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A REDESCRIPTION OF THE MIDDLE SILURIAN COMPOUND RUGOSE  
CORAL *GRABAUPHYLLUM JOHNSTONI* FOERSTE

BY  
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4. Mouth frame of the ophiuroid *Onychaster*, by Philip R. Bjork, Paul S. Goldberg, and Robert V. Kesling. Pages 45-60, with 4 plates and 4 text-figures.
5. Rugose corals of the Silica Formation (Middle Devonian) of northwestern Ohio and southeastern Michigan, by Erwin C. Stumm. Pages 61-70, with 4 plates.

# A REDESCRIPTION OF THE MIDDLE SILURIAN COMPOUND RUGOSE CORAL *GRABAUPHYLLUM JOHNSTONI* FOERSTE

ERWIN C. STUMM

ABSTRACT—The holotype of *Grabauphyllum johnstoni* Foerste (1917, p. 199–200, pl. 11, fig. 9) from the Niagaran dolomite of the Chicago region was described from a cast of the calyxes. The specimen is apparently lost. Two specimens, the first another cast of the calyxes and the second showing the internal structures, are described and illustrated.

## INTRODUCTION

AUGUST FOERSTE (1917, p. 199–200, pl. XI, fig. 9) described and figured the new genus and species *Grabauphyllum johnstoni* from one specimen found in the "Niagaran dolomite" near McCook, five miles southwest of Chicago, Illinois. The specimen consisted of a dolomitized cast of the calyxes of a large, ceriod rugose coral with corallites having lonsdaleioid dissepimentaria and periaxial septal zones. Some of Foerste's types of fossil invertebrates were deposited in the U. S. National Museum but this is apparently not among them, and is presumed to be lost. Two other specimens of this species have been located. The first of these is another cast of the calyxes presented to our Museum of Paleontology many years ago by the now defunct Detroit Natural History Society. The other is a massive specimen in the collection of the Field Museum of Natural History, Chicago, in which the matrix has been leached in parts of the corallum. Both the specimens are labeled "Niagaran dolomite, vicinity of Chicago," so the exact stratigraphic position is in doubt.

## ACKNOWLEDGMENTS

I wish to thank Dr. Eugene S. Richardson, Jr., Curator of Fossil Invertebrates, Field Museum of Natural History, for the loan of the specimen of *Grabauphyllum johnstoni* in the museum's collections and for permission to section it. I wish also to thank Mr. Karoly Kutasi for preparing the photographs of the specimens and Drs. C. A. Arnold and R. V. Kesling for critically reviewing the manuscript.

## SYSTEMATIC DESCRIPTION

### Family SPONGOPHYLLIDAE

### Genus GRABAUPHYLLUM Foerste

*Grabauphyllum* Foerste, 1917, p. 199–200.

*Type species*.—*Grabauphyllum johnstoni* Foerste, 1917, p. 199–200, pl. 11, fig. 9.

## GRABAUPHYLLUM JOHNSTONI Foerste

Pl. 1, figs. 1–5

*Description*.—Corallum hemispherical, cerioid, with typically pentagonal corallites ranging from 1.5 to 5 cm in diameter. Calyxes with a maximum depth of 2.5 cm. Calyx walls gently sloping peripherally, steeply sloping periaxially. Bases of calyxes relatively flat, formed by the uppermost tabula. Maximum depth of calyxes about 2 cm. Walls between corallites very thick and provided with very short peripheral septal ridges. Proceeding axially is a wide lonsdaleioid dissepimentarium with large axially and distally convex elongate dissepiments of the spongophyllid type. In the periaxial region radially arranged septa extend about three-fourths the distance to the axis. These septa average 36, and are smooth and of medium thickness, tapering slightly at their axial ends. It is possible that these are all major septa, and that the minor septa did not extend beyond the peripheral ridges. Tabulae wide, typically complete, closely spaced, depressed peripherally, distally arched periaxially, flat axially.

*Remarks*.—The extremely thick walls are similar to typical species of the Devonian genus *Endophyllum* but this genus has relatively long minor septa and a less well developed lonsdaleioid dissepimentarium.

*Occurrence*.—Middle Silurian, "Niagaran" dolomite, northern Illinois.

*Types*.—Hypotype, Field Museum of Natural History, Chicago; hypotype no. 34568, Museum of Paleontology, The University of Michigan.

## LITERATURE CITED

- FOERSTE, A. F., 1917, Notes on Silurian fossils from Ohio and other central states: Ohio Jour. Sci., v. 17, nos. 6–7, p. 187–204, 233–266, pls. 8–12.

