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TWO UNUSUALLY WELL-PRESERVED
RUGOSE CORALS FROM THE
JEFFERSONVILLE LIMESTONE (DEVONIAN)
OF THE FALLS OF THE OHIO

BY
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MUSEUM OF PALEONTOLOGY
ANN ARBOR

CONTRIBUTIONS FROM THE MUSEUM OF PALEONTOLOGY

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TWO UNUSUALLY WELL-PRESERVED SIMPLE RUGOSE
CORALS FROM THE JEFFERSONVILLE LIMESTONE
(DEVONIAN) OF THE FALLS OF THE OHIO

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ABSTRACT

Unusually well-preserved specimens of *Heterophrentis inflata* (Hall) and *Scenophyllum conigerum* (Rominger) are illustrated. Stereophotographs are used to illustrate the calyxes. Both specimens are from the Jeffersonville Limestone at the Falls of the Ohio.

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INTRODUCTION AND ACKNOWLEDGMENTS

TWO UNUSUALLY WELL-PRESERVED simple rugose corals from the Falls of the Ohio have been located in the Rominger collection of fossil corals at the Museum of Paleontology, The University of Michigan. In both specimens the calyx walls are complete or nearly so, a condition rare in the preservation of simple rugosa. This is a result of the fact that the calyx walls in most species become progressively thinner upward and may be only 1 mm thick at the margin. Therefore, in most specimens, only the basal parts of the calyx walls are preserved. Ordinary photographs are sufficient for illustration under these conditions. However, when the walls are complete, and the depth to the calyx floor may be as great as 5 cm, ordinary photographs do not show many of the important calycinal features. This paper is an attempt to illustrate simple rugose corals with deep, well-preserved calyxes by stereophotographs.

My thanks are due to Drs. L. B. Kellum, C. A. Arnold, and R. V. Kesling for critically reviewing this paper. I am also indebted to Mr. Karoly

Kutasi for photographing the specimens. Both specimens are deposited in the type collections of the Museum of Paleontology, The University of Michigan.

SYSTEMATIC DESCRIPTIONS

Genus *Heterophrentis* Billings

Heterophrentis inflata (Hall)

(Pl. 1, Figs. 1-3)

For complete synonymy see Stumm (1964, p. 20).

Description.—Corrallum ceratoid, slightly curved in proximal portion. Curvature directed toward right alar septum. Corallum measuring 10 cm in length with a maximum diameter of 5 cm at the calyx margin. Exterior with a thin, weakly to moderately transversely wrinkled epitheca. Inter-septal ridges faintly visible through epitheca in places. Base of corallum provided with two relatively small attachment talons along one side. Calyx with a perfectly preserved margin. Calyx walls almost vertical, flaring slightly near distal margin. Depth of calyx 4.5 to 5 cm. Base of calyx relatively flat, slightly elevated at axial ends of major septa. Cardinal fossula prominent, 2-3 mm in diameter, 1 cm long and 4-5 cm deep. Fossula confined to calyx floor. Major septa 60, lamellar, extending from margin of calyx to within 5 mm of axis, becoming slightly elevated at their axial ends. Cardinal septum well developed along calyx wall, elevated above other major septa, and extending downward along peripheral margin of fossula. Counter and alar septa not distinguished from metasepta. Minor septa 60, appearing as low, peripheral ridges between major septa, extending to base of calyx wall but not on calyx floor.

Remarks.—The great depth of the fossula may be due to destruction of the tabulae during silicification of the specimen. Internal structures and exterior views of other specimens are illustrated by Stumm (1964, Pl. 4, Figs. 11-12; Pl. 7, Figs. 1-5, 7; Pl. 15, Fig. 1).

Occurrence.—Middle Devonian Jeffersonville Limestone, Falls of the Ohio River, Jeffersonville, Indiana; above coral zone, probably from *Paraspirifer acuminatus* zone.

Types.—(For type numbers and repositories of holotype and all other known hypotypes see Stumm (1964, explanation of Pls. 4, 7, and 15); hypotype herein illustrated UMMP 23726.

Genus *Scenophyllum* Simpson
Scenophyllum conigerum (Rominger)

(Pl. II, Figs. 1-3)

For complete synonymy see Stumm (1964, p. 26).

