

AMERICAN MUSEUM NOVITATES

Published by
Number 1223 THE AMERICAN MUSEUM OF NATURAL HISTORY March 31, 1943
New York City

AN UPPER ALBIAN AMMONITE FROM MOUNT TAYLOR COUNTRY, NEW MEXICO

By OTTO HAAS

The American Museum of Natural History was recently presented by Mr. George X. Frey, formerly of Albuquerque, New Mexico, with a fragment of an ammonite found by him in 1939 "near the bottom of a canyon . . . about 800 or 1000 feet below the level of the surrounding country; there were two layers of lava above, also fine layers of coal. The canyon is about two miles south of Seboyeta,¹ New Mex.,"² Valencia County.

The present fragment is easily recognized as a "horned" *Pervinqueria* (cf. Haas, 1942, pp. 67, 72-78) and is here identified as

Pervinqueria cf. *romeri* Haas

Figures 1-3

A.M.N.H. No. 25469

Cf. *Pervinqueria romeri* Haas, 1942, p. 73, Pl. XI, figs. 1, 2, text fig. 7a.

It strikingly resembles the paratype of this species described from Angola (*ibid.*, Pl. XI, fig. 2, text fig. 7a); if put together, both fragments fit so well that one would believe them to belong to the same specimen.

The present fragment, measuring about 135 mm. in length, includes about a sixth of a whorl; at its anterior end it corresponds to a diameter of the disc of about 250 mm. As it is septate throughout, the conch, when complete, must have attained a diameter of at least 350 mm.

The shape and section of the whorl are

exactly as in the paratype of *P. romeri*; both specimens also agree fairly well in ornamentation and in the character of the suture lines. There are, however, some minor differences which allow only an approximate identification of the New Mexican specimen with the African ones.

As far as the ornamentation is concerned, the ribs, only two of which are preserved in the present fragment, seem to stand slightly farther apart from each other; they are equal in size, as in the holotype of *P. romeri* (Haas, 1942, Pl. XI, fig. 1), whereas in the paratype (*ibid.*, fig. 2), which corresponds to a somewhat smaller diameter than both the holotype and the New Mexican example, longer and shorter costae still alternate. Also the lateral swelling of the ribs is a little farther dorsad in the specimen under examination than it is in those from Angola. In ventral view they appear more distinctly dissymmetric on the sides of the present fragment than they are in the African specimens.

Its suture line, which is in part excellently preserved (Figs. 1, 2), is, despite the somewhat greater diameter, altogether less richly indented than that of the paratype of *P. romeri*, and all its main elements are lower and more massive. In addition, the following differences can be observed. The siphonal lobe is broader and the median knob is lower and sturdier in the specimen under examination; the outer stem of its external saddle is considerably wider than the inner one, whereas the opposite is true of the Angolan specimen, and is subdivided into three almost equal terminal leaves. Both main branches of the first lateral lobe are bifid instead of trifid; the branches next to the triangular leaflet dividing this lobe appear to be

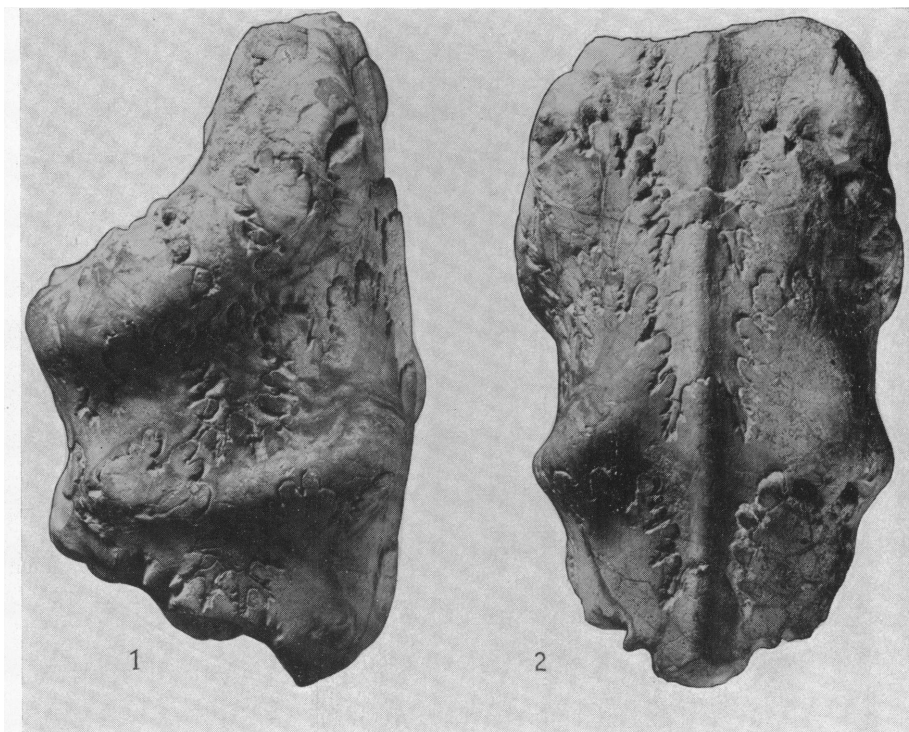
¹ This name is spelled as above on the "Geologic Map of the Eastern Part of the Mount Taylor Coal Field, in the Southern Part of the San Juan Basin, New Mexico," accompanying Hunt, 1936, but "Cebolleta" on the topographic map (as it is also in "Cebolleta Grant" on Hunt's geologic map). According to Hunt (1936, p. 38, footnote 17) "Seboyeta, the post-office name, is a phonetic spelling of the Spanish 'Cebolleta' (tender onion), the original name."

