

NEW RUGOSE CORALS FROM THE MIDDLE AND UPPER DEVONIAN OF NEW YORK

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ABSTRACT—Two new species of rugose corals, *Macgeea ponderosa* and *Mictophyllum orientalis* are described from the Chemung group. The new species *Depasophyllum tabulatum* is described from the Tully limestone.

INTRODUCTION

CORALS are extremely rare in the clastic sediments typical of the New York Upper Devonian. A few specimens in the Cornell University collections were sent to me by Dr. J. W. Wells for study. In addition, some specimens from a small bioherm in the Tully limestone were sent. This paper is the result of the study of these specimens. I wish to thank Dr. Wells for the opportunity to study them. All type material is deposited in the collections of the Department of Geology, Cornell University.

SYSTEMATIC DESCRIPTIONS

Genus MACGEEA Webster

Macgeea Webster, 1889, p. 710; Fenton and Fenton, 1924, p. 53; Lang and Smith, 1935, p. 552; Smith, 1945, p. 27; Stainbrook, 1946, p. 419.

Type species.—By subsequent designation of Fenton and Fenton, 1924, p. 54, *Pachyphyllum solitarium* Hall and Whitfield, 1873, p. 232, pl. 9, figs. 6, 7. Upper Devonian, Lime Creek shale, Cerro Gordo member, Iowa.

MACGEEA PONDEROSA n. sp. Pl. 30, figs. 5-10

Description.—Corallum subcylindrical to ceratoid, the holotype, an incomplete specimen measuring 7 cm. long with an average diameter of 3 cm. with proximal end missing. Exterior with a thin epitheca through which the septal ridges are prominently developed. Calyx round, oval, or constricted with erect, relatively thick walls and a flat base.

In transverse section septa radially arranged, averaging about 96 in number. Major septa extending almost to axis, dilated peripherally and axially, attenuated periaxially. Minor septa about one-third as long as major, dilated peripherally, attenuated axially. In longitudinal section tabulae occupying axial region, complete or incomplete, typically proximally convex, spaced from 1 to 3 mm. apart. A peripheral row of distally convex, globose dissepiments present, bounded periaxially by several rows of elongate, axially convex dissepiments.

Remarks.—*Macgeea ponderosa* is distinguished from other species of the genus by

EXPLANATION OF PLATE 30

- FIGS. 1-4—*Mictophyllum orientalis* n. sp. 1, side view of holotype No. 40601 X1; 2, 3, transverse and longitudinal sections of same specimen X1.5, from lower part of Chemung sandstone, Spencer, Tioga County, New York. 4, Latex cast of calyx of paratype No. 40602, lower part of Chemung sandstone at "The Narrows," a cliff 1 mile west of Chemung, Chemung County, New York.
- 5-10—*Macgeea ponderosa* n. sp. 5, 6, 9 Transverse section and longitudinal section X1.5, and exterior of holotype X1, No. 40598, lower part of Chemung sandstone, cliff above Chemung River, just west of Waverly, Tioga County, New York. 7, 8, Transverse and longitudinal sections X1.5, of paratype No. 40599 from same horizon and locality as holotype. 10, Latex cast of calyx X1, of paratype No. 40600, from lower part of Chemung sandstone, Spencer, Tioga County, New York.
- 11-13—*Depasophyllum tabulatum* n. sp. 11, Side view of paratype X1, No. 40603; 12, 13, Longitudinal and transverse sections X2, of holotype No. 40604, both from Tully limestone, reef knoll, southeast of Borodino, Onondaga County, New York.

its much greater size, larger number of septa, and by the proximally convex tabulae.

Occurrence.—Upper Devonian, lower part of Chemung sandstone, western New York.

Types.—Holotype, Cornell Univ. no. 40598; paratypes, nos. 40599–60.

Genus *Mictophyllum* Lang
and Smith

Mictophyllum, Lang and Smith, 1939, p. 155; Smith, 1945, p. 30.

Type species.—By original designation, *Mictophyllum nobile* Lang and Smith, 1939, p. 155, pl. 4, figs. 1a–d, Upper Devonian Red Knife River, North West Territories, Canada.

MICTOPHYLLUM ORIENTALIS n. sp.
Pl. 30, figs. 1–3

Description.—Corallum simple, narrowly ceratoid. Holotype, with broken proximal end and somewhat crushed distal end, measuring 7.5 cm. long with an average maximum diameter of 3 cm. Exterior with a heavy, closely annulated epitheca through which weakly developed, widely separated interseptal ridges are developed. Calyx of holotype filled with rock material but one partly preserved on paratype indicates walls thin and erect.

In transverse section major septa 32, thin peripherally, becoming very thickened periaxially and slightly attenuate axially, extending without twisting almost to axis. Minor septa very short and thin lacking in some areas. In longitudinal section tabulae occupying most of corallite, closely set, complete and incomplete, relatively horizontal or slightly proximally convex in the axial region, becoming distally convex in the periaxial region, and bending downward at the periphery. Dissepimentarium very narrow, composed of one or two rows of large, very elongate dissepiments.

