

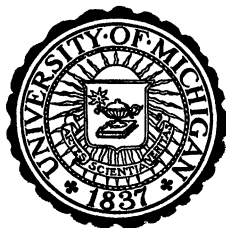
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ANISOTRYPA WAYNENSIS, A NEW
BRYOZOAN FROM THE WARSAW
FORMATION OF KENTUCKY

BY
CHARLES F. DEISS, JR.



UNIVERSITY OF MICHIGAN
ANN ARBOR

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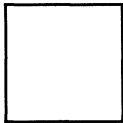
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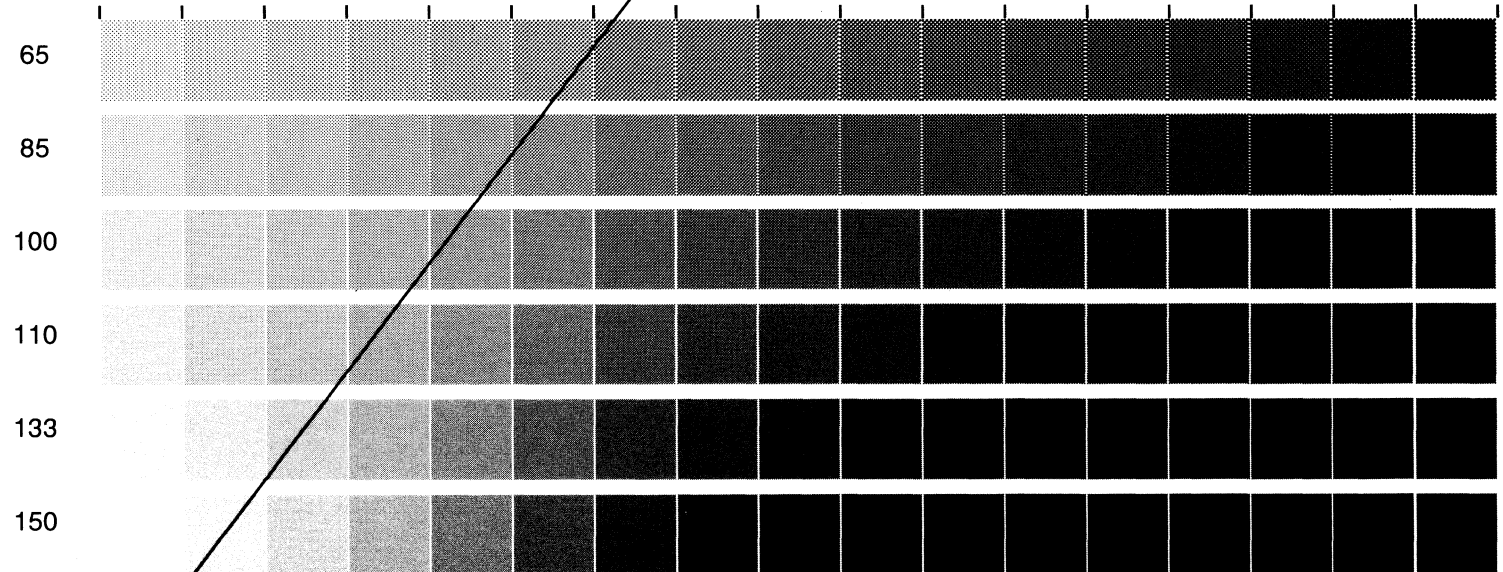
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UNIVERSITY OF MICHIGAN

Editor: EUGENE S. McCARTNEY

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(Continued on inside of back cover)

ANISOTRYPA WAYNENSIS, A NEW BRYOZOAN FROM THE WARSAW FORMATION OF KENTUCKY

CHARLES F. DEISS, JR.

