PRELIMINARY REPORT ON THE BOVIDAE FAUNA FROM KAYADİBİ, KONYA

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During the 1969 field work carried out by the M.T.A. Institute, the author has found a bed containing Vertebrate fossils at a locality 2 km northwest of Kayadibi Village, Hatunsaray Township, Konya Province.

This fossil bed is 20-25 meters thick and consists of complicate elements, such as mud, sand and tuff. Underlying this bed there is an irregular white tuffaceous series, attaining in places 5 to 6 meters. The fossil bed itself is overlain by a yellow tuffaceous series 3 to 4 meters thick.

The fossiliferous locality contains abundant fossils. During the survey, we collected the following fossils: *Mastodon* sp., *Oioceros* sp., *Gazella, Antilope, Giraffa, Hipparion, Rhinoceros, Chilotherium* sp., *Testudo* sp.j *Suidae.*

Among these forms, I studied only some Bovidae fauna.

Family **: BOVIDAE**

Subfamily : ANTILOPINAE BAIRD, 1857

Genus : *HELICOTRAGUS* PALMER, 1903

Helicotragus rotundicornis Weithofer

(PL IV, fig. 1)

Material: A left horn-core fragment.

Horizon: Lower Pliocene.

Locality: 2 km NW of Kayadibi Village, Hatunsaray Township, Konya Province.

Diagnosis: A left horn-core fragment which has only an upper part. It is relatively worn out and the tip region is flattened. The horn-core has one torsion and its cross-section is sub-circular.

Comparison and differences: By its flat tip and the torsion shape our horn-core reminds *Helicotragus rotundicornis* Weithofer. Our specimen approaches more *Helicotragus* species from Pikermi (3) and Salonica (2) rather than *Helicoceras fraasii* Andree from Samos (1) or *Helicotragus incarinatus* Ozansoy from Sinap (6) and *Helicotragus* species from Maragha (4).

Due to the fact that the horn-core of our specimen was not complete, no detailed measurements were possible. I measured only the fragment near the tip.

The measurements of the tip portion of this horn-core are as follows:

Anterior-posterior diameter (at the base) (mm)	*Transverse diameter (at the base) (mm)*	*Robustus value*	*Length-breadth index* $\frac{B \times 100}{L}$
14.5	17.5	263.75	12.06

Genus : *ANTILOSPIRA* TEILHARD DE CHARDIN, 1929

Antilospira incarinatus n. sp.

(Pl. I, fig. 1; Pl. II, fig. 1; Pl. III, fig. 1)

Material: A frontal portion of a cranium with right and left horn-cores and many isolated horn-cores.

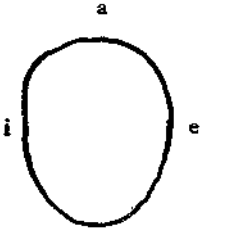
Horizon : Lower Pliocene.

Locality : Kayadibi (Konya).

Diagnosis : Type specimen no. 4.

Horn-cores placed over the orbits. They twist first from inside to the outside, then from outside to the inside, and then the right and left horn-cores approach each other at the top. The twisting is neither fast nor slow and it generally completes only one revolution. It has no carena, but there is a shallow groove, which reaches from the back side to the front side in the middle of the horn-core. Cross-sectibn is oval. Supraorbital foramina is sunken and of medium size.

Comparison and differences: Our horn-core has a totally different form and torsion shape from *Palaeoreas.* Likewise, it is distinguished from *Protragelaphus* and *Helicotragus,* because the horn-cores of the latter two species have only one carena and they twist differently. Moreover, their cross-sections are different. On the other hand, our specimen can be distinguished from other *Tragelaphus* species: our horn-core has a different spiral axis and revolution. The characters of our horn-core resemble those of the *Antilospira* genus. This fossil horn-core comes nearer to ?*Antilospira zdanskyi* Teilhard & Traassaert, but differs from ?*Antilospira gracilis* Teil. & Traas., *Antilospira robusta* Teil. & Traas., and *Antilospira licenti* Teilhard & Young of the southeastern Shansi in China (14). However, some characters of our horn-core are different from those of ?*Antilospira zdanskyi.*



Schema 1 - Cross-section at the base of the horn-core of *Antilospira incarinatus* n. sp. (Kd-4).