Description.—Corallum narrowly ceratoid, elliptical, measuring 4.2 cm in maximum and 3.6 cm in minimum diameter. Total preserved length 11.8 cm; approximately 1 cm broken off at base. Epitheca thin, relatively smooth, moderately annulated, and with vertical interseptal ridges faintly visible. Calyx with almost erect walls, very thin in distal part, 1 mm thick at margin. Average depth of calyx 4.3 cm. Major septa 56, thin, lamellar, extending about 5 mm inward from calyx wall in lower part of calyx wall. In upper part of calyx wall they become short and thickened until they are almost in contact with the neighboring minor septa. Minor septa appearing as thin peripheral ridges in lower part of ridges, not extending more than 1 mm from calyx wall. In upper part of calyx they become shorter and thickened in the same manner as the major septa. Base of calyx occupied by a fusiform columella with a broad base occupying entire base of calyx. Upper part of columella 7 mm in length and 4 mm in width. Entire columella produced by doming of the tabulae over which the axial ends of the major septa extend in a counter-clockwise spiral. Entire columella 1.2 cm high; upper fusiform part elongated in the direction of the cardinal-counter axis. Cardinal fossula distinct only in basal part of calyx. Cardinal septum slightly shorter than neighboring metasepta. No other modifications of the protosepta visible.

Remarks.—Internal structure of another hypotype and external features of holotype illustrated by Stumm (1964, p. 26, Pl. 16, Figs. 1-3).

Occurrence.—Middle Devonian, Jeffersonville Limestone, Falls of the Ohio River, Jeffersonville, Indiana.

Types.—Holotype UMMP 8585; sectioned hypotype UMMP 14252; hypotype herein illustrated UMMP 49707.

LITERATURE CITED

- Stumm, E. C., 1964. Silurian and Devonian Corals of the Falls of the Ohio. Geol. Soc. America, Mem. 93.

Manuscript submitted Nov. 4, 1964

EXPLANATION OF PLATE I

(All figures $\times 1$)

	PAGE
<i>Heterophrentis inflata</i> (Hall)	158
FIG. 1. Stereophotograph of the calyx showing the great depth, steepness of calyx walls and prominent cardinal fossula.	
FIG. 2. Side view taken in the direction of the right alar fossula showing the attachment talons.	
FIG. 3. Side view taken in the position of the cardinal-counter axis, showing curvature of basal part of corallum toward the right alar septum.	

