# NOTE ON SOME LOWER CRETACEOUS AMMONITES FROM KARALAR KÖYÜ, NORTHWEST OF ANKARA

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## INTRODUCTION

Karalar Köyü is a village in the district of Bitik, situated to the northwest of Ankara. This village lies 6 km. west of the 40-kilometer sign of the Ankara-Kızılcahamam highway.

During the year 1951, Dr. OĞUZ EROL and Dr. SUAT ERK collected some Ammonites from this locality. These Ammonites were examined by the author and prove to be of Aptian or Albian age. In the following year, the author had the opportunity to visit this locality and to collect some more specimens. Although generally the specimens were broken and had only poorly preserved shells, they were of considerable importance in determining the presence of Ammonite-bearing Lower Cretaceous strata in the vicinity of Ankara.

## GEOLOGY

The few geological data given below were taken from an unpublished report by o. EROL, which is to be found in the Archives of the M. T. A. Institute (Derleme Report No. 2491; 1954).

The area between the Karalar and Kınık villages, where the Mesozoic formation outcrops, is occupied by a depression of the NE • SW striking § a 111-han Anticline. At both ends of the structure it is bordered by Paleozoic schists outcropping in culminations of the axis. In the depression Jurassic and Lower Cretaceous strata occur. The upper part of the Jurassic succession is represented by-yellow-colored sandstones of Middle Jurassic age and by thick-bedded oolitic to pisolitic limestones of Upper Jurassic age. In these limestones some microfossils were found, which indicate either the Upper Jurassic or the Lower Cretaceous. For this reason, the whole formation of oolitic to pisolitic limestone was taken together as Upper Jurassic and Lower Cretaceous. Now, a distinction has been made possible by the find of Lower Cretaceous Ammonites in the upper half of the formation. These fossils were collected immediately to the west of Karalar village, in the solid rock below the ruins of an ancient fort.

## PALEONTOLOGY

Superfamily **DESMOCERATACEA** Wright

Family DESMOGERATIDAE Zittel

Genus **Desmoceras** Zittel

Subgenus **Uhligella** Jacob

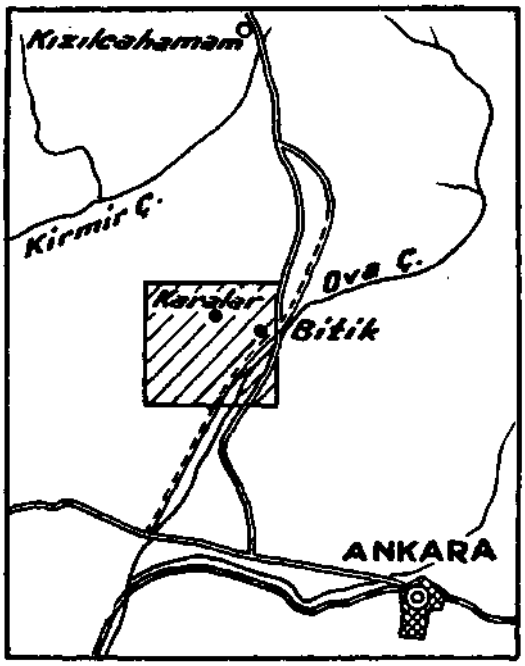
Desmoceras (Uhligella) walleranti Jacob

PI. I,,fig. 1-5

1907—*Uhligella walleranti* JACOB-Etudes sur quelques Ammonites du Cretace moyen, p. 31, pl. Ill, fig. 1-3.