INTRODUCTION

THE type specimen of *Anisotrypa waynensis* was collected by Professor G. M. Ehlers of the University of Michigan from the Somerset shale member of the Warsaw formation, which is exposed on the slopes of a gully about three and one half miles west of Mill Springs, Kentucky. The gully extends northward from a point on the Cumberland School road about three quarters of a mile southeast of the school.

The stream in this gully had cut headward in such a manner as to form gently sloping benches in the Somerset shale member of the Warsaw. On these benches colonies of *Anisotrypa waynensis* were found in distinct patches, subcircular in shape and ranging from thirty to forty centimeters in diameter. Although found in a broken condition, the branches of the zoaria were still more or less in their original position. This occurrence seems to indicate that the shape of the unbroken zoaria was probably that of a low bush with the diameter about double the height.

DESCRIPTION OF SPECIES

ANISOTRYPA WAYNENSIS, n. sp.

(Plate I, Figs. 1-7; Plate II, Figs. 1-4)

The zoarium has a dome-like form in which the individual branches vary greatly in shape, ranging from very flat, thin fronds to subcircular ramulets. The specimens figured vary in width from 6 to 11 mm., and in thickness from 2 to 6 mm.

The surfaces are covered with low rounded monticules 4 to 5 mm. apart. The zooecia in the monticules are more than twice the size of those in the inter-areas.

In tangential sections this species shows two distinct sizes of zooecia ranging from 0.15 to 0.43 mm. in diameter with an average number of 7.5 per 2 mm. The zooecia are subcircular to polygonal, with a more or less distinct line dividing the walls. Mesopores are few and found only in the monticules. Acanthopore-like granules, resulting from a thickening of the zooecial walls, are present at the angles of the zooecia.

In longitudinal sections a thickening of the walls in the peripheral region is shown. Diaphragms are absent in the axial region, but average four to five to each zooecium in the peripheral. The incomplete diaphragms are very conspicuous in this species. There is a constant tendency toward the formation of incomplete diaphragms in groups of zooecia, which are separated from similar groups by one to five zooecia containing complete diaphragms. See Plate II, Figure 4. Both complete and incomplete diaphragms are found in some zooecia.

This species was at first thought to be very similar to *Anisotrypa solida* Ulrich, but upon close examination several differences were easily recognized. *A. solida* has zooecia varying in width from 0.28 to 0.45 mm. with an average of 6 to 6.3 zooecia in 2 mm. In *A. waynensis*, however, the zooecia vary in width from 0.15 to 0.43 mm. and average 7.5 in 2 mm., which is a far greater variation and difference in size than those of *A. solida*.

The specimens figured in this paper are parts of the holotype which are preserved in the Museum of Geology of the University of Michigan under the number 9643.

The Warsaw age of *Anisotrypa waynensis* is indicated by its association with the following characteristic Warsaw fossils: *Hapsiphyllum calcariforme* (Hall), *Pentremites conoideus* Hall, *Dizygocrinus* cf. *whitei* Wachsmuth and Springer, *Talarocrinus simplex* (Shumard), *Productus altonensis* Norwood and Pratten, *Echinoconchus biseriatus* (Hall), *Brachythyris subcardiformis* (Hall), *Spirifer tenuicostatus* Hall, *Spiriferella neglecta* (Hall),

Reticularia setigera Hall, *Eumetria verneuiliana* (Hall), *Athyris densa* Hall, *Cliothyridina* sp. cf. *hirsuta* (Hall), *Composita trinuclea* (Hall).

It is of considerable interest to note that *Anisotrypa wayensis* is a very abundant and characteristic bryozoan of the Somerset shale member of the Warsaw formation of the entire area about Mill Springs, Kentucky.

EXPLANATION OF PLATE I

Anisotrypa waynensis, n. sp.