The cross-section of *Antilospira licenti* (15) differs from our fossil by the following characters : *Antilospira licenti* has deep grooves; trie tips of the horn-core are separated from each other towards the top; supraorbital foramina are large and deep; the twisting is slow (less than one revolution).

The horn-cores of ?*Antilospira gracitis* are flattened, they have strong anterior and posterior carenas and deep grooves.

Horn-cores are separated from each other at the base; they are slowly twisted (half a revolution). These characters differ totally from our fossil; even the cross-section of this horn-core is unlike that of our specimen.

Likewise, the characteristic features of *Antilospira robusta* have no striking similarity with our fossil.

Thus, although some characters of our horn-core are different from those of ?*Antilospira zdanskyi,* these two specimens have some features that are common to both species: the twisting and the form of the horn-core of these two fossils are very similar. In both specimens the supraorbital foramina is sunken and the horn-cores are placed over the orbits. On the other hand, although ?*Antilospira zdanskyi* has anterior and posterior carenas, our fossil has no carena at all. The orbital fossa of ?*Antilospira zdanskyi* is deeper than in our specimen and the starting points of the horn-cores are nearer to each other in our fossil. It is possible to see these characters in the cross-section of our specimen.

In our opinion, the Kayadibi specimen should be attributed to the genus *Antilospira;* however, it may be a new species, judging by the evidences cited above. Since *Antilospira* genus was discovered for the first time in the Pontian series in China, and now the same fossil was found at Kayadibi (Konya) in Turkey, we believe that Asya could be the first home of this species.

Consequently, it is likely that this genus migrated from China to Turkey and, therefore, we can expect to discover, in future, this fossil between these two countries.

Measurements of the horn-core of *Antilospira* taken at the base and tip regions and their indexes

	Range no. 1	*Range no.* 2	*Range no.* 3	*Range no.* 4	*Range no.* 5
Anterior-posterior diameter at the base (mm)	26.8	29.2	27.6	26.8 sa 27.0 sl	25.5
Transverse diameter at the base (mm)	21.0	22.7	20.9	22.1 sa 22.4 sl	22.2
Anterior-posterior diameter at the tip (mm)	1.9	—	—	17.6 sa 18.2 sl	—
Transverse diameter at the tip (mm)	9.2	—	—	14.4 sa 14.0 sl	—
Robustus value	562.80 k 17.48 u	662.84	576.84	592.28 ksa 604.80 ksl 253.44 usa 254.80 usl	566.10
Length-breadth index $\frac{B \times 100}{L}$	78.35 k 484.21 u	77.73	75.72	82.45 ksa 82.96 ksl 81.87 usa 76.92 usl	87.05

Sa : right; sl : left; k : base; u : tip; ksa : right horn-core, at the base; ksl : left horn-core, at the base; usa : right horn-core, at the tip; usl : left horn-core, at the tip.

Genus: *GAZELLA* DE BLAINVILLE, 1816

Gazella sp.
(Pl. IV, fig. 2)

A talus and tarsal bones belonging to the *Gazella* genus were found at the same locality (Kayadibi, Konya). They are almost intact.

Subfamily: CAPRINAE GILL, 1872

Genus: *OIOCEROS* GAILLARD, 1902

Oioceros boulei Mecquenem
(Pl. V, fig. 1)

Material: A broken fragment of a right horn-core.

Horizon: Lower Pliocene.

Locality: Kayadibi (Konya).

Diagnosis: A fragment of a right horn-core is present, measuring 48.50 mm from the base. The shape of the upper part and the tip of the horn-core are unknown, because the horn-core is broken. This horn-core is relatively well preserved. The torsion of the horn-core is from the inside to the outside. The upper part of fossa orbitalis is present, the other part is broken. Foramen supra-orbitalis and fossa post-orbitalis are seen very clearly.

