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SPONGOPHYLLUM MISSOURIENSE, A NEW CORAL FROM THE MIDDLE DEVONIAN CALLAWAY LIMESTONE OF MISSOURI

BY

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INTRODUCTION

THIS paper describes a new species of the tetracoral genus *Spongophyllum* from the Middle Devonian Callaway limestone of Missouri. The description is based on a single specimen which was found by Mr. Joe Harner of Nevada, Missouri, about fifteen years ago and sent by him to the Museum of Paleontology of the University of Michigan as part of an exchange of fossils. According to Mr. Harner's notation on a label accompanying the specimen, the tetracoral was obtained from an outcrop about 5 miles southeast of Fulton, Missouri.

All species of *Spongophyllum* which have been listed or described from North American rocks are of Middle or Upper Devonian age. C. R. Stauffer (1930, pp. 87, 101, 107) noted the occurrence of *Spongophyllum sedgwicki* Edwards and Haime from the lower Middle Devonian Kennett formation of the Inyo Mountain and Klamath Mountain areas of California. E. C. Stumm (1937, pp. 435–37) described *Spongophyllum expansum* and *S. nevadense* from the lower Middle Devonian part of the Nevada limestone of east-central Nevada. Stumm (1938, p. 482) also described *Spongophyllum prismatophylloides* from the upper Middle Devonian part of the same formation and region. G. M. Ehlers and E. C. Stumm (1949, pp. 125–27) described *Spongophyllum romingeri* and *S. alpenense* from the Middle Devonian Traverse group of Michigan. Stumm (1948,

p. 41) described *Spongophyllum martinense* and *S. breviseptatum* from the Upper Devonian Martin limestone of the Bizbee, Arizona, region. Stanley Smith (1945, pp. 55–57) described *Spongophyllum* near *S. semiseptatum* Schlüter, *S. imperfectum, S.* near *imperfectum, S. lituus,* and *S. pax* from the Upper Devonian strata of the Mackenzie River region of Canada.

The specimen of *Spongophyllum missouriense* described in this paper marks the first occurrence of a member of the genus *Spongophyllum* in Missouri. The Callaway limestone from which it was obtained occupies a position in the upper part of the Middle Devonian (Cooper, 1942, p. 1748).

SYSTEMATIC DESCRIPTION

Phylum COELENTERATA
Class ANTHOZOA
Subclass TETRACORALLA
Family Columnariidae
Subfamily Spongophyllinae

Genus *Spongophyllum* Edwards and Haime

Spongophyllum Edwards and Haime, 1851, p. 425.
Genotype.—By monotypy, *Spongophyllum sedgwicki* Edwards and Haime, 1851, p. 425; 1853, p. 242, Pl. 56, Figs. 2, 2*a–e*. Devonian; Torquay, Devonshire, England.

Spongophyllum missouriense Ehlers and Stumm, sp. nov.

(Pl. I, Figs. 1–3)

Description.—Species known only from one specimen. Corallum cerioid, hemispherical in form. Most mature corallites pentagonal or hexagonal in outline and 6 to 12 mm. in diameter, with the majority approximating 10 mm.; immature corallites tetragonal in outline. Calyxes averaging 6 mm. in depth in corallites of mature size, with steeply sloping walls flared in upper parts and with moderately flattened bases. Major septa extending to bases of calyxes; minor septa appearing as low septal ridges in upper part of calyxes of large corallites.

In transverse section, walls moderately thick and either straight or curved. Major septa thin, 17 to 20 in mature corallites and 18 in most corallites. Major septa long, most of them extending from walls or from inner margins of lonsdaleioid dissepimentaria to points about two-thirds distance to axes; very few reaching axes. Minor septa represented by very short, thick, septal ridges in parts of some corallites. Lonsdaleioid dissepimentaria wide and continuous in some corallites, narrow and discontinuous in others. In most corallites major septa composed of ridges on the walls reappearing as continuous lamellar septa on inner margins of lonsdaleioid dissepimentaria. No trace of minor septa on inner margins of lonsdaleioid dissepimentaria.

In longitudinal section, tabularia wide and composed of closely set complete and incomplete, horizontal and arched tabulae, reinforced by periaxial tabellae in most parts of corallites. Dissepimentaria continuous, composed of two or three rows of very elongate, overlapping, steeply inclined dissepiments.

