CONTRIBUTIONS FROM THE MUSEUM OF PALEONTOLOGY

THE UNIVERSITY OF MICHIGAN

VOL. XXI, No. 2, pp. 67–72 (1 pl.) MAY 10, 1967

PLANALVEOLITELLA, A NEW GENUS OF DEVONIAN TABULATE CORALS, WITH A REDESCRIPTION OF *PLANALVEOLITES FOUGHTI* (EDWARDS AND HAIME)

BY

ERWIN C. STUMM

MUSEUM OF PALEONTOLOGY

THE UNIVERSITY OF MICHIGAN

ANN ARBOR

CONTRIBUTIONS FROM THE MUSEUM OF PALEONTOLOGY

Director: LEWIS B. KELLUM

The series of contributions from the Museum of Paleontology is a medium for the publication of papers based chiefly upon the collection in the Museum. When the number of pages issued is sufficient to make a volume, a title page and a table of contents will be sent to libraries on the mailing list, and to individuals upon request. A list of the separate papers may also be obtained. Correspondence should be directed to the Museum of Paleontology, The University of Michigan, Ann Arbor, Michigan.

VOLS. II–XX. Parts of volumes may be obtained if available.

VOLUME XXI

1. Fossils from the Seymour Formation of Knox and Baylor Counties, Texas, and their bearing on the Late Kansan Climate of that Region, by Claude W. Hibbard and Walter W. Dalquest, Pages 1–66, with 5 plates and 8 figures.
2. *Planalveolitella,* a new genus of Devonian Tabulate Corals, with a redescription of *Planalveolites foughti* (Edwards and Haime), by Erwin C. Stumm, Pages 67–72, with 1 plate.

VOL. XXI, No. 2, pp. 67–72 (1 pl.) MAY 10, 1967

PLANALVEOLITELLA, A NEW GENUS OF DEVONIAN TABULATE CORALS, WITH A REDESCRIPTION OF *PLANALVEOLITES FOUGHTI* (EDWARDS AND HAIME)

BY
ERWIN C. STUMM

ABSTRACT

Three species of encrusting Devonian tabulate corals are similar to the Silurian genus *Planalveolites* but differ in lacking tabulae and mural pores. These species are assigned to the new genus *Planalveolitella*. Two of the species, *P. megastoma* (Winchell) and *P. monroei* (Cleland), were formerly assigned to *Alveolites*. The third species, *P. parasitica*, is new and is the type species.

CONTENTS

Introduction and acknowledgments 67
Stratigraphic relationships 68
Systematic descriptions 68
Genus *Planalveolites* 68
Planalveolites foughti (Edwards and Haime) 68
Genus *Planalveolitella* gen. nov. 69
Planalveolitella parasitica sp. nov. 69
Planalveolitella megastoma (Winchell) 69
Planalveolitella monroei (Cleland) 70
Literature cited 71
Plates ..... *(after)* 72

INTRODUCTION AND ACKNOWLEDGMENTS

IN RECENT years a number of specimens of an encrusting tabulate coral were collected by Mrs. Ruth Berner Chilman from the Middle Devonian Silica Shale of Lucas County, Ohio, and presented to the Museum of Paleontology of The University of Michigan. These specimens looked superficially like specimens of *Planalveolites foughti* from the Upper Silurian of Gotland, Sweden, but, on closer examination, were found to differ from this species in lacking tabulae and mural pores.

A species from the Traverse Group of Michigan and one from the

Milwaukee Formation of Wisconsin were studied and both were found to have the same major characters as the specimens from the Silica Shale.

Therefore the generic name *Planalveolitella* is here proposed to include these three species.

I wish to thank Mrs. Ruth Berner Chilman for donating the specimens from the Silica Shale. I also wish to thank Drs. C. A. Arnold, L. B. Kellum, and R. V. Kesling for critically reading the manuscript.

Unless otherwise designated all illustrated specimens are deposited in the Museum of Paleontology, The University of Michigan.

STRATIGRAPHIC RELATIONSHIPS

All specimens known are of upper Middle Devonian (Hamilton) age. The specimens from the Silica Shale are considered to be of Skaneateles age. The specimen from the Traverse Group is either of high Skaneateles or basal Ludlowville age. The specimen from the Milwaukee Formation is approximately the same age as that from the Traverse Group.