Comparison and differences: Our horn-core differs both from *Oioceros rothi* Wagner rand from *Oioceros atropatenes* Rodler & Weithofer by the shape of the torsion and the form of the carena, but it approaches *Oioceros boulei* Mecquenem by the same characters.

The measurements of the horn-core of *Oioceros* from Kayadibi are as follows:

Anterior-posterior diameter (at the base) (mm)	*Transverse diameter (at the base) (mm)*	*Robustus value*	*Length-breadth index* $\frac{B \times 100}{L}$
26.90	22.70	610.63	84.38

CONCLUSION

Some Vertebrates migrated from Europe to Asia and some came from Asia to Europe, but many returned again to the place of origin. Almost every form of Vertebrates passed over Turkey. For this reason, we found both European and Asiatic fauna in the Pliocene series in Turkey.

Some *Gazella* came to Turkey from Pikermi, Salonica and Samos, and some *Gazella* migrated from Asia. *Heltcotragus rotundicornis* Weithofer came from Europe, while *Oioceros boulei* Mecquenem and *Antilospira* genus migrated from Asia during the Pliocene epoch.

F a u n a	*Salonica*	*Pikermi*	*Samos*	*Maragha*	*China*	*Turkey (Kayadibi)*
Helicotragus rotundicornis Weithofer, ...	+	+	+	+	—	+
Antilospira incarinatus n. sp. ..	—	—	—	—	+	+
Gazella sp.	+	+	+	+	+	—
Oioceros boulei Mecquenem ...	—	—	—	+	—	—

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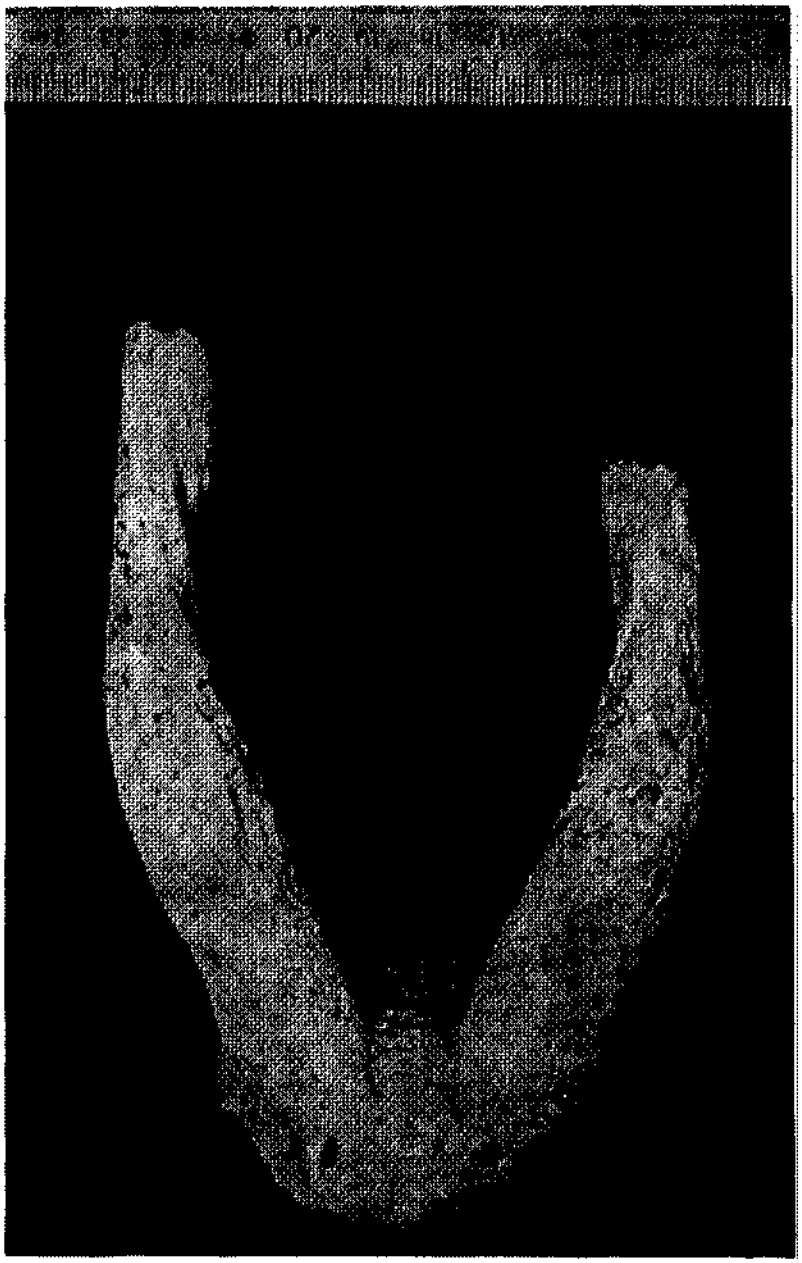