Remarks.—This species is closely related to *Spongophyllum alpenense* Ehlers and Stumm (1949, pp. 126–27) from the Potter Farm formation of the Devonian Traverse group of Michigan but differs from that species in having corallites of smaller average diameter, calyxes with flat instead of elevated bases, flaring instead of erect calyx walls, and a smaller number of septa. It also differs from that species in having minor septa represented by short, thick, septal ridges instead of lamellar plates and by the absence of traces of minor septa on the inner margin of the lonsdaleioid dissepimentaria. In addition, the dissepimentaria of this species are vertically continuous and not discontinuous as in *S. alpenense;* numerous periaxial tabellae are present in *S. missouriense* and absent in *S. alpenense.*

Occurrence.—Middle Devonian Callaway limestone; 5 miles southeast of Fulton, Missouri.

Type.—Holotype No. 18807, Museum of Paleontology, University of Michigan.

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Submitted for publication March 8, 1951

PLATE

EXPLANATION OF PLATE I

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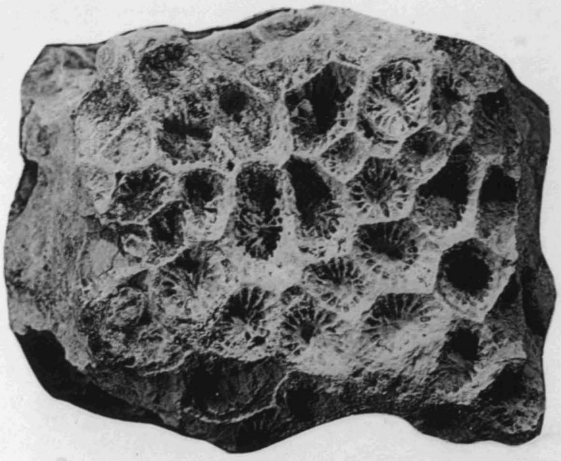
Spongophyllum missouriense Ehlers and Stumm, sp. nov. 292

FIG. 1. View of part of distal surface of specimen showing calyxes with major septa and with steeply sloping walls flared in upper parts and moderately flat bases. Holotype No. 18807, Museum of Paleontology, University of Michigan. Callaway limestone. Five miles southeast of Fulton, Missouri. × 1.

FIG. 2. Longitudinal section of same specimen showing closely spaced tabulae of tabularium, periaxial tabellae and elongate, overlapping, steeply inclined dissepiments of dissepimentarium. × 2.

FIG. 3. Transverse section of same specimen showing thickness of walls of corallites, well-developed lonsdaleioid dissepimentaria, major septa and extent of their axial ends, and few minor septa appearing as low septal ridges. × 2.

PLATE 1



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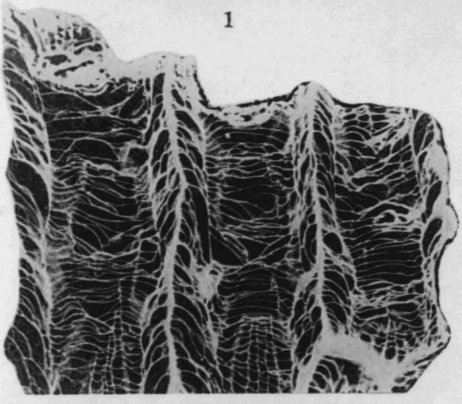
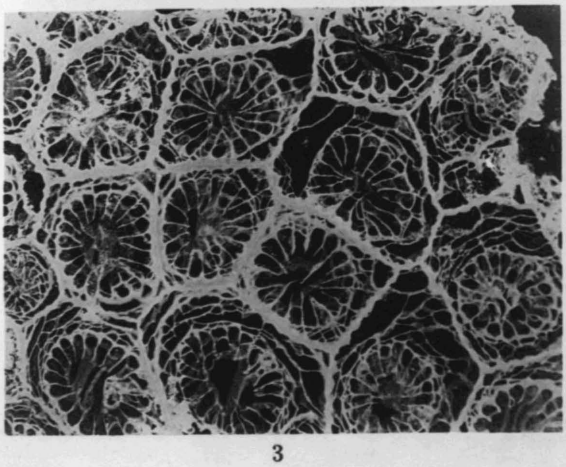


2



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