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GEOLOGIE

A NEW VALANGINIAN AMMONITE (*DOBRODGEICERAS BENAVIDESI* SP. NOV.) FROM PERU

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In his monograph "Cretaceous System in Northern Peru", V. Benavides-Caceres [1] described as "*Valanginites brogii* (Lisson)" three Olcostephanid specimens from the Carhuaz Formation (Upper Valanginian). He thus identified them with the Bajocian ammonite *Sphaeroceras broggianum* Lisson [2]. There are, of course, some morphological features which are common to Lisson's specimen and to those of Benavides-Caceres: involute and inflated coiling of these sphaerocones with depressed whorl section, elliptically coiled umbilicus, and also the style of the ribbing — faintly forward sloping and sinuous primary ribs that are surmounted by a tubercle which gives rise of two or three secondary ribs. However, there exists a number of differentiating morphological features between *Sphaeroceras broggianum* Lisson and *Valanginites broggii*: Benavides-Caceres. Thus, the latter possesses a characteristic ventral tubercle and, besides, more fine ribbing on the venter and much thicker primary ribs which are transfered into bullae with the growth of the specimen. It must further be emphasized that Lisson's specimen is a Bajocian sphaeroceratid of the superfamily Stephanocerataceae, whereas the ammonite of Benavides-Caceres is an Upper Valanginian Olcostephanid that belongs to the superfamily Perisphinctaceae; the representatives of the family Sphaeroceratidae being restricted to the Bajocian Age, while those of the family Olcostephanidae range from the Lower Tithonian to Lower Barremian.

In fact, the semblance between the ammonites under discussion is purely a matter of homeomorphy and has no phylogenetic basis. I would further emphasize that homeomorphy is a well known phenomenon within the Mesozoic ammonites and therefore, must not puzzle us when considering this particular case.

The specimen of Benavides-Caceres [1], erroneously reffered to *Sphaeroceras broggianum* Lisson, must be separated as a new species which is the subject of the present notes.

Acknowledgements. I wish to express my cordial gratitude to Dr. V. Benavides-Caceres (Lima, Peru) for sending rare papers that in some way involve the problem, and to Dr. Roger L. Batten (American Museum of Natural History, New York) for a cast of the specimen of Benavides-Caceres, which is described below.

Family *OLCOSTEPHANIDAE* HAUG, 1910

Subfamily **POLYPTYCHITINAE** SPATH, 1924

Genus ***Dobrodgeiceras***, Nikolov, 1963
(=***Dobrogeites*** Nikolov, 1962, non Kittl, 1908)

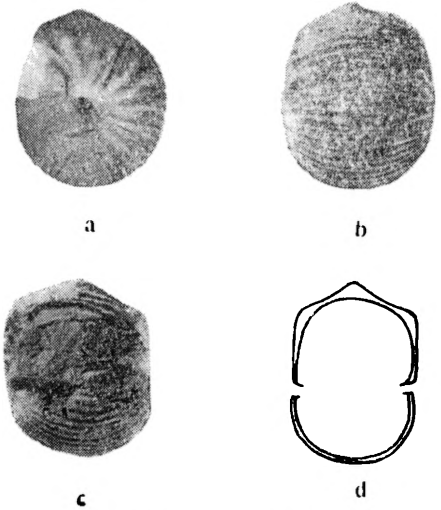
Type-Species. *Dobrogeites ventrotuberculatus* Nikolov, Upper Valanginian, Southern Dobrogea, Bulgaria, by original designation (Nikolov, 1962, p. 69).

Remarks. The genus *Dobrodgeiceras* Nikolov was set up to unite a group of ammonites of the family Olcostephanidae which are involute inflated sphaerocones with a row of ventral tubercles that range between every 4 to 12 ribs. The presence of tubercles in the ventral region is one of the fundamental characteristics of this genus. It is related to the genus of *Valanginites* from which it probably originates.

Dobrodgeiceras benavidesi sp. nov.

Figs. 1a, b, c, and d

1956. *Valanginites broggii* (Lisson) Benavides-Caceres, p. 437, pl. 40, Figs. 10—12, text-fig. 22



Figs. 1a, b, c, d. *Dobrodgeiceras benavidesi* sp. nov., holotype. As the holotype I am here designated the Benavides-Caceres' specimen — A. M. N. H. No. 27386 : 1 (1956, pl. 40, figs. 10—12, p. 437, fig. 22); a — lateral, b — ventral and c — frontal views, d — whorl section of the specimen

Type. The holotype is the original kept in the American Museum of Natural History (A. M. N. H. No. 27386 : 1). Carhuaz formation, bed 6, of the Carhuaz section, Northern Peru. The species was named in honour of the Peruvian geologist Dr. Victor Benavides-Càceres.

Dimensions: Holotype, A. M. N. H. No. 27386:1 [1, p. 437]

D	*H*	*D/H*	*T*	*D/T*	*U*	*D/U*
24	13	.54	17	.73	3	.12

Description. Small, involutely inflated sphaerocone, with depressed whorl section, and very narrow, elliptically coiled umbilicus. The inner whorls are covered with fine ribs beginning from the umbilical edge; the lateral walls are rounded and gradually pass over into the broad ventrum. In the second half of the last whorl the lateral walls are almost subparallel and covered with distinct and sharp ribs which in the adoral direction gradually pass over into prorsiradiate bullae. On the ventrolateral shoulder these sharp primary ribs terminate in a tubercle which is the starting point of two fine ribs passing the broad rounded venter without interruption. There are also intercalatory ribs on the ventrolateral shoulder. At this end of the outer whorl in the central part of the venter there is a sharp tubercle which is slightly transversely elongated. The suture line is unknown.

Comparison. *D. benavidesi* sp. nov. is very close to *D. ventrotuberculatum* Nikolov, 1962, differing from the latter in its smaller size, finer rib-formation, and later appearance of the ventrolateral tuberculation.

REFERENCES

[1] V. Benavides-Càceres. Bull. Amer. Museum Natur. History. **108**, 1956, 353—494. [2] C. Lisson, Rev. Cien. Lima. **422**, 1937, 153—155. [3] W. J. Arkell and C. W. Wright in R. C. Moore (editor). Treatise on Invertebrate Paleontology, Part L. [illegible] 4. Ammonoidea. Univ. Kansas Press, 1957, 129. [4] T. Nikolov. Compt. rend. Acad. bulg. Sci. **15**, 1962, N° 1, 69. [5] Id. Geol. Mag. **100**, 1963, N° 1, 94.