**Measurements :**

| | | | | |
|---|---|---|---|---|
| Diameter | : | 40 mm | 44 mm | 46 mm |
| Thickness | : | 12 (0.30) mm | 14 (0.32) mm | 13 (0.30) mm |
| Width of umbilicus | : | 5 (0.12) mm | 5 (0.12) mm | ? |




Geographic sketch showing area studied
1 : 800,000

Shell flat, mostly involute, whorl covering two thirds of the preceding whorl. Siphonal edge round, maximum thickness about 1/3 of umbilicus. Umbilicus deep, test absent. The shell has only a faint ornamentation, which is generally not preserved. On the interior mould there are some slight ridges which are bordered by small grooves at both sides. Between the ridges there are a number of scarcely visible falciform ribs. Suture-lines finely denticulated. Siphonal lobe shorter than first lateral lobe, which is deep and symmetrical.

Remarks.

*Uh. walleranti* JACOB resembles *Desmoceras beudmti* BRONGNIART, which was later named by KOSSMAT as *Puzozia stoliczkai* (JACOB, 1907, p. 32). However, it differs from it in having thicker, more distinctly involute shells and another kind of suture-line.

It should be mentioned here that not all these properties were visible on one and the same specimen, so that the above-mentioned description was only arrived at after examination of all the available material.

Horizon: Albian.

