

PLACENTICERATID AMMONITE (Ammonoidea: Ammonitina: Hoplitacea:  
Placenticeratidae) FROM THE CAMPANIAN PHOSPHATE LIMESTONE  
OF PALESTINE

(RECORD NO. 7 OF THE HEBREW UNIVERSITY GEOLOGICAL MUSEUM)

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A small piece of phosphate limestone, with a remarkably well preserved ammonite, was recently discovered among specimens of unsorted material recovered from the collections of the Department of Geology of the Hebrew University, which, because of political circumstances during the past twelve years, were stored in the former premises of the University on Mt. Scopus. During this period there was no free approach to these collections, and, therefore, it was impossible either to take proper care or study them. Consequently, much damage was done, and many valuable specimens were irreparably lost.

The unusual shape (for the Palestinian Senonian) of this ammonite, as well as its excellent preservation, have attracted our attention. The rock-piece which includes it, measures no more than 40 per 35 mm. It is extremely fossiliferous and of the kind of phosphatic "bone-bed" which commonly occurs in the Judean Desert, in the north-eastern Negev and in the Amman district of Transjordan. No informative label was attached to the specimen except a small paper-square with the letter "D" glued on it. Specimens marked in this way were often received for examination by the Department of Geology from a geologically-minded cleric, Père Cogniant, living in the Holy Piscine cloister in the Old City of Jerusalem. The monk left Jerusalem in 1946 on a mission to one of the tropical countries of Africa; thus, a part of his material remained in the Department of Geology collections. It seems that the phosphate specimen, with its beautiful ammonite, most likely originated from some place in the Judean Desert, as this region was of great interest for the pious clericals and their disciples. Its age is well attested by the lithology, as well as by the tiny fossils crowded on the surface of the rock-piece. Among them it was possible to recognize as follows:

*Astarte undulosa* Conrad

*Corbula* cf. *paracrassa* Wade

? *Meretrix* (*Dosiniopsis*) *judaica* L. Picard

? *Crassatella* sp.

*Natica* (*Ampullina*) *farafrensis* Wanner

*Dentalium* aff. *inornatum* Wade

Bone and teeth fragments of fishes and reptiles

Coprolithes

This association indicates Campanian age.

The ammonite, (reg. No. 21378) disclosing appr.  $2\frac{1}{2}$  volutions, is not more than 17 mm of max. diam. and 13 mm of min. diam. It is compressed, nearly involute; its umbilicus has  $3\frac{1}{2}$  mm in max. diam., and, in relation to the umbilical margin, is appr.  $1\frac{1}{2}$  mm deep. The shell surface is beautifully preserved, displaying opalescent lustre. In the youngest volutions it is ornamented by sinuous, bifurcating and relatively broad ribs, which gradually pass into flat, sinuous and finely fasciculate plicae; these plicae radiate at the umbilical margin from curved elongated knots. The ventrum is grooved, and its width, in the disclosed part of our specimen is 1-2 mm; it is bordered on both sides by characteristically finely denticulated clavi, which terminate the ribs, resp. the plicae; in the youngest portion of volutions these clavi are symmetrically arranged, but later become probably alternating as a result of the not perfect regularity of the plicae.

Although the suture lines are not disclosed, the excellent preservation of the external features leaves no doubt as to its attribution to the genus *Placenticeras* Meek. As a rule, a juvenile shell restricts the exactness of determination, but, in this case, the perfect similarity of our ammonite to *Placentiras intercalare* Meek (*Pl. placenta* var. *intercalare* Meek, 1876, p. 468, Pl. 23; figs. la,b,c, and especially as described and figured by Hyatt, 1903, p. 207, Pls. 35-38), from the Upper Cretaceous Fort Pierre formation (Upper Senonian) of the U.S.A., allows us to ascribe it to this species. It is for the first time that *Pl. intercalare* is recorded from our region.

Very few placenticeratids were reported from Israel or from the neighbouring countries. Taubenhau (1920) names two species. One of them, *Placenticeras subplanum*, was described as new; it is represented by two specimens, each of different locality in Transjordan (not from one, as wrongly stated by Taubenhau). Already Blanckenhorn (1927, p. 186), in his critique on Taubenhau's paper, corrected the determination of one of the specimens (deposited in our collections, No. 2206), stating that it is not a *Placenticeras* but a *Hoplitoides*, cf. *H. mirabilis* Pervinquière. Similar *Hoplitoides* was reported and figured by E. Basse from the Turonian of Lebanon, considered as new species and named *H. baalbeckensis* (Basse, 1937, p. 189, Pl. VIII; figs. 4a, b). The specimen which represents it, is very imperfect, its sutures being deeply abraded. In size and in shape it is very similar to the above quoted *H. cf. mirabilis* from Transjordan and, possibly, it is identical with it; Basse poses it near *H. ingens* (Koenen) Solger.

The second specimen of "*Placenticeras subplanum* Taubenhau" (No. 2158) in our collections was later determined by L.S. Spath as *Hoplitoides* cf. *ingens* (Koenen) Solger, a Lower Turonian to Lower Coniacian species. It seems, therefore, that both

specimens, reported under the name of "*Placenticerus subplanum*", are not *Placenticerus* at all. Anyhow, they point to Turonian age, correcting the conclusions of Taubenhaus (Senonian), as well as those of Blanckenhorn (Cenomanian).

The second species quoted by Taubenhaus is *Placenticerus* cf. *pseudoplacenta* Hyatt from the Emscherian (Lower Senonian) of Jerusalem. This specimen is deposited in the Natural History Museum of Stuttgart. It is described in a very general way and no figure is given. The author emphasizes its bad preservation.

E. Basse (1937, p. 191) reported on a *Hoplitoplacenticerus* aff. *H. plasticus* Paulcke from the probable Campanian of Lebanon. The specimen, according to the author and to the given figure, is too poorly preserved for any additional discussion.

The nearest to our species is that reported by A. Chavan (1947, p. 129) under the name of *Hoplitoplacentiras vari* (Schlüter) (determined by E. Basse de Menorval),

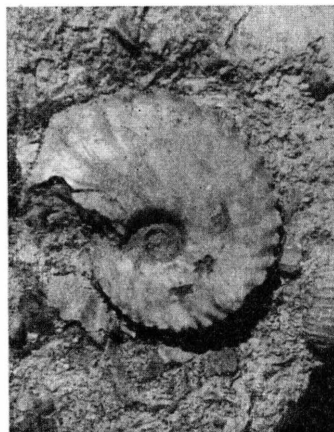


Figure 1  
*Placenticerus intercalare* Meek, Campanian, Judean Desert.

found in the Campanian "Leda-beds" of Mount of Olives in Jerusalem. In our specimen of *Placenticerus intercalare* the sides are slightly convex, the width of the flat, narrow ventrum widens very slowly, the ribs are faint, falcoid. On the contrary, the *Hoplitoplacenticerus vari* has a trapezoidal, almost inflated cross-section; the flat ventrum of this species widens quite quickly and its ribs are coarse and broad, with prominent umbilical and ventro-lateral tubercules.

Chavan also notes — according to unpublished information of E. Basse — that *Hoplitoplacenticerus vari* occurs in Syria (? Lebanon, locality unspecified). It seems then, that placenticeratids are represented among the Senonian ammonites of the Levant by the two quoted species at least.

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