Remarks.—This species most nearly resembles *M. semidilatatum* Smith (1945, p. 31, pl. 4, figs. 2a–c) in its septal arrangement but differs in the very restricted dissepimentarium.

Occurrence.—Upper Devonian, lower Chemung sandstone, Spencer, Tioga County, New York.

Types.—Holotype, Cornell Univ., no. 40601; paratype, no. 40602.

Genus DEPASOPHYLLUM Grabau
DEPASOPHYLLUM TABULATUM n. sp.
Pl. 30, figs. 11–13

Description.—Coralla typically simple, cylindrical, largest known specimen, incomplete, measuring 3 cm. in length with an average diameter of 1 cm. Exteriors with a closely annulated epitheca. Calyxes unknown.

In transverse section septa 24, of equal length, very thin, extending less than one-third distance to axis.

In longitudinal section tabulae typically complete, closely set, horizontal in axial and periaxial regions, becoming sharply deflected downward near periphery.

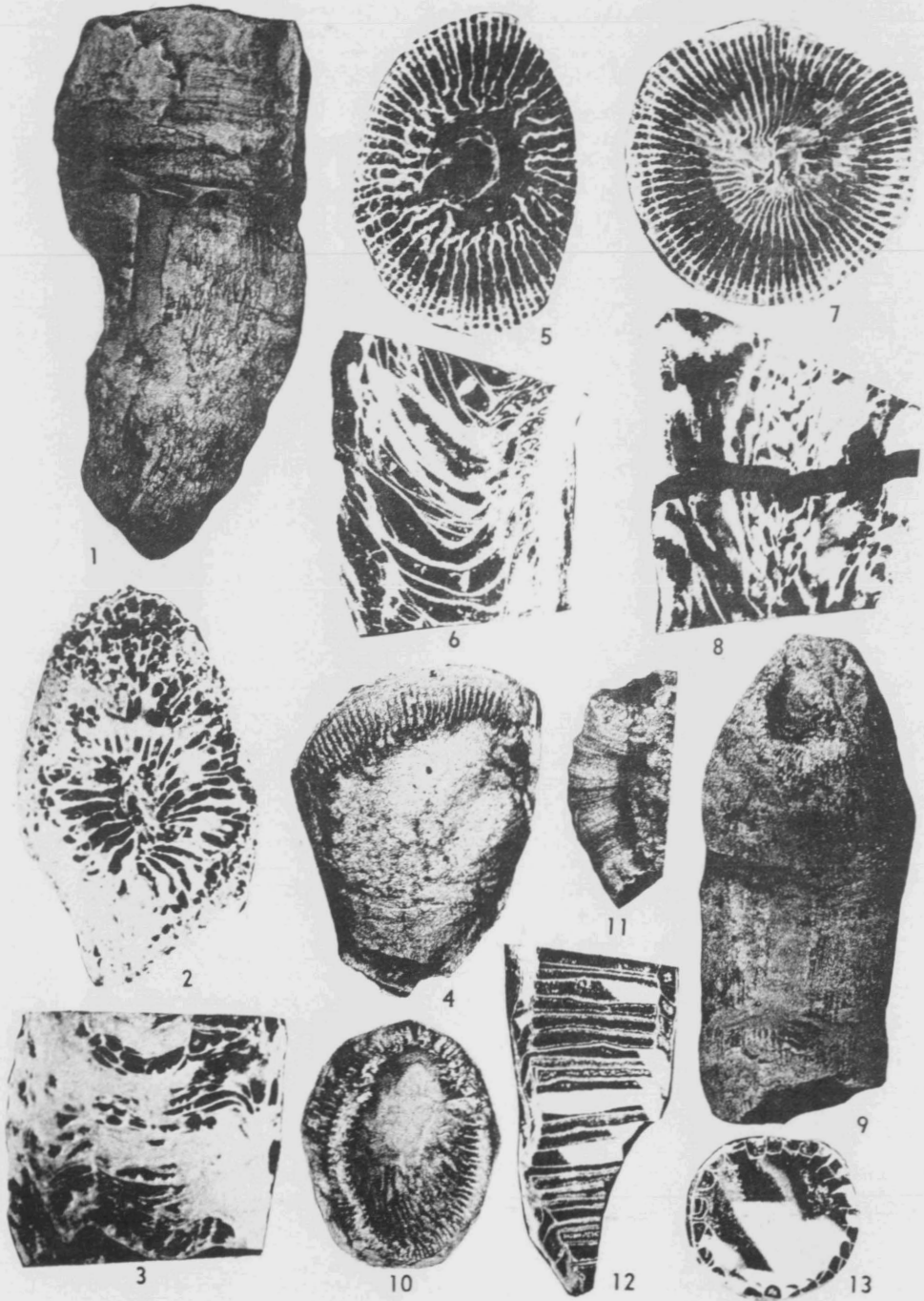
Remarks.—This species is similar to the type species *D. adnetum* Grabau but differs in having fewer septa and more closely set tabulae (see Ehlers & Stumm, 1949, for illustrations of type species). No compound specimens of *D. tabulatum* have been found.

Occurrence.—Middle Devonian, Tully limestone, New York.

Types.—Holotype, Cornell Univ. no. 40603; paratype, no. 40604.

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