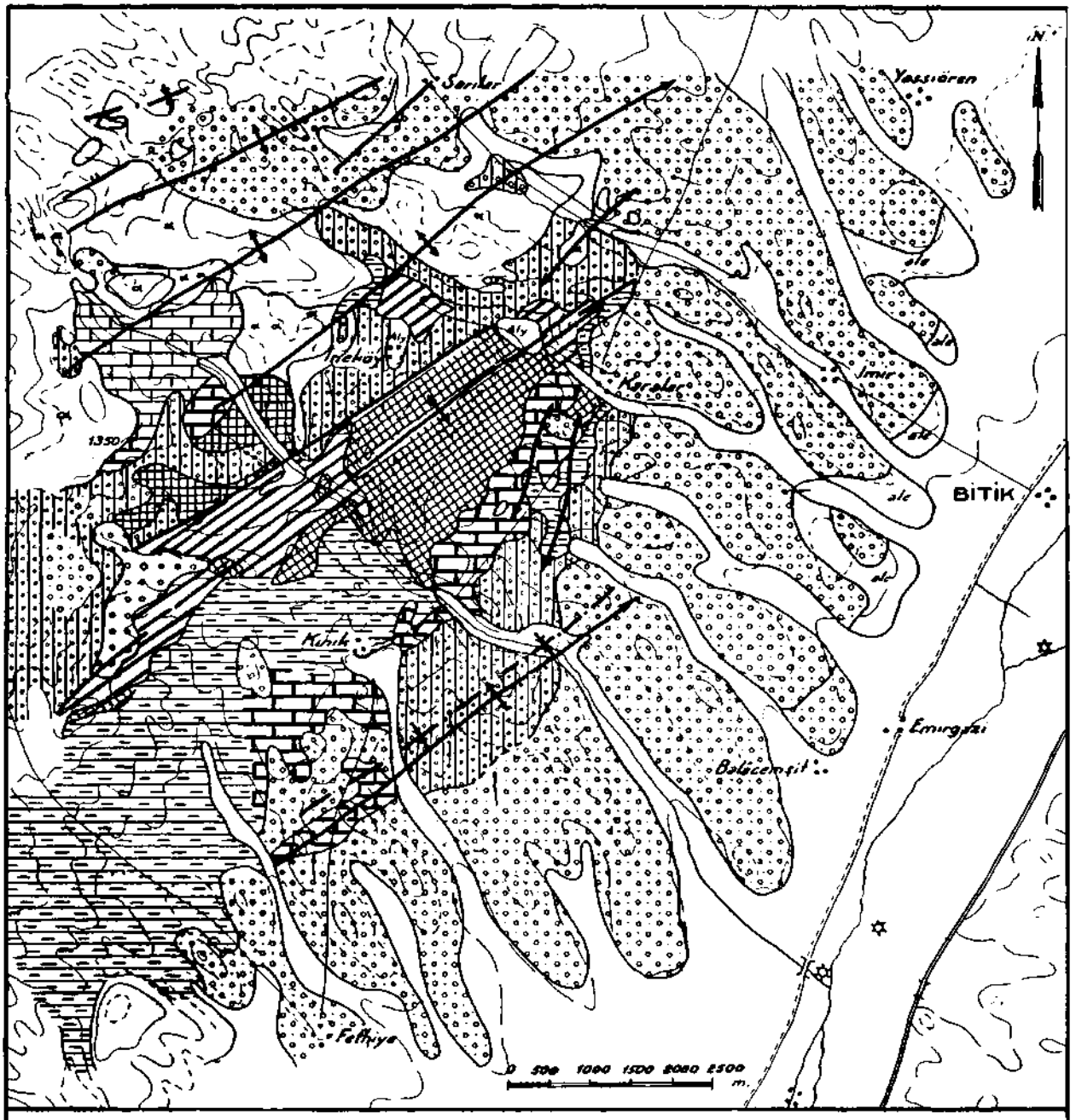
Family DESMOCERATIDAE

PI. II, fig. la, Ib, Ic

**Measurements :**

| | | |
|---|---|---|
| Diameter | : | 57 mm. |
| Thickness | : | 15(0.26) mm. |
| Width of umbilicus | : | 25(0.43) mm. |
| Height of last whorl | : | 19(0.30) mm. |

In our collection there is still another specimen, which could not even be identified generically, although it is quite well preserved. However, as all its properties indicate that it belongs to the family of the DESMOCERATIDAE which are restricted to the Cretaceous, it also provides an indication in favor of a Cretaceous age. A more complete discussion of this specimen may be given




L E G E N D

- Quaternary
- Pliocene
- Miocene
- Miocene - Oligocene
- Lutetian
- Eocene
- Paleocene
- Malm - L. Cretaceous
- Paleozoic
- Andesite
- Andesite - tuff
- Alluvium
- Older alluvium

**GEOLOGIC MAP SHOWING THE VICINITY OF KARALAR (NW of ANKARA)**

Map taken from the «Report on the Geology of Ankara and its Surroundings» (1954), by Dr. Oğuz Erol

at a later date, when more literature will be available.

Shell fairly high and evolute; the whorls contain periodic constrictions which are rather prominent. The constrictions are straights, U-shaped on the external side of the shell. Between the constrictions occur several ribs which tend to fade away on the external side.

As regarding the suture - lines, the external lobe is slightly shorter than 1st lateral lobe, whereas the 2nd lateral lobe is somewhat less deep than the first one.

Remarks.

This specimen is reminiscent of the genus *Silesitoides* SPATH. However, our specimen is larger in size, as compared with the specimens found in the available literature. Due to the lack of literature, however, it is impossible to arrive at a definite conclusion.

Superfamily **PHYLLOCERATACAE** Hyatt
Family PHYLLOCERATIDAE Zittel
Subfamily **PHYLLOCERATINAE** Zittel

Genus **Phylloceras** Suess

Phylloceras sp.

PI. II, fig. 2a, *2b'*

The author has studied three specimens, the diameter of which did not exceed 2 cm. Whorl highly involute, section oval, and height almost equal to thickness. Four very slight constrictions are visible on each whorl.

Our specimen closely resembles *Phylloceras aphrodite* FALLOT - TERMIER (Aptian-Albian), but differs from it by having less prominent suture-lines and different dimensions.

In the collection of Ammonites, described above, occur as well one fragment of an uncoiled Ammonite, one of Lytoceras, and one flat Belemnite.

## CONCLUSION

The object of the present paper has been to prove the Lower Cretaceous age of the Karalar limestone formation which was hitherto taken as Jurassic. The presence of Ammonites, belonging to the family of the DESMOCERATIDAE as well as the occurrence of an uncoiled Ammonite and a flat-shaped Belemnite, are conclusive evidence for this thesis.