² Quoted from a letter of Mr. George X. Frey, dated Hermosa Beach, Calif., October 21, 1942.

three-pronged, those more remote from it, two-pronged. Finally, the first lateral saddle is much less deeply intersected, and its inner stem is the higher one, not the outer, as in the true *P. romeri*. All these differences are best recognized by comparing Figs. 1, 2, with text fig. 7a of Haas, 1942.

On Hunt's (1936) Geologic Map the Mancos shale is indicated as occurring at the locality given by the finder of this

Upper Albian, and there is every reason to assume the same age for the fossil here discussed. As far as the writer is aware, this is the first record of an ammonite of this age from New Mexico. This was, on the writer's request, verified by Prof. Gayle Scott of Texas Christian University, whose kind assistance is gratefully acknowledged. In a letter, dated Fort Worth, November 23, 1942, he comments as follows, ". . . the find of what is ap-



Figs. 1, 2. *Pervinqueria* cf. *romeri* Haas, A.M.N.H. No. 25469. Fig. 1, left side view, slightly oblique; Fig. 2, ventral view; both $\times \frac{2}{3}$.

fossil. This formation is (*ibid.*, pp. 40 ff.) referred to the Upper Cretaceous and said to overlie the Dakota (?) sandstone, which is also referred to the Upper Cretaceous and, in turn, overlies, with an erosional unconformity, the Morrison formation.

However, *P. romeri* occurs, as do all the horned *Pervinqueriae*, in the *inflata* zone (comprising beds IX–XIII of the English Gault, see Spath, 1941, p. 668) of the

parently a lower Washita ammonite in the Mt. Taylor area is new so far as I know. It should also be of considerable importance provided its exact horizon and locality were accurately recorded. On the new United States map you will notice quite a band generally surrounding that area mapped as Morrison. But the Morrison of this region has long been believed to contain Dakota (some of which is certainly

Washita Albian) and other strata, even Jurassic. Your ammonite would seem to substantiate part of this contention and

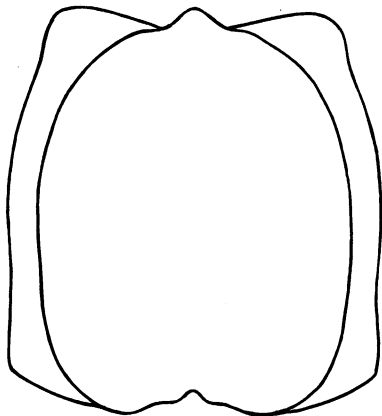


Fig. 3. *Pervinqueria* cf. *romeri* Haas, A.M.N.H. No. 25469; costal and intercostal section at posterior end of fragment; $\times \frac{2}{3}$.

should be of great value in helping to solve the extremely knotty problem of what the Morrison, so-called, of that area really

does contain. (See U.S.G.S. *Bull.* 860-B, p. 40.)

"Adkin's sketch of 'the known extent of the Kiamichi-Duck Creek seas' Univ. Texas *Bull.* 3232, p. 277, would need to be greatly extended (as I am sure it should be) to include most of New Mexico."

In the writer's opinion, the present ammonite might be of Middle rather than Lower Washita age and, therefore, slightly younger than the Duck Creek to which Prof. Scott refers.

Be this as it may, the find here recorded appears to be equally interesting from the points of view of both regional stratigraphy and palaeogeography. Under the latter it is worth noting that the true *P. romeri* and a specimen closely resembling another horned *Pervinqueria* from Angola, *P. barbouri* Haas (1942, p. 75, Pl. XII, fig. 2), were found also in Texas (see Haas, 1942, pp. 68, 74, 75). Thus the geographic range of *P. romeri* and its closest allies seems to be established from New Mexico and Texas to Angola (Portuguese West Africa), giving evidence of at least the same extent of the ocean during some part of the later Albian epoch.

LITERATURE CITED

- HAAS, OTTO
1942. "The Vernay Collection of Cretaceous (Albian) Ammonites from Angola." *Bull. Amer. Mus. Nat. Hist.*, LXXXI, pp. 1-224, text figs. 1-33, Pls. I-XLVII, Tables I, II.
- HUNT, CHARLES B.
1936. "The Mount Taylor Coal Field." *Part 2 of "Geology and Fuel Resources of the Southern Part of the San Juan Basin, New Mexico."* U. S. Geol. Surv. *Bull.* 860-B, pp. i-vi, 31-80, Pls. XXVII-XXXVIII, 2 maps.
- SPATH, L. F.
1941. "A Monograph of the Ammonoidea of the Gault." Pt. XIV, pp. 609-668, text figs. 218-244, Pls. LXV-LXXII; *Palaeontogr. Soc. London*, XCV.

