

A NEW SPECIES OF *ASTRAEOSPONGIA* FROM THE MIDDLE DEVONIAN OF OHIO

JOHN W. WELLS,

The Ohio State University, Columbus, Ohio

In the course of a study of the Middle Devonian bone beds of Ohio and adjoining states a rich thanatocoenotic microfauna has been found in them, including many new types of skeletal parts of fishes together with lesser numbers of conodonts, ostracods, and foraminifera. Spicules of sponges are much rarer than other remains and all that have been found so far seem to pertain to a new species of the peculiar octactinellid, *Astraeospongia*, described below.

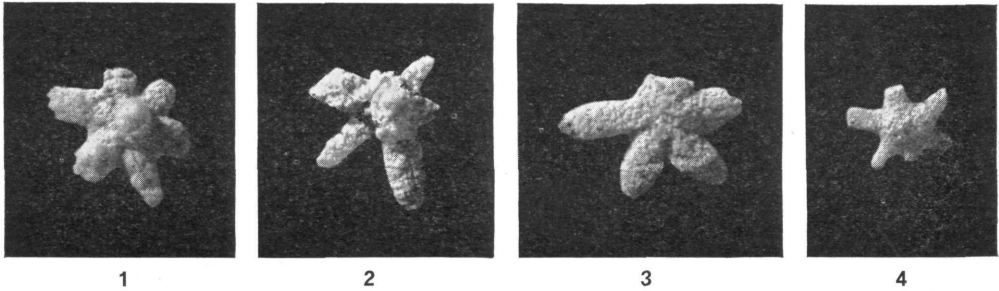
Family OCTACTINELLIDAE

Genus *Astraeospongia* Roemer 1860

Astraeospongia ohioensis n. sp.

(Figures 1-4)

Description.—Known only from isolated beekitized spicules. Two specimens (Figs. 1, 2) have six horizontal rays and two vertical ones, the latter equal in length to the horizontal ones. In two other specimens (Figs. 3, 4) the vertical rays are mere protuberances scarcely one-fifth the length of the horizontal rays. Total diameter across opposite horizontal rays, 1 to 1.5 mm. Rays club-shaped or bluntly cylindrical, about 0.25 mm. thick, fixed to a well-developed central disc.



Astraeospongia ohioensis, n. sp.

FIG. 1. Holotype (O. S. U. No. 19486), Columbus ls. bone bed, Marion Co., O.; 2, O. S. U. No. 19485, Columbus ls. bone bed, Franklin Co., O.; 3, O. S. U. No. 19487, Columbus ls. bone bed, Crawford Co., O.; 4, O. S. U. No. 19488, upper Columbus ls., Ottawa Co., O. All spicules enlarged 25X.

Occurrence and Material.—(a) In the bone bed at the top of the Columbus formation at the following localities: (1) J. and L. Snouffer quarry, east side of Scioto River, one mile south of Dublin, Franklin County, Ohio (1 specimen, O. S. U. 19485); (2) J. M. Hamilton and Sons quarry, east of highway 1.75 mi. north of Marion, Marion County, Ohio (2 specimens, including holotype, O. S. U. 19486); (3) National Lime and Stone Co. quarry on Broken Sword Creek, 1 mi. northwest of Spore, about 6 mi. northwest of Bucyrus, Crawford County, Ohio (1 specimen, O. S. U. 19487).

(b) In the uppermost part of the Columbus formation in a road cut on the south side of Marblehead peninsula 2.5 mi. west of south of Lakeside, Ottawa County, Ohio (1 specimen, O. S. U. 19488).

Remarks.—This form is marked by the small size of the spicules which are on the average less than half as big as those of other Devonian species. In *A. devoniensis* Hinde (1887, p. 140, pl. 4, figs. 8–8c) from the Middle Devonian of Devonshire, the spicules are larger (2.5 to 5 mm.), with thinner, longer, more attenuate rays. *A. meniscoides* Dewalque (1872, pp. 23–26, pl. 1) from the Middle Devonian of Belgium and the Eifel, has larger spicules (4 mm.) with no vertical rays and fusiform horizontal rays. *A. hamiltonensis* Meek and Worthen (1868, p. 419, pl. 10, fig. 6) from the Middle Devonian of Iowa, also has larger spicules (3.25 mm.) that seem to lack vertical rays and with horizontal ones 0.5 mm. in thickness and 1.5 mm. long. In *A. rhenanum* (Schlüter) (1887, p. 23, pl. 2, figs. 7–9), from the Middle Devonian of the Eifel, the spicular rays are relatively very long and slender, needle-like, 0.2 to 0.4 mm. thick, the total diameter of the spicules being 3 or 4 mm.; the central disc is very small and the vertical rays well-developed.

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