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CORALS OF THE TRAVERSE GROUP OF MICHIGAN
PART X, *TABULOPHYLLUM*

BY
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MUSEUM OF PALEONTOLOGY
THE UNIVERSITY OF MICHIGAN
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VOLUME XVII

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12. Corals of the Traverse Group of Michigan. Part IX, *Heliophyllum*, by Erwin C. Stumm and John H. Tyler. Pages 265-276, with 3 plates.
13. An Interpretation of *Rhombifera bohémica* Barrande, 1867, An Unusual Hydrophoridean Cystoid, by Robert V. Kesling. Pages 277-289, with 2 plates.
14. Corals of the Traverse Group of Michigan. Part X, *Tabulophyllum*, by Erwin C. Stumm. Pages 291-297, with 2 plates.

CORALS OF THE TRAVERSE GROUP OF MICHIGAN
PART X, *TABULOPHYLLUM*¹

BY
ERWIN C. STUMM

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INTRODUCTION

PART X of the study of the corals of the Traverse group of Michigan concerns the species of the simple, rugose, spongophyllid coral genus *Tabulophyllum*. These are characterized by having a peripheral lonsdaleoid dissepimentarium with very elongate dissepiments, and by having degenerate or discontinuous minor septa. The common species *Tabulophyllum traversense* (Winchell) is illustrated and its stratigraphic range noted. Two new species of *Tabulophyllum*, both from the Bell shale, are described.

PREVIOUS WORK

Alexander Winchell (1866) described *Zaphrentis traversensis* from the Gravel Point formation of the Little Traverse Bay region.

Rominger (1876) described the same species as *Cyathophyllum houghtoni* Rominger sp. nov. Rominger's specimens were also from the Gravel Point formation of the Little Traverse Bay region. Sloss (1939) proposed the new genus *Diversophyllum* with *Zaphrentis traversensis* Winchell as

¹ Part I is published in Vol. VII, No. 8; Part II in Vol. VIII, No. 3; Part III in Vol. VIII, No. 8; Part V in Vol. IX, No. 3; Part V in Vol. XIV, No. 11; Part VI in Vol. XVI, No. 4; Part VII in Vol. XVII, No. 9; Part VIII in Vol. XVII, No. 10; and Part IX in Vol. XVII, No. 12, of the *Contributions from the Museum of Paleontology, The University of Michigan*.

type species and noted that *Cyathophyllum houghtoni* was conspecific. Watkins (1959) determined that *Diversophyllum* was congeneric with *Tabulophyllum* Fenton and Fenton (1926).

ACKNOWLEDGMENTS

I wish to thank Dr. L. B. Kellum, Dr. C. A. Arnold, and Dr. R. V. Kesling for critically reading the manuscript of this paper. All type specimens illustrated herein are in the Museum of Paleontology, The University of Michigan.

REGISTER OF LOCALITIES

1. (Grabau locality). Quarries, northern end of Alpena, SE $\frac{1}{4}$ sec. 14 (Fox Quarry), SW $\frac{1}{4}$ sec. 13 (Collins Quarry), T. 31 N., R. 8 E., Alpena County.
14. Quarry of the Penn-Dixie Cement Co. (formerly the Petoskey Portland Cement Company quarry), about 1 $\frac{1}{2}$ miles west of Petoskey, Emmet County, SW $\frac{1}{2}$ sec. 2, and SE $\frac{1}{4}$ sec. 3, T. 34 N., R. 6 W.
- 14e. Abandoned "Bell" quarry and ledges on shore of Lake Michigan about 2 miles east of Bay Shore, Emmet County, near NE corner sec. 8, T. 34 N., R. 6 W.
21. Abandoned Kegomic Quarry on south shore of Mud Lake just east of Harbor Springs Road (M. 131) about $\frac{1}{4}$ mile north of its termination on U.S. 31, 1 mile east of Bay View, Emmet County, SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T. 35 N., R. 5 W.
- 21a. Highway shoulder and creek bed on south side of U.S. 31 (Bay View-Alanson Road), 200 feet east of junction with M. 131 (Harbor Springs Road) and about 1 mile east of Bay View, Emmet County, near center of N line sec. 34, T. 35 N., R. 5 W.
31. Quarry of Michigan Limestone and Chemical Division of U.S. Steel Corporation at Calcite, Presque Isle County. Ten sections in SE part of T. 35 N., R. 5 E. and adjacent townships.
40. Quarry of Michigan Alkali Company, eastern edge of Alpena, Alpena County, sec. 13, T. 31 N., R. 8 E.
53. Abandoned quarry of the Thunder Bay Quarries Company, eastern edge of Alpena County, SE $\frac{1}{4}$ sec. 14, T. 31 N., R. 8 E.
68. Small shale pit at northwest corner of the Alpena Cemetery (Evergreen Cemetery), west city limits of Alpena, Alpena County, SW $\frac{1}{4}$ sec. 21, T. 31 N., R. 8 E.
90. Excavations at the Alpena City Waterworks and ledges outcropping on beach at Stony Point, south edge of city of Alpena, Alpena County, near NW corner sec. 34, T. 31 N., R. 8 E.