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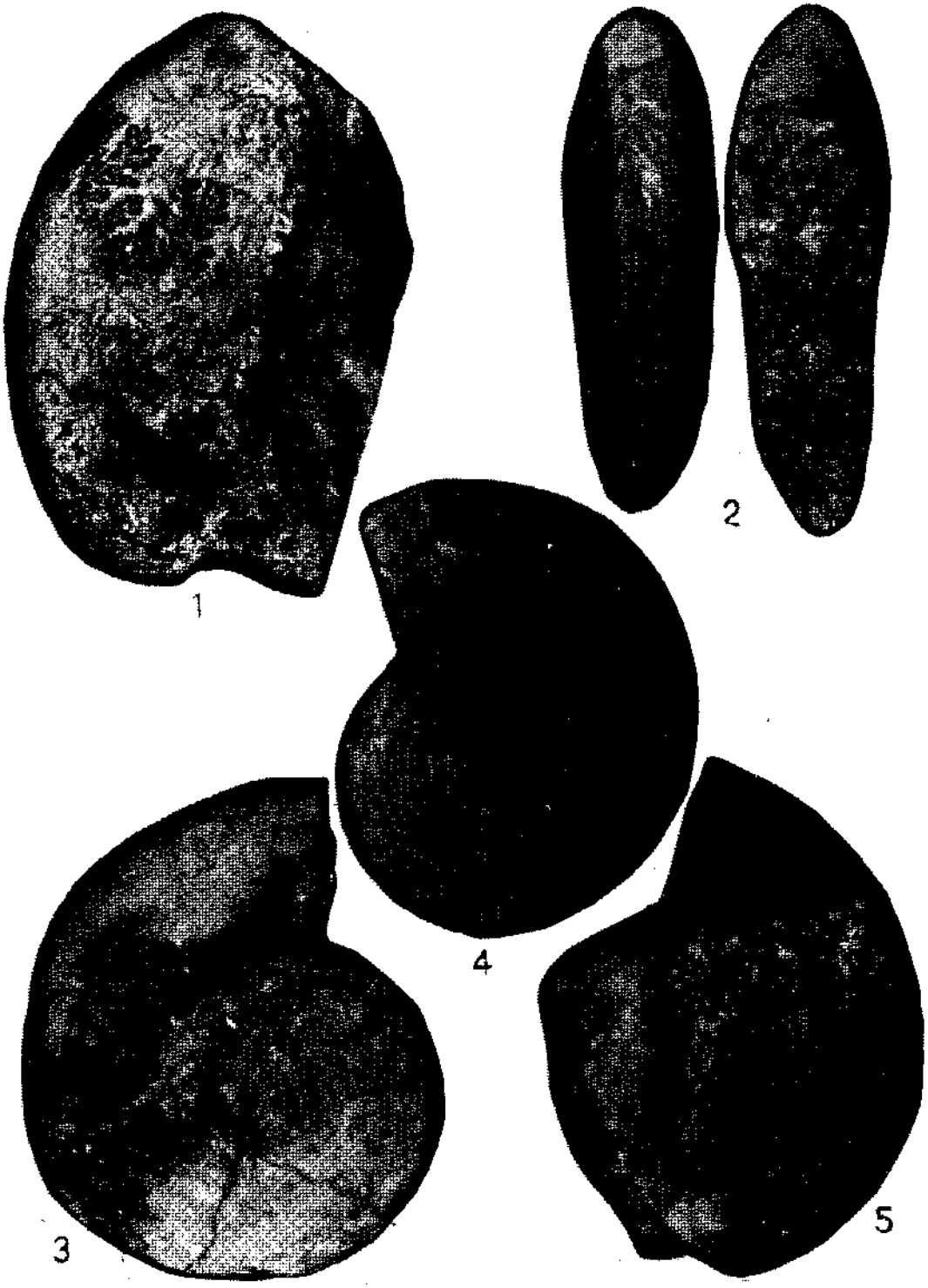
1
2
3
4
5


1a
2a
2b
1c
1b

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