- FIG. 1. Edge view of compressed cylindrical branch showing thickness. Natural size
- FIG. 2. Side view showing manner of branching and the average width of the subcircular branches. Natural size
- FIG. 3. Side view of subcylindrical branch showing tendency to form ridges on the surface. This view shows the typical appearance of the monticules. Natural size
- FIG. 4. Edge view of a flattened frond showing its average thickness. Natural size
- FIG. 5. Side view of a frond. Natural size
- FIG. 6. Side view of the terminal part of a frond. Natural size
- FIG. 7. Enlargement of surface of a branch showing variation in size of zoecia between those in the monticules and those in the inter-areas, and the presence of mesopores in the monticules. $\times 5$

PLATE I



1



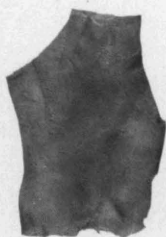
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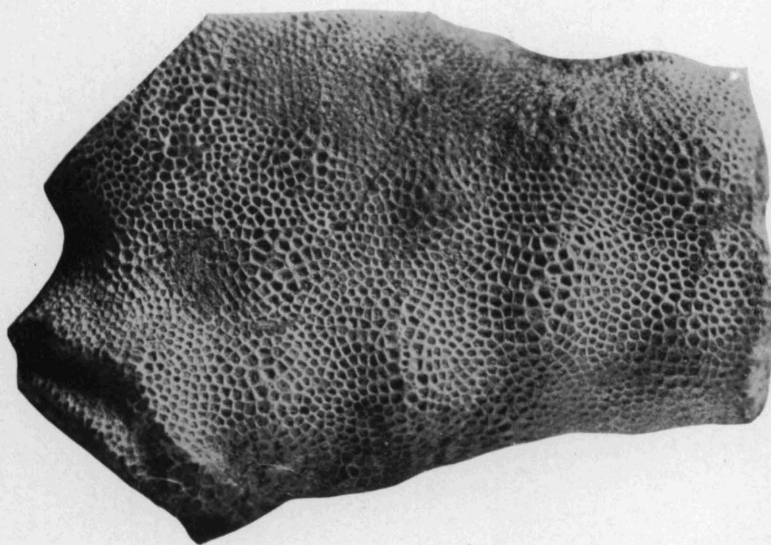
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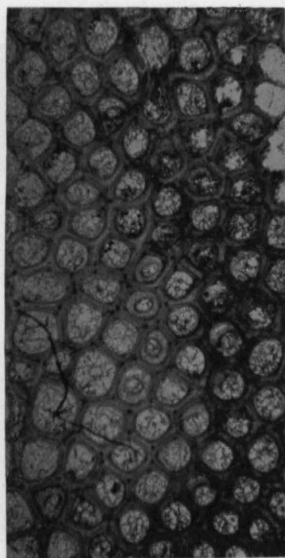
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EXPLANATION OF PLATE II

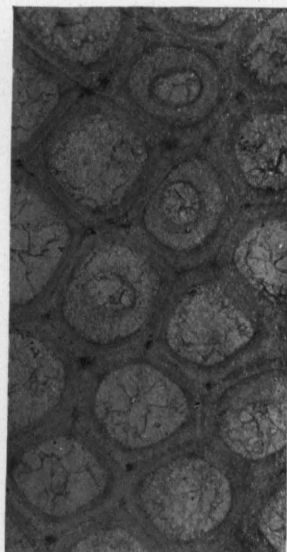
Anisotrypa waynensis, n. sp

- FIG. 1. Tangential section showing variation in size of the zooecia. The larger zooecia compose the monticule shown on the left side of the figure. Several incomplete diaphragms are shown within the openings of the zooecia. $\times 20$
- FIG. 2. An enlargement of part of Figure 1, showing typical wall-structure with the small acanthopore-like granules at the angles of the zooecial walls. This gives a clearer view of the incomplete diaphragms in tangential section. $\times 50$
- FIG. 3. Longitudinal section of one half of a branch of the zoarium showing the absence of diaphragms in the axial region and the thickened walls and incomplete diaphragms in the peripheral region. $\times 20$