Fig. 1 - *Antilospira incarinatus* n. sp. Front view, 4/5 of natural size.

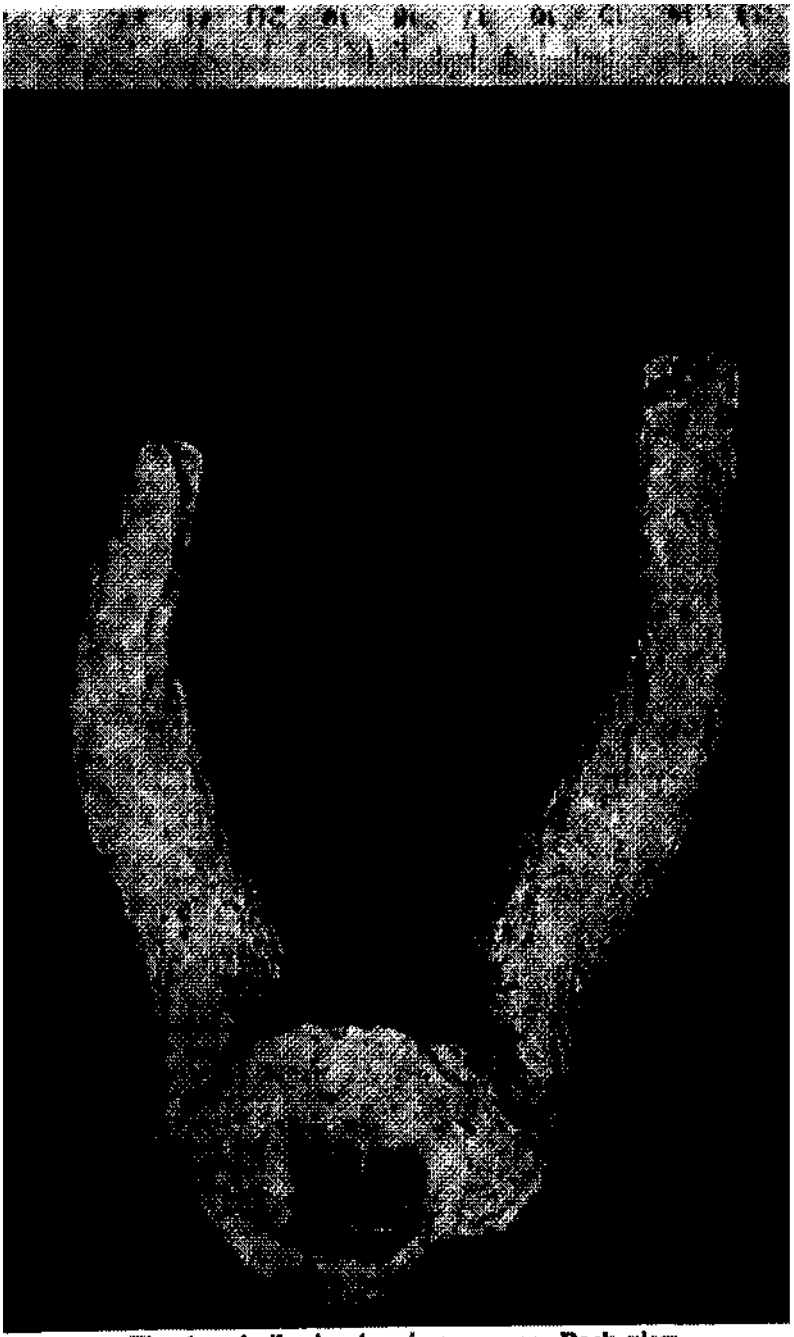

Fig. 1 - *Antilospira incarinatus* n. sp. Back