

## A NEW AMERICAN PENTREMITE

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The new American *Pentremites* here described was found by Dr. S. W. McCallie, assistant State geologist of Georgia, in the Bangor limestone of Georgia, and several months ago was forwarded to the writer for description, and presented to the U. S. National Museum. Doctor McCallie has referred to the occurrence of this *Pentremites* in his Report on the Coal Deposits of Georgia,<sup>a</sup> where notes on the stratigraphy may be found.

### PENTREMITES MACCALLIEI, new species.

Theca elongate, conical, and very large, having a length of 57 mm. and a width of about 40 mm. Base inverted-cone shaped, large, rapidly



FIG. 1.—*a*, THE DISTORTED SPECIMEN OF *PENTREMITES MACCALLIEI* SLIGHTLY TILTED SO AS TO BRING OUT MORE NEARLY THE NORMAL FORM. NATURAL SIZE. *b*, SIDE VIEW SHOWING AMOUNT OF DISTORTION.

expanding, a little less than one-fourth the total length of theca, deeply pentalobate and with the basal plates sharply delimited from

<sup>a</sup> Geol. Surv. Georgia, Bull. No. 12, 1904, p. 16.

the radials. Ambulacra very large, three-fourths the length of the theca, with flat sides sloping down to the depressed median groove. Length of each ambulacrum about 45 mm., greatest width about 9 or 10 mm. There are about 25 ambulacral grooves in 10 mm. Interambulacral areas deeply and angularly indented. Deltoids very long and narrow.

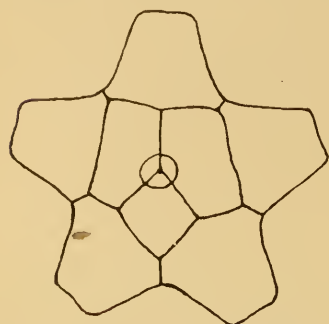


FIG. 2.—BASAL VIEW OF PENTREMITES MACCALLIEI IN OUTLINE, RESTORED TO PROBABLE NORMAL FORM.

*Remarks.*—In the structure of the ambulacra, the deep interambulacral areas, and form of basal half, the new species agrees very nearly with *P. sulcatus* Roemer. It differs, however, in being twice as large as the average adult specimen of that species, and in the more important particular that its apical end is longer and more attenuate. The deltoids also are correspondingly longer and narrower. The recently described *P. folisi*<sup>a</sup> has similar ambulacra and equals *P. maccalliei* in size but differs decidedly in having flat instead of deeply concave interambulacral spaces. Finally, *P. obesus* Lyon, an even larger species, while being similarly pentalobate in cross section, has very different ambulacra, these being biconvex in transverse contour, as in *P. godoni* De France and its allies. As the new species is based on a single mature example, nothing can be given regarding the developmental changes.

*Formation and locality.*—The specimen was found by Dr. S. W. McCallie in the Bangor limestone in an old lime quarry in Nickajack gulch, a short distance below the coke ovens at Cole City, Georgia.

*Holotype.*—Cat. No. 35689, U.S.N.M.



FIG. 3.—SECTION OF PENTREMITES MACCALLIEI ACROSS AN AMBULACRAL FURROW, SHOWING THE VERY SLIGHT CONVEXITY OF THE SLOPES ON EITHER SIDE OF THE MEDIAN GROOVE.

<sup>a</sup> Ulrich, U. S. Geol. Surv., Prof. Paper No. 36, 1905, pl. VII, figs. 5 to 9.