
PENTREMITIDEA FILOSA WHITEAVES FROM THE SILICA
FORMATION IN NORTHWESTERN OHIO

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INTRODUCTION

Blastoids were described from the Silica formation in northwestern Ohio by Kier (1952). Two species, *Nucleocrinus* sp. cf. *N. elegans* Conrad and *Pentremiteida reimanni* Kier, were collected from unit 13 of the Silica formation, as designated by Ehlers, Stumm and Kesling (1951), from the south quarry of the Medusa Portland Cement Company west of Sylvania, Ohio. The specimens described here were collected from unit 6 (Ehlers, Stumm and Kesling, 1951) in the north quarry of the same company. The north quarry is located approximately three miles southwest of Sylvania, Ohio, on the north side of Brint Road just west of Centennial Road in the SE $\frac{1}{4}$ sec. 7, T. 9 S., R. 6 E.

SYSTEMATIC DESCRIPTION

ORDER EUBLASTOIDEA

Family Pentremitidae

Genus *Pentremiteida* Orbigny, 1849

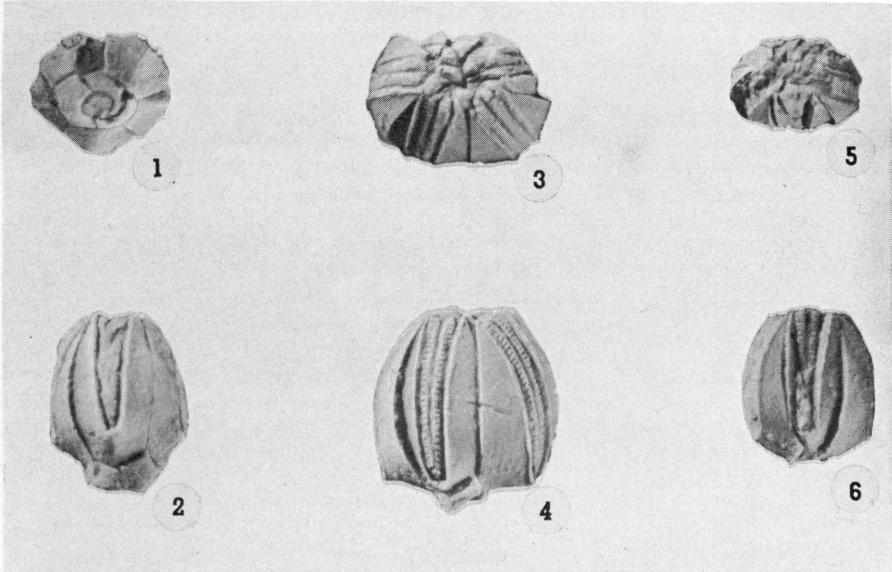
Pentremiteida filosa Whiteaves, 1889

Figures 1-6

Pentremiteida filosa Whiteaves, 1889, Contributions to Canadian Palaeontology, 1: 104-107, pl. 14, figs. 1, 1a, 1b.

Calyx of medium size with the undistorted specimen being 11.3 mm high and 8.1 mm wide. Greatest width below mid-height, usually at or near the base of the ambulacra. The edges of the radial plates adjacent to the ambulacral areas are raised forming a narrow ridge. Relative dimensions of radial plates and

ambulacral areas shown in table 1. Deltoids extremely small with the anal deltoid appreciably larger and rhomboid in shape. Three basal plates with one smaller than the others. Ambulacral areas narrow and widening uniformly towards the oral surface. Groove in the center of the ambulacrum is more pro-



EXPLANATION OF FIGURES IN PLATE

All figures on this plate are of *Pentremitidea filosa* Whiteaves and are magnified $\times 2$.

- 1, 2. Basal and lateral views. BGSU No. 1051.
 3, 4. Summit and lateral views. BGSU No. 1052.
 5, 6. Summit and lateral views. BGSU No. 1053.

nounced towards the oral surface being faint near the bottom of the ambulacral area.

Ornamentation on the surface of the radial plates consists of very fine lirae which parallel the outer edge of the plate but which are subparallel near the cen-

TABLE I
Comparison of radial and ambulacral dimensions.

Specimen	H.	W.	Length Radial	Width Radial	Length Amb.	L/W. Ratio Radial	Length Ratio Radial & Amb.
1	12.2*		11.7	6.8	11.0	.58	.940
2	11.3	8.1	9.8	5.0	8.9	.51	.908
3	9.8*		9.5	4.6	8.6	.48	.905

*Basal plates absent.
 Dimensions in millimeters.

tral portion of a side of a plate. The lirae begin well below the oral apex of the radials with the longer ones near the outer edge and then becoming progressively shorter as the ambulacral area is approached. The lirae extend to the base of

the radials but were not seen on the basal plates. Brachioles and summit features not preserved.

Remarks.—The specimens, although partially crushed, agree closely with the original description by Whiteaves (1889), especially in the size relationships of the radial plates and ambulacral areas. However none of the basal plates in the specimens described here are quadrangular as he mentions.

Pentremitidea filosa differs from *P. goldringae* Reimann, *P. southworthi* Reimann, *P. cummingsi* Reimann and *P. clavatifformis* Reimann by having its greatest width closer to the base of the calyx and less attenuate basal plates. *P. perovale* Reimann has ambulacrals which expand more rapidly and although the basal plates are near the same size they comprise one-fifth of the total height in *P. perovale* and only one-seventh in the specimens described above. *P. americana* Barris has more widely expanding ambulacral areas and a longer more attenuate base (Barris, 1883). *P. reimanni* Kier has shorter ambulacral areas in relation to the length of the radial plates. *P. cooperi* Reimann has a rounded summit and *P. bellatula* Reimann has a smaller summit area than *P. filosa* (Reimann, 1935, 1940, 1945).

Apparently there is an increase in the ratio of the length of the radial plates and the length of the ambulacral area and also an increase in the length/width ratio of the radial plates in connection with an increase in total size (table 1). The fine surface markings also become more prominent as size increases.

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