view, 4/5 of natural size.

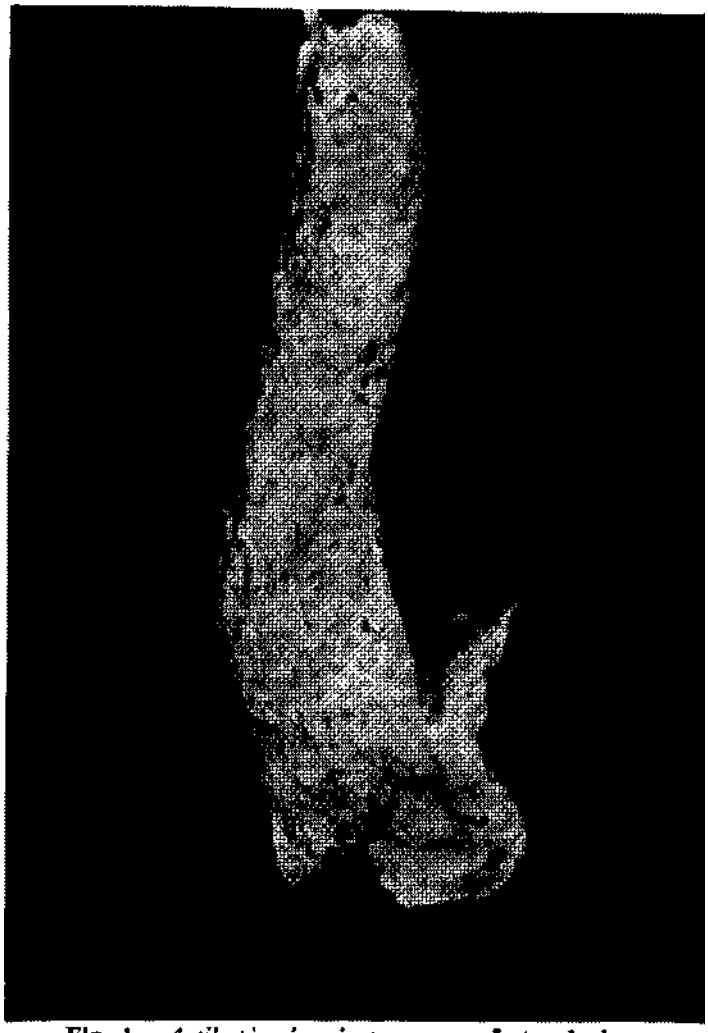

Fig. 1- ***Antilospira incarinatus*** **n. sp. Lateral view, 4/5 of natural size.**

