*Protanancus macinnesi*, but in this species the paracone is more anterior than the protocone, while they are at the same level at Çandır.

## Results and Discussion

The problem in identifying the Çandır teeth arises from their lack of derived features. They are certainly more primitive than those of Upper Miocene *Choerolophodon*, but they could almost as well belong to an ancestral form of this genus (the outlines of the unnumbered dp3 and of AÇHÜ-2406 being rather similar to those of this genus), or to an Amebelodontinae, such as *Protanancus*, known in East Africa (TASSY 1986), in the Siwaliks (TASSY 1983), and perhaps also in Turkey (GAZIRY 1976, as *Amebelodon* / *Platybelodon*). Unfortunately, although a few Middle Miocene *Choerolophodon* are known in Turkey (GAZIRY 1976) and Chios (TOBIEN 1980), their milk teeth are not known. However, the incisors mentioned above are too straight to belong to *Choerolophodon*, and they must belong either to an Amebelodontinae, or to a Gomphothere. Thus, since there is no conclusive evidence for more than one species, we refer provisionally the whole material to a single taxon, despite the variations in size and proportions.

There is little doubt, in any case, that the Çandır mastodont is different from the one present at Paşalar, called *Gomphotherium angustidens pasalarensis* by TOBIEN (1990), but it may well be that at neither of these two sites is the Proboscidean list is complete.

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Captions to plate

Plate.1. cf *Protanancus* sp., Çandır. 1 : left dp3 (unnumbered) ; 1A : Occlusal view (stereo) ;  
1B : lingual view. 2 : left DP3 (AÇHÜ-2406), stereo; C: left DP3 (AÇHÜ-2427),  
stereo. All figures x 3/2.

Caption to figure

Fig 1. Length x width plot of the DP3 and dp3 of some Proboscidea. Data from MECQUENEM,  
1924; GAZIRY, 1976; TASSY, 1983, 1986 and 1994.