SYSTEMATIC DESCRIPTIONS

Genus *Planalveolites* Lang and Smith

Planalveolites Lang and Smith, 1939, p. 154; Lang, Smith, and Thomas, 1940, p. 101.

Type species, by original designation, *Alveolites foughti* Edwards and Haime, 1851, p. 257, Pl. XVII, Figs. 5, 5*a*. Upper Silurian (Salopian) Isle of Gotland, Sweden.

Diagnosis.—(Lang and Smith, 1939, p. 154).—"Tabulate corals which form thin, flat coralla of horizontal corallites with very oblique calyxes, the lower wall of which is typically produced considerably beyond the upper. The acanthine septa are typically well developed, numerous, but very short; the tabulae are thin and distant; mural pores are large and far apart."

Remarks.—In a study of several topotypes of the type species it appears that some of the corallites are without tabulae.

Planalveolites foughti (Edwards and Haime)
(Pl. I, Fig. 1)

Revised description.—Corallum encrusting on bryozoan colonies, or other large invertebrate skeletal material. Corallites typically one layer thick, very oblique with lunate apertures 3 to 5 mm in maximum diameter. In some specimens corallites closely crowded and less oblique so that only apertural rims present on distal surface. In other specimens, corallites, more strongly oblique have one side as well as the calyx exposed on the

distal surface. Vertical rows of very short septal spines present on some corallites. Absence on others may be due to weathering. Some corallites with one or two relatively horizontal tabulae near base; others without tabulae. Mural pores prominent, fairly numerous, irregularly scattered.

Occurrence.—Upper Silurian, Salopian, Isle of Gotland, Sweden.

Types.—Holotype probably in the École des Mines, Paris; hypotype herein illustrated UMMP 2341.

Genus *Planalveolitella* gen. nov.

Type species.—*Planalveolitella parasitica* sp. nov.

Diagnosis.—Tabulate corals forming thin, encrusting coralla with growth habit similar to *Planalveolites*. Coralla typically encrusting nautiloids or bryozoan colonies. Corallites oblique with lunate or oval apertures ranging from 2 to 3 mm in maximum diameter. In some species corallites closely crowded, less oblique; in others corallites more oblique showing a large part of the side wall on the distal surface. Tabulae and mural pores lacking.

Planalveolitella parasitica sp. nov.
(Pl. I, Figs. 4–7)

Description.—Corallum flat or curved to match surface of host; typically encrusting exterior of nautiloid shells; composed of one layer of oblique corallites. Corallites very closely set so that a small part of side wall exposed below lower lip of aperture. Apertures lunate to oval, from 1 to 1.5 mm in maximum diameter. Mural pores and tabulae lacking.

Remarks.—Apparently all specimens seen show a curvature indicating that they were encrusting nautiloid shells. One specimen (Pl. I, Fig. 7) is still attached to such a shell.

Occurrence.—Middle Devonian (Silica Shale); Quarries of the Medusa Portland Cement Company at Silica, 1½ miles SW of Sylvania, Lucas County, Ohio.

Types.—Holotype UMMP 53043; paratypes UMMP 53044 and 53673.

Planalveolitella megastoma (Winchell)
(Pl. I, Figs. 2–3)

Alveolites megastoma Winchell, 1866, p. 89.
Alveolites (Planalveolites) megastoma Stumm, 1949, Card 126.

Original description (Winchell, 1866, p. 89).—"Thin incrustations, with large, crowded, oblique cell-mouths which have the form of a segment of a circle in transverse section; outer lip, when perfect, lying in a plane normal to the general surface, its exterior marked by minute dis-

tinct transverse lines of growth; radial striae very obscure. Transverse diameter of cell-mouths. 28 mm (.11); distances apart longitudinally, the same."

Revised description.—Corallum encrusting, composed of very oblique, almost flat corallites with sublunate apertures. Upper sides of corallites well exposed on distal surface of corallum. Calyxes ranging from 2 to 3 mm in maximum diameter. Epitheca of sides of corallites with faint transverse growth ridges. In a few places the exterior shows very faint, closely set vertical ridges. No mural pores or tabulae present.

Remarks.—The holotype, the only known specimen, is encrusting a fenestelloid bryozoan zooarium and it has been encrusted by another bryozoan zooarium in the lower left part and by a spirorbid worm in the upper central part.

