ON THE PRESENCE OF *VILLANIA* (AMMONOIDEA) IN TURKEY

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ABSTRACT. — The genus *Villania* so far known only from Hungary is recorded for the first time from Turkey. Two specimens found in the Bilecik region, identified as *Villania* cf. *densilobata* and *Villania* sp., prove that *Villania* had wider geographical distribution than that had been thought. It is also remarkable that *Villania* Till and *Epideroceras* Spath show similar ontogenetic development, their suture lines are identical, and they are both present in the *Jamesoni* zone (Lower Pliensbachian) in Turkey.

INTRODUCTION

The specimens here described came from the red limestones and marls of the Bayırköy formation exposed near the Village of Günüviran, in the Bilecik region (Fig. 1). These rocks are abundantly fossiliferous and contain an ammonite fauna indicating the presence of *Raricostatum, Jamesoni* and *Ibex* zones (Alkaya, 1981b). To the further east in northern Turkey, fossiliferous outcrops with the same range occur in the Ankara, Amasya and Bayburt regions. Although intensive studies have been carried out and fossil collections with similar faunal assemblages have been made from these outcrops, *Villania* has not been recorded so far. This local appearence of *Villania* and the presence of only two specimens representing it seem significant and lead to questions about generic assignments, which will be discussed under «concluding remarks». The abbreviations used are: D-Diameter of the shell in mm, U-Diameter of the umbilicus measured at seam, H-Height of the

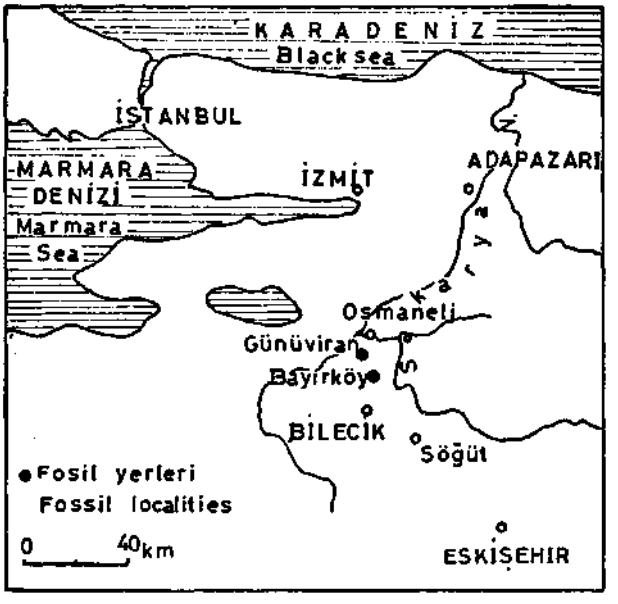

Fig. 1 - Location map.

whorl measured in the plane of coiling, W-Maximum width of the whorl at right angles to the plane of coiling, U/D-Relative umbilicus, H/D-Relative height, W/D-Relative width, H/W-Form ratio, P-Number of primary ribs, E-External lobe, L-Lateral lobe, U-Umbilical lobe, saddles are designated with respect to the adjacent lobes, e.g E/L, L/U.

SYSTEMATIC DESCRIPTION

Superfamily : Eoderocerataceae Spath, 1929

Family : Phricodoceratidae Spath, 1938

Genus : Villania Till, 1911

Type species: *Villania densilobata* Till, 1911

The type of the species is from Villany, Hungary. It is large but incomplete specimen with bituberculate inner whorls and smooth outer whorls, the body chamber is not known. It was first described as a new genus, *Villania* by Till from beds presumed to be of Callovian age, but subsequent findings of new fossils dated these beds and *Villania* as Pliensbachian.

Villania cf. *densilobata* Till, 1911

(Plate I, fig. 2a, b)

cf. *Villania densilobata* Till, p. 45 (67), Pl. 7, fig. 6,7,8,9; Pl. 8, fig. 1,2.

Material: One incomplete internal mould.

Description: At 87 mm diameter, the specimen consists of three whorls of phragmocone. The inner whorl is subcircular, expanding rapidly to the outer whorl which is subovate in section. The specimen is poorly preserved and shows ornament only on one side and parts of the venter. The whorls bear closely-set radial primaries that start at the umbilical seam and run upto ventrolateral tubercles, the umbilical tubercles are not conspicuous small swellings on the ribs may be remnants of them. The venter is crossed by fine secondary ribs. The suture line of the present specimen cannot be drawn accurately, but exposed parts agree well with the suture line of holotype.

Measurements

Sp. N.	D	U	U/D	H	H/D	W	W/D	H/W	P
19VI	87	28	32 %	34	39 %	32	36 %	1.06	27
	32	10	31 %	15	46 %	15	46 %	1.00	27

Remarks: The suture line shown in Pl.l, fig. 3b was first illustrated by Till (1911; Pl. 7, fig. 10) as the suture line of *Villania densilobata*, subsequently refigured by Arkell (1957) in «Treatise» LI98 fig. 227 (3b). This suture line is not considered here representative since details of L/U saddle differ from those exposed on the holotype. As far as it can be made out from the photograph of holotype, L/U saddle is as shown in Pl. 1, fig. 3a. The specimen here described closely resembles *V. densilobata* in coiling and whorl section, but differs by being more closely ribbed. The whorl sides are highly eroded and it cannot be determined whether the ribs are bituberculate or monotuberculate.