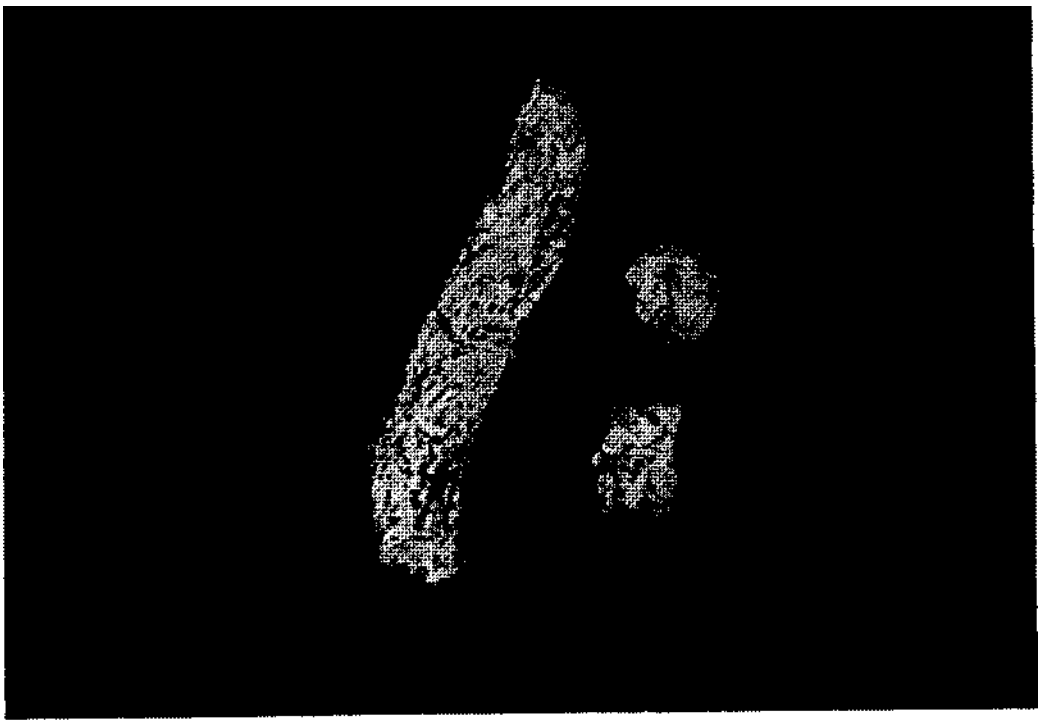

Fig. 1 - *Helicotragus rotundicornis* Weithofer.

Fig. 2 - *Gazella* sp. Talus and tarsal.

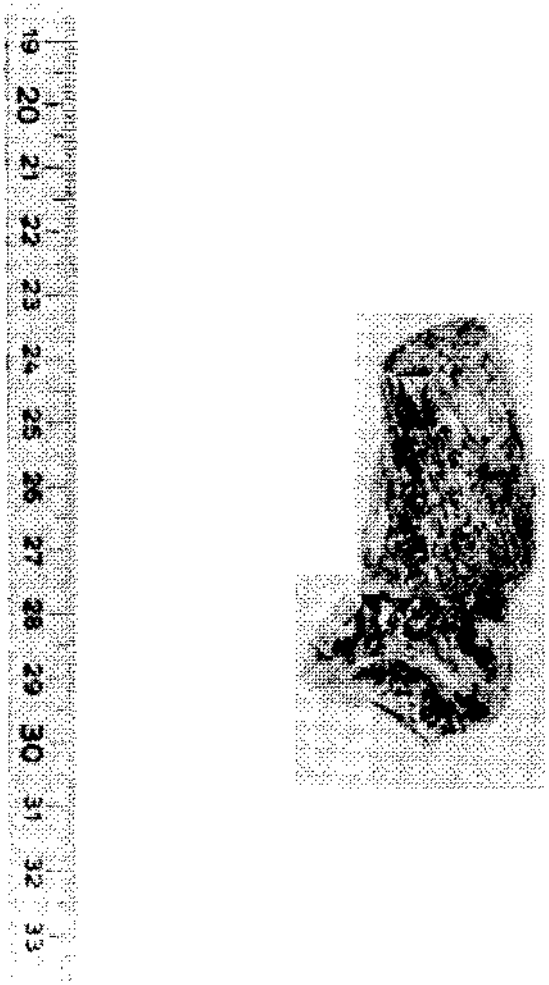

Fig. 1 - *Oioceros boulei* Mecquenem. Lateral view, 4/5 of natural size.