Occurrence.—Middle Devonian (Traverse Group—Gravel Point Formation), shore of Little Traverse Bay, SW¼, sec. 2, T. 34 N., R. 6 W., about 1½ miles W. of Petoskey, Michigan.

Type.—Holotype UMMP 24722.

Planalveolitella monroei (Cleland)

(Pl. I, Figs. 8–9)

Alveolites monroei Cleland, 1911, p. 33, pl. 2, Figs. 1–2; Stumm, 1949, Card 129.

Original description.—"Incrusting expansions. In the only specimen collected the corallum surrounds what appears to be the fragment of a large *Gomphoceras*. On one side the growth of the edge of the colony has caused it to overlap a portion of the earlier growth. Corallites very oblique and large for the genus varying in greatest diameter from 1½ to 3 mm; in some of the corallites the transverse diameter is considerably greater than the hight [sic] but in others the two diameters are nearly equal. In general appearance the corallum looks like a carpenter's coarse wood file."

Remarks.—Like the other species of *Planalveolitella, P. monroei* does not have either mural pores or tabulae. The species differs from *P. parasitica* in the much larger corallites, and from *P. megastoma* in having the corallites more crowded so that the side walls are not visible on the distal surface.

Occurrence.—Middle Devonian (Milwaukee Formation—Zone A), former Milwaukee cement quarry, near Humboldt Street Bridge, Milwaukee, Wisconsin.

Type.—Holotype (the only known specimen) in the E. E. Teller collection, U.S. National Museum.

LITERATURE CITED

CLELAND, H. F. 1911. The Fossils and Stratigraphy of the Middle Devonic of Wisconsin. Wisc. Geol. and Nat. Hist. Surv., Bull. 21, Sci. Ser. 6.

EDWARDS, H. M., and HAIME, JULES. 1851. Monographie des Polypiers Fossiles des Terrains Palaeozoïques. Arch. Mus. Hist. Nat., Paris.

LANG, W. D., and SMITH, STANLEY. 1939. Some New Generic Names for Palaeozoic Corals. Ann. Mag. Nat. Hist., Ser. 11, Vol. 3.

———, SMITH, STANLEY, and THOMAS, H. DIGHTON. 1940. Index of Paleozoic Coral Genera. British Museum (Natural History).

STUMM, E. C. 1949. Type Invertebrate Fossils of North America, Tabulata, Cards 126, 129. Wagner Free Inst. Sci., Philadelphia.

WINCHELL, ALEXANDER. 1866. The Grand Traverse Region, Appendix, p. 89. Dr. Chase's Steam Printing House, Ann Arbor, Michigan.

Manuscript accepted for publication March 4, 1966

PLATE

EXPLANATION OF PLATE I

PAGE

Planalveolites foughti (Edwards and Haime) 68

FIG. 1. Distal view of hypotype No. 2341. Upper Silurian, Isle of Gotland, Sweden, showing well-developed mural pores, × 1.

Planalveolitella megastoma (Winchell) 68

FIG. 2. Distal view of holotype No. 24722. Middle Devonian, Traverse Group, Gravel Point Formation, shore of Little Traverse Bay, 1½ miles W. of Petoskey, Michigan, × 1.

FIG. 3. View of same specimen, × 2.

Planalveolitella parasitica sp. nov. 68

FIG. 4. Distal view of holotype showing closely set, oblique corallites with lunate apertures. Holotype No. 53043. Middle Devonian (Silica Shale, Unit 9) Quarry of the Medusa Portland Cement Co. at Silica, 1½ miles SW of Sylvania, Lucas Co., Ohio, × 1.

FIG. 5. View of same specimen, × 2.

FIG. 6. View of another specimen with lunate and oval apertures. Paratype No. 53044. Same occurrence as original of Fig. 4. × 2.

FIG. 7. View of fragmentary specimen attached to a nautiloid. Hypotype No. 53673. Same occurrence as original of Fig. 4.

Planalveolitella monroei (Cleland) 70

FIG. 8. Distal view of only known specimen attached shell of a *Gomphoceras*. Middle Devonian, Milwaukee Formation, Former Milwaukee Cement Quarry, Milwaukee, Wisconsin. Holotype, in U.S. National Museum, × 1.

FIG. 9. Enlargement of part of right-hand side of holotype, × 2.

E-0366-213-12C

PLATE I