SYSTEMATIC DESCRIPTIONS

Family Spongophyllidae Genus *Tabulophyllum* Fenton and Fenton

Tabulophyllum Fenton and Fenton, 1926, pp. 30-31; Watkins, 1959, pp. 81-82.
Diversophyllum Sloss, 1939, pp. 65-66.

Type species.—By original designation *Tabulophyllum rectum* Fenton and Fenton, 1926, pp. 31–32, Pl. VI, Figs. 8–12, Upper Devonian, Hackberry group, Iowa.

Remarks.—The species of this genus are characterized by having a variable form, ranging from thin to thick, cylindroid to wide ceratoid. An intermittently developed lonsdaleoid dissepimentarium is present. The dissepiments are elongate and the minor septa are either degenerate or represented by discontinuous septal crests.

Tabulophyllum traversense (Winchell)

(Pl. I, Figs. 3–10; Pl. II, Figs. 5–17)

Zaphrentis traversensis Winchell, 1866, p. 90.

Cyathophyllum houghtoni Rominger, 1876, p. 104, Pl. XXXVI, upper tier.

Diversophyllum traversense Sloss, 1939, pp. 66–68, Pl. II, Figs. 13–23; Pl. 12, Fig. 22,

Text-Fig. 7 on p. 67.

Tabulophyllum traversense Watkins, 1959, pp. 80–81, Pl. 16, Figs. 1–9.

Remarks.—For a detailed description of this species, see Sloss, 1939, pp. 66–68. The species is widespread in several zones in the middle and upper part of the Traverse group.

Occurrence.—Upper part of Genshaw limestone, locality 40; upper part of Alpena limestone, localities 40, 53, Grabau locality 1; Dock Street Clay, locality 53; Gravel Point formation, lower and upper blue shales, localities 14 and 14e; Potter Farm formation, localities 68 and 90; Petoskey limestone, localities 21 and 21a.

Types.—Lectotype No. 14355; Rominger's types of *Cyathophyllum houghtoni* No. 14375; hypotypes herein illustrated Nos. 35214, 35215, 35216, 35217, 35242, 35251, 35263, 35312, 44727, 44827, 44828, and 44832.

Tabulophyllum curtum, sp. nov.

(Pl. I, Figs. 1–2; Pl. II, Figs. 1–2)

Description.—Corallum short, cylindroid, with a very wide attachment scar at base. Holotype measuring 43 mm long and 30 mm in maximum diameter. Exterior heavily and closely annulated. Calyx relatively shallow, with sloping walls and a circular axial pit produced by the axial ends of the relatively short major septa. No modifications of the protosepta visible.

In transverse section thin, radially arranged septa, numbering 80, of which the major extend one-half the distance to the axis and the minor appear as short peripheral spines, or are absent. A lonsdaleoid dissepimentarium is weak and intermittently developed.

In longitudinal section tabulae in two distinct series. Some axial tabulae complete and horizontal, and some incomplete, inclined axially on the complete tabulae. The periaxial tabulae are complete or incomplete, inclined distally between the inner margin of the dissepimentarium and the outer margin of the axial tabularium. Dissepimentarium composed of elongate, closely set, axially and distally convex dissepiments.

Remarks.—This species is distinct from other forms of *Tabulophyllum* by the short corallum with wide attachment base and by the diploid tabularium.

Occurrence.—Middle Devonian, Traverse group, Bell shale, locality 31.

Types.—Holotype No. 35235, paratype No. 35158.

***Tabulophyllum elongatum*, sp. nov.**

(Pl. I, Figs. 11–12; Pl. II, Figs. 3–4)

Description.—Corallum medium-sized to long, subcylindroid to ceratoid, holotype measuring 82 mm long with a maximum diameter of 25 mm. Paratype measuring 44 mm long with a maximum diameter of 28 mm. Exterior moderately annulated and with well-developed interseptal ridges. Calyx shallow with sloping walls and narrow base. Calycinal rejuvenescence common. Basal attachment talons present on some specimens.

