AMPHICYON MAJOR BLAINVILLE DISCOVERED IN THE MIDDLE MIOCENE BEDS OF ÇANDIR

Mustafa GÜRBÜZ

Mineral Research and Exploration Institute of Turkey

During paleontological excavation work carried out by the team of Vertebrate paleontologists of the M.T.A. in 1973, at Hırsızdere, Kalecik County, Çandır Township (Ankara), a specimen of *Amphicyon major* Blainville was discovered for the first time in Turkey, along with such fossils as *Hispanatherium, Acerotherium, Gazella, Triceromeryx, Listriodon, Micromeryx, Procervulus, Progenatta, Plesiogulo, Pseudaelurus* and *Mustela.*[1]

Group: GARNIVORA BOWDICH, 1821

Family: CANIDAE GRAY, 1821

Subfamily: AMPHICYONINAE TROUSSART, 1885

Genus: *Amphicyon* LARTET, 1836

Amphicyon major BLAINVILLE
(Pl: I, figs. 1-3)

Material.— Isolated left upper carnassial (P^4).

Description.— The material consists of two lobes and a rudimentary parastyle which is cemented to the paracone of the anterior lobe. The slender crest of parastyle reaches as far as the central part of the paracone. On the inner anterior part of the paracone of the same lobe, a relatively smaller and conical shaped protocone (deuterocone) is observed. The paracone—which is the strongest tubercle situated on the same lobe—also has a conical form and is bent towards the metacone. The crest of the same tubercle slightly surpasses the crest of the metacone.

Metacone is present on the posterior lobe and is separated from the paracone by a relatively deep sulcus, which extends in the anterior-posterior directions. Examination of the metacone from the labial view revealed that an obvious flattening toward the lingual is present. An assumed line drawn between the anterior and posterior parts and passing the tip of the metacone will be tangential to the inner part of the crest of the paracone and will pass within the deuterocone area. Cingulum, on the other hand, becomes much stronger from deuterocone to metacone.

Similarities and differences.— Comparison of our material with *Amphicyon major* Blainville (Helbing, 1928) from Ravensburg will show that, although the general form and odontological features of P^4 are identical, in *Amphicyon major* of Ravensburg the parastyle is more obvious, the deuterocone is stronger, and the sulcus separating paracone from metacone is shallower.

The parastyle of *Amphicyon major* (Deperet 1887) from La Grive-Saint-Alban, on the other hand, is less distinct, while the metacone is rather more obvious, as compared to our material.

So far as the characteristic features of *Amphicyon giganteus* (Ginsburg & Telles Antunes, 1968) from Baigneaux are concerned, some obvious differences can be detected,: The parastyle of *Amphicyon gigantens* is comparatively more distinct, while the metacone extending in the anterior and posterior directions is less developed and relatively stronger. The deuterocone, which is stronger than in our specimen, is located well below the paracone.

Table - I

Measurements of the upper carnassial (P^4) of *Amphicyon* specimens

Amphicyon	*Length (mm)*	*Width (mm)*
Amphicyon major BLAINVILLE (collected from Sansan) Depéret, 1887	32	—
Amphicyon major BLAINVILLE (collected from La Grive-Saint-Alban) Depéret, 1887	31	—
Amphicyon major BLAINVILLE (collected from Sansan) Depéret, 1887	27	—
Amphicyon major BLAINVILLE (collected from Sansan) Bergounioux & Crouzel, 1973	25.9	15
Amphicyon major BLAINVILLE ((collected from Ravensburg) Helbing, 1928	33.3	19
Amphicyon major BLAINVILLE (collected from Çandır)	31.8	17.4

Although *Amphicyon major* Blainville (Bergounioux & Crouzel, 1973) of Sansan is smaller compared to our material,[2] such features as the development of the parastyle and the paracone, the general shape of the paracone and its inclination towards the metacone are similar. The metacone of our specimen, as compared with *Amphicyon major* from Sansan, has identical shape and extends in the anterior and posterior directions; it is, furthermore, separated from the paracone by a deep sulcus. The tip of the paracone is in the same position but slightly surpasses the tip of the metacone. Deuterocone of our specimen, on the other hand—as is the case in the *Amphicyon major* of Sansan—is present on the inner anterior part of the paracone, is relatively smaller and has a conical shape.

It may be concluded that, based on the above-given morphological and odontological features, the Çandır fossil closely resembles *Amphicyon major* Blainville from Sansan.