Occurrence: Günüviran (Bilecik); the specimen was found loose together with other fossils derived from the *Raricostatum* and *Jamesoni* zones, but comparing infilling matrixes it can be surmised that it came from the *Jamesoni* zone.

Villania sp.

(Plate I, fig. la, b)

Material: One internal mould.

Description: At 59 mm diameter the specimen comprises two whorls; the innermost and outer whorls are not present. The preserved first whorl is subquadrate with a widely rounded venter and convex sides. The second whorl is compressed with converging sides and a narrow venter. The umbilicus is fairly deep, the umbilical wall is high with rounded but welf marked shoulders. The whorls are ornamented with evenly spaced prominent rectiradiate primaries that terminate in ventrolateral spine-like tubercles. On the figured side of the specimen only the large, circular bases of the tubercles are preserved. On the other side, which is covered with matrix, they are well preserved and appear as spines. At about 36 mm diameter the tubercles disappear, while the primary ribs are still present but fainter. The secondaries are finer than the primaries and more numerous. They originate from the ventrolateral tubercles and cross over the venter transversely.

Measurements

Sp. N.	D	U	U/D	H	H/D	W	W/D	H/W	P
19V2	59	19	32.2 %	29	49.1 %	20	33.8 %	1.45	28
	47	15.5	32.9 %	20	42.5 %	—	—	—	25
	38	13	34.2%	15	39.4%	15	39.4%	1.00	25

Remarks: This specimen agrees well with the definitions of two genera, *Epideroceras* and *Villania,* and can be easily classified under either of them. It bears some resemblance to *Epideroceras transiens* Bremer, but differs by its more rounded inner whorls and by the absence of umbilical tubercles, the ribs bear ventrolateral spine-like tubercles only. This specimen was first described by the present writer as *Epideroceras* sp. 4 (Alkaya, 1979) but is assigned here to *Villania* rather than *Epideroceras* since it is closer to the former.

Occurrence: Günüviran (Bilecik); Lower Pliensbachian.

CONCLUDING REMARKS

The genus *Villania* so far known only from Hungary was recorded for the first time from Turkey. It is represented by two specimens, identified as *Villania* cf. *densilobata* and *Villania* sp.

If representatives of this genus lived in the Bilecik region during Early Liassic time, why should only two of them be fossilized in an environment which was apparently most suitable for their preservation ? This cannot be a result of insufficient sampling, since the rocks are naturally weathered and over 600 ammonite fossils were collected from the same outcrop including even small fragments. The answer may lie in improper generic assignments.

Spath, in 1925 proposed the genus *Epideroceras* as a new name for *Ammonites roberti* Hauer and the genus *Coeloderoceras* for *Coeloceras ponticum* Pia. A number of specimens collected by the present writer from various localities in northern Turkey clearly show that many forms pre-

P L A T E

PLATE - I

Fig. 1 - *Villania* sp.
a, b - Side and ventral views, 19V2, X 1; c - Suture line, 19V2.

Fig. 2 - *Villania* cf. *densilobata* Till
a, h - Side and ventral views, 19V2, X 1.

Fig. 3 - *Villania densilobata* Till
a - L/U saddle exposed on holotype (based on photo); b - Suture illustrated by Till (1911, Pl. VII, fig. 10).


1a
1b
L/U
L
1c
2a
2b
L/U
E/L
L
E
3a
3b

viously assigned to either of the genera, in fact, belong to a single genus which undergoes a considerable change of form and ornament during growth. Both generic names, *Coeloderoceras* and *Epideroceras* were proposed in the same year and therefore neither of them has the priority over the other. The name *Epideroceras* was preferred by the present writer (Alkaya, 1979). *Epideroceras,* on the other hand, seems to be closely related to *Villania.* They both go through same change of form during growth, have almost identical septal suture and ornament. If they are proved as belonging to the same genus rather than two genera, then the name *Villania* will be the proper and valid name.

Villania was first described by Till (1911) from the beds presumed to be of Callovian age, which was later corrected as Pliensbachian by Ager and Callomon (1971). It was classified under Lytoceratidae by Arkell (1957), transferred to the subfamily Coeloceratinae of the family Eoderoceratidae by Donovan and Forsey (1973), and classified under the subfamily Phricodoceratinae by the present writer (Alkaya, 1979, 1981a, 1981b). This subfamily was raised to the family rank by Donovan et al. (1981).

Wiedenmayer (1980) refers to *Pseuduptonia* Bremer as synonym of *Villania* Till, which is not agreed here. *Pseuduptonia* is quite distinct from *Villania* in size, ornament and whorl outline.

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