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EXPLANATION OF PLATE 1

All figures  $\times 1$

FIGS. 1-5—*Grabauphyllum johnstoni* Foerste. 1, Latex mold of cast of calyx. Hypotype no. 34568, Museum of Paleontology, The University of Michigan. Middle Silurian, Niagaran dolomite, vicinity of Chicago, Illinois. 2, Distal surface of hypotype in Chicago Natural History Museum, same occurrence as original of fig. 1. 3, Side view of same specimen showing well-preserved tabulae. 4, Transverse section of same specimen showing septa and lonsdaleioid dissepimentarium. 5, Longitudinal section of same specimen showing elongate spongophylloid dissepiments.

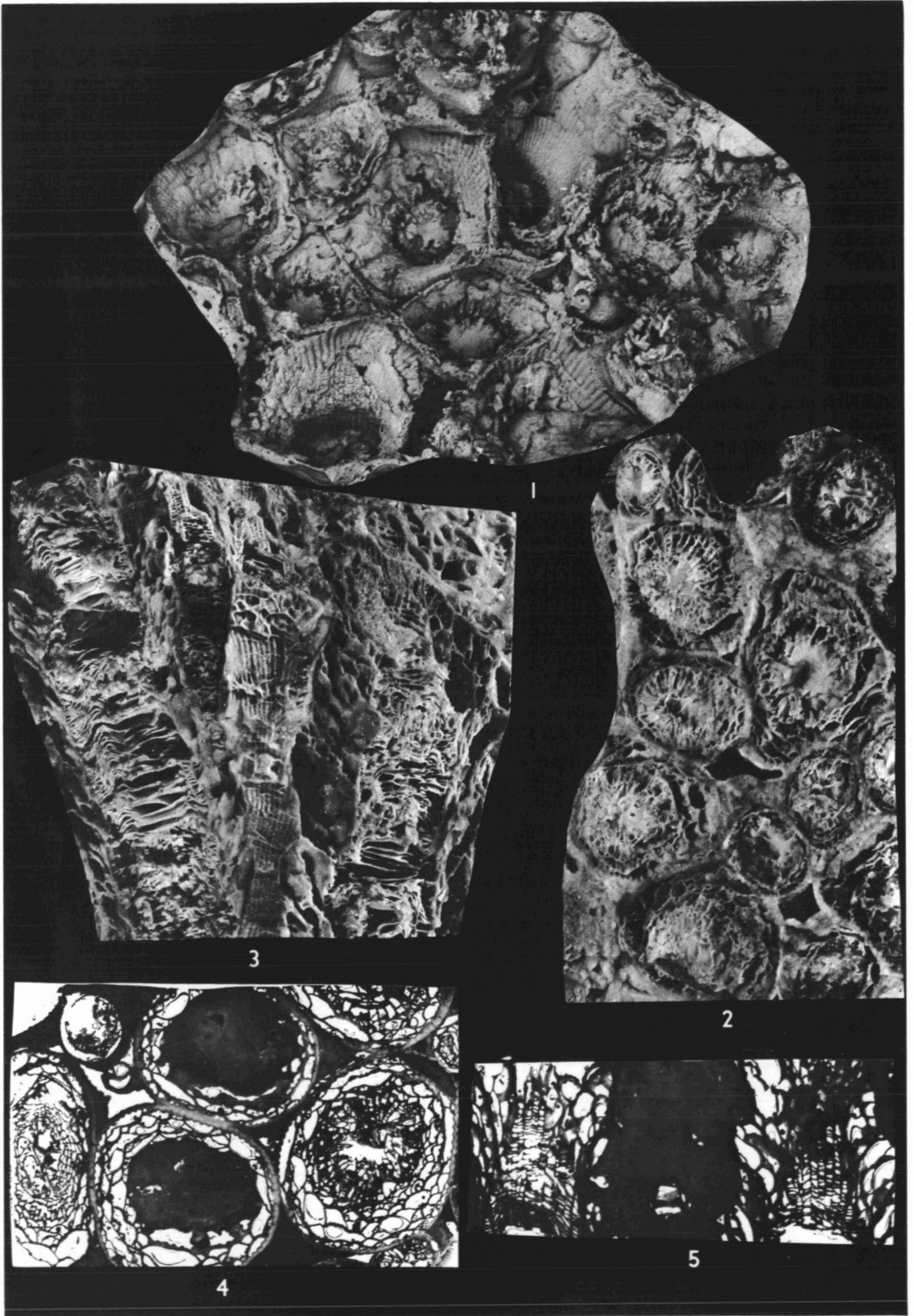


PLATE 1