CONCLUSION

The specimen of *Amphicyon major* Blainville discovered in the Çandır area can be found also in Europe where it shows a vertical distribution with some variations, ranging from the beginning

Fig. 1 - *Amphicyon major* Blainville from Çandır. P^4, interior view.

Fig. 2 - *Amphicyon major* Blainville from Çandır. P^4, exterior view.

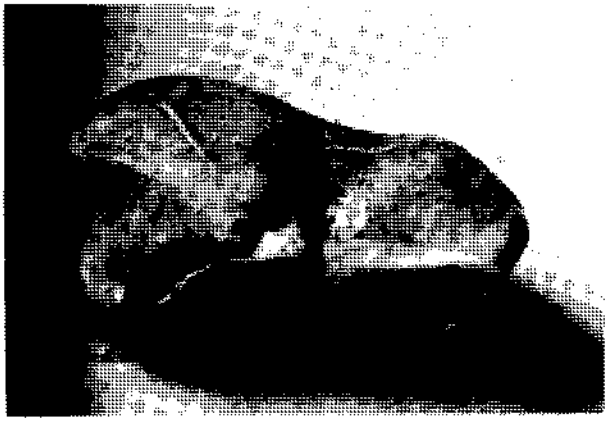

Fig. 3 - *Amphicyon major* Blainville from Çandır. P^4, view from above.

of Burdigalian to the end of Vindobonian. It may be assumed that our specimen once also lived in such areas as Sansan, Pontlevoy, Orleanais, Baigneaux, Romieu, Allier, Rhone, La Grive-Saint-Alban, Steinheim, Lisbon and Ravensburg.

Translated by: Filiz E. DİKMEN

Manuscript received January 30, 1974

BIBLIOGRAPHY

BERGOUNIOUX, F.M. & CROUZEL, F.C. (1973): *Amphicyon major* Blainville du Miocene moyen de Sansan (Gers). *Ann. Paleont.,* t. 59, fas. 1, pp. 3-76,47 fig. Paris.

COLBERT, E.H. (1939): Carnivora of the Tung Gur Formation of Mongolia. *Bull. Amer. Mus. Nat. Hist.,* t. 76, pp. 47-81,19 fig., New York.

DEPERET, C. (1887): Recherches sur la succession des faunes de Vertebres miocenes de la Vallce du Rhone. *Arch, Mus. Hist. Nat. Lyon,* vol. IV, pl. XIII, Lyon.

FRICK, Ch. (1926): The Hemicyoninae and an American Tertiary Bear. *Bull. Amer. Mus. Nat. Hist.,* t. 56, pp. 1-119, New York.

GAUDRY, A. (1867): Animaux fossiles et geologie de l'Attique. 476 p., 75 pl., *Savy, edit.,* Paris.

GERVAIS, P. (1848-1852): Zoologie et Palcontologie francaises. 544 p., 57 fig. (accompagne d'un atlas de 84 pl.) *Arth. Bertrand,. edit.,* Paris.

GINSBURG, L. (1966): Les Amphicyons des phosphorites du Quercy. *Ann. Paleont.,* t. LII, pp. 1-44, 21 fig., Paris.

———& TELLES ANTUNES, M. (1968): *Amphicyon gtgantens,* carnassier geant du Miocene. *Ibid.,* t. LIV, pp. 1-32, 31 fig , 1 pl.

HELBING, H. (1928): Carnivoren aus dem Miocan von Ravensburg und Georgensgmünd. *Ecl. Geol. Helv.,* t. 21, pp. 377-385, 5 fig., Bale.

MAYET, L. (1908): Etude des Mammiferes des Faluns de la Touraine. *Ann. Univ. Lyon,* N.S., 1, 24, 336 p., 100 fig., 12 pl.

OZANSOY, F. (1957): Faunes de Mammiferes du Tertiaire de Turquie et leurs revisions stratigraphiques. *M.T.A. Bull.,* no. 49, Ankara.

———(1965): Etude des gisements continentaux et des Mammiferes de Cenozoique de Turquie. *Mem. Nat. Mus, Nat. Hist. Fr.,* 89 p., 14 fig., 10 pl. Paris.

ROMAN, F. & VIRET, J. (1934): La faune de Mammiferes du Burdigalien de la Romieu (Gers). *Mem. Soc. Geol. Fr.,* N.S., 9 (7-3), 67 p., 25 fig., 12 pl., Paris.

SIMPSON, G.G. (1945): The principles of clasification and a clasification of Mammals. *Bull. Amer. Mus. Nat. Hist.,* vol. 85 New York.