PLATE I

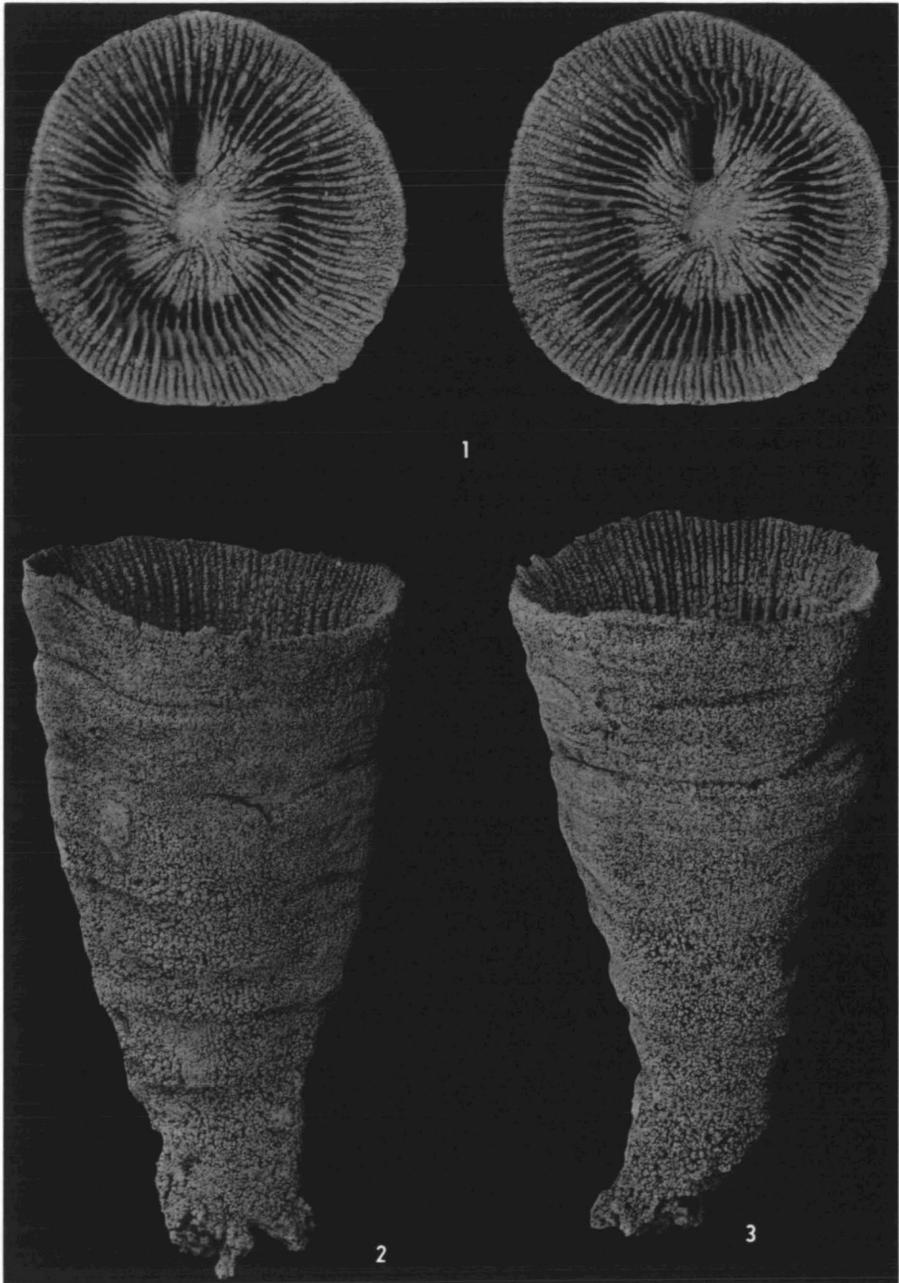
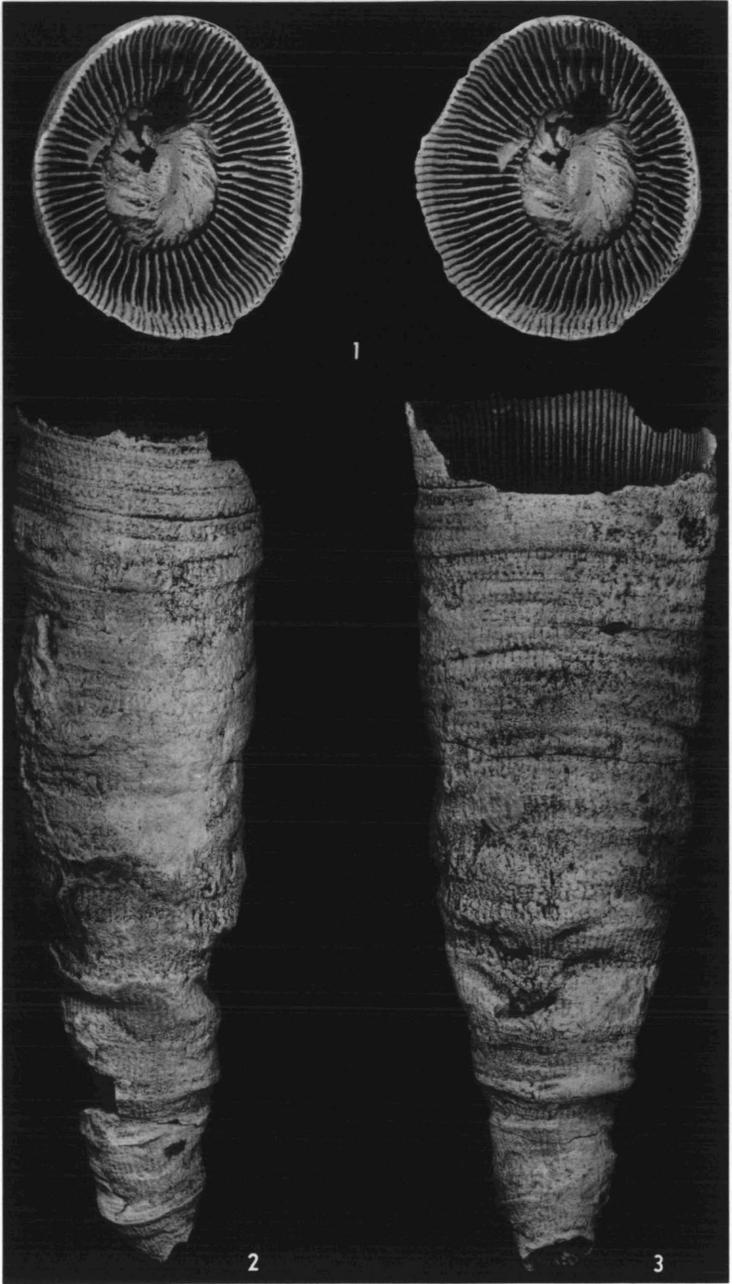


PLATE II



EXPLANATION OF PLATE II

(All figures $\times 1$)

	PAGE
<i>Scenophyllum conigerum</i> (Rominger)	159
FIG. 1. Stereophotograph of the calyx showing the steep, erect, thin walls and the fusiform columella.	
FIG. 2. Side view taken in the position of the cardinal-counter axis showing the minimum diameter.	
FIG. 3. Side view at right angles to the cardinal-counter axis, showing the maximum diameter; thickened septa visible in upper part of calyx.	