In transverse section septa averaging 72, of which the major are thin, radially arranged, extending about two-thirds the distance to the axis. Minor septa represented by discontinuous septal crests in the peripheral one-third of the corallum. Lonsdaleoid dissepimentarium weak and intermittently developed.

In longitudinal section tabularium very wide, composed of complete and incomplete, horizontal, or slightly distally convex tabulae. Dissepimentarium very narrow, composed of one or two rows of very elongate, distally convex dissepiments.

Remarks.—The species is distinguished from *T. traversense* by the smaller number of septa, the shorter major septa, and the more weakly developed dissepimentarium.

Occurrence.—Middle Devonian, Traverse group, Bell shale, locality 31.

Types.—Holotype No. 44758; paratype No. 44759.

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PLATES

EXPLANATION OF PLATE I

(All figures x 1)

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PLATE I

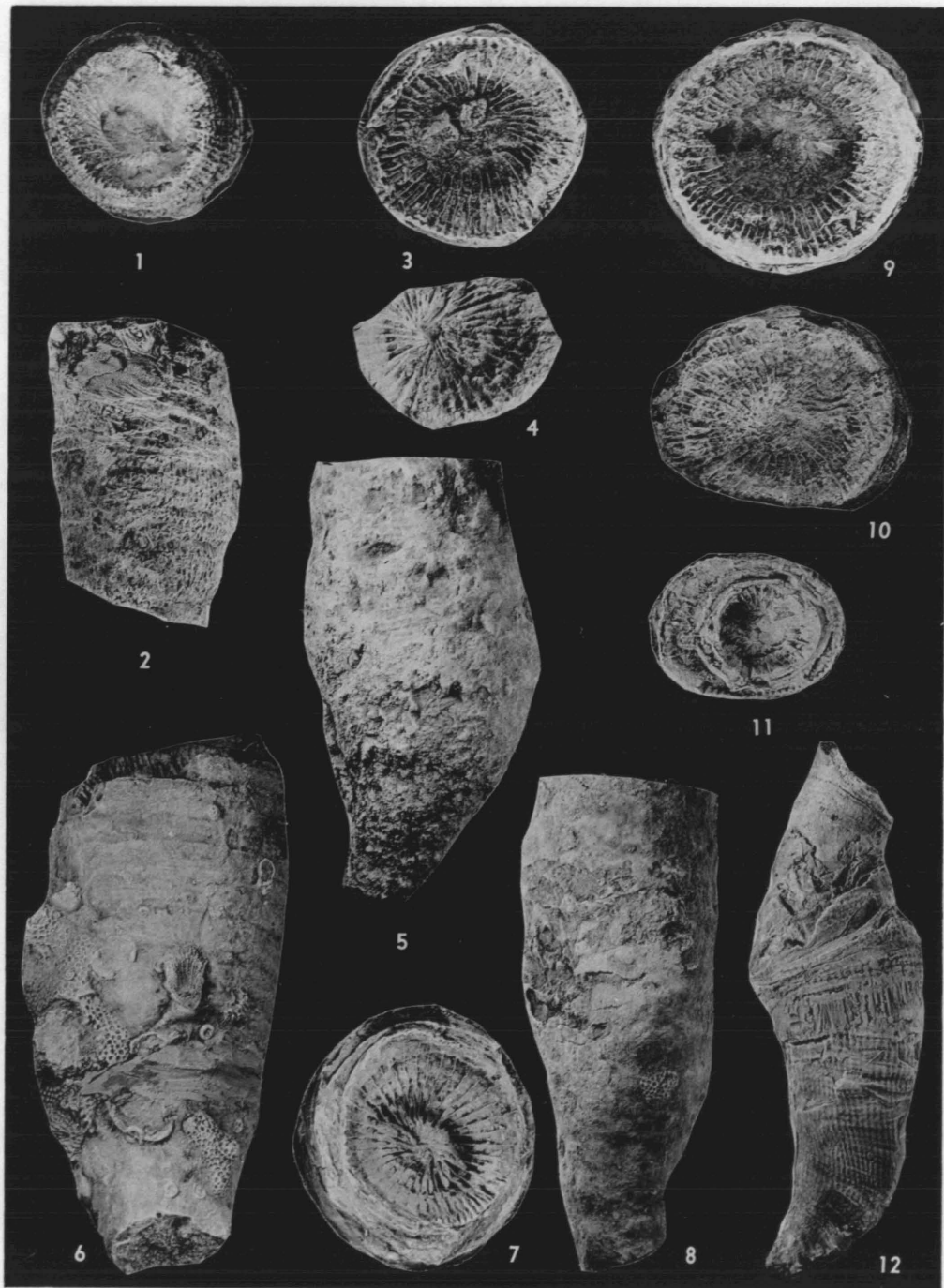
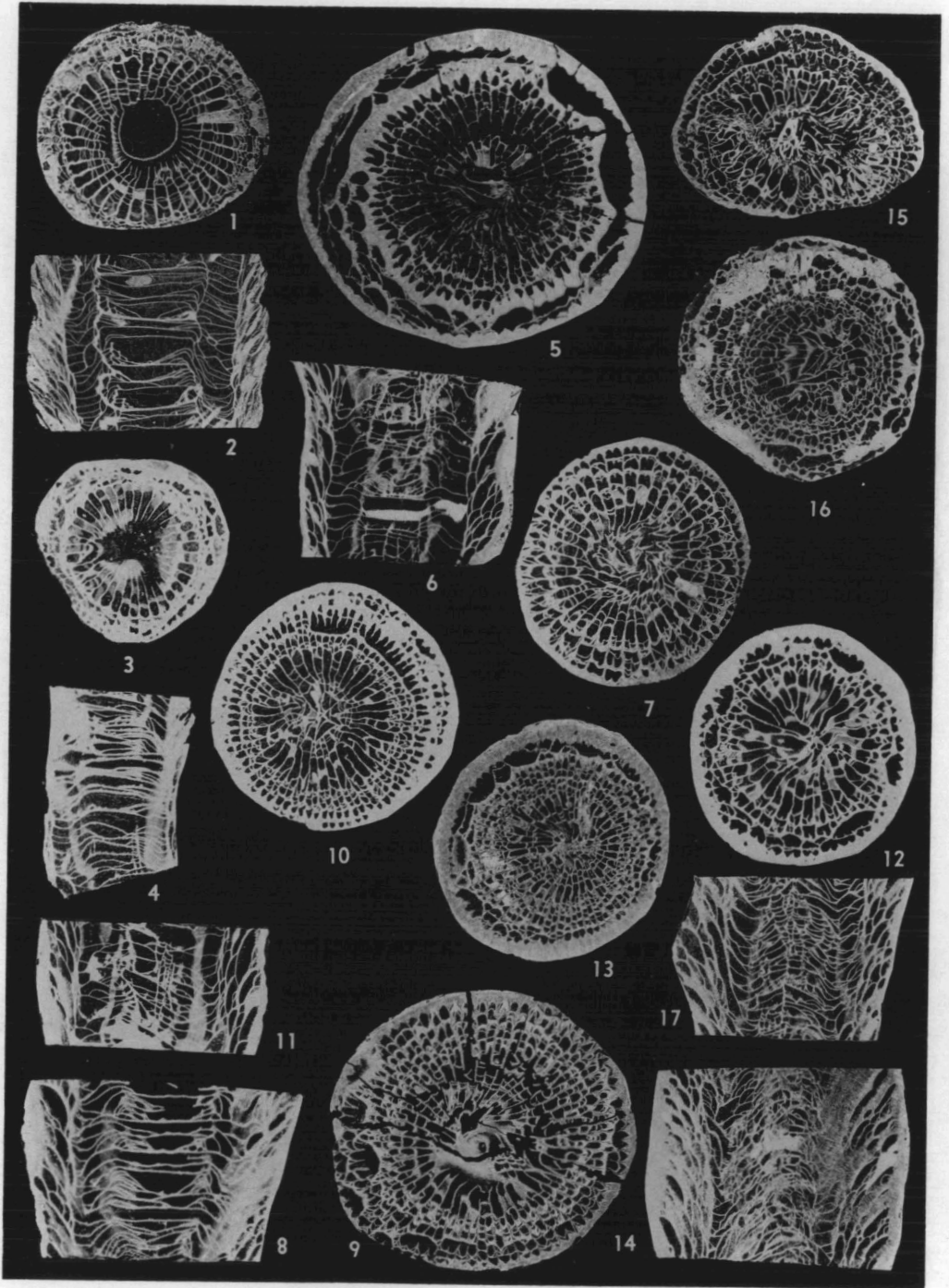


PLATE II



EXPLANATION OF PLATE II

(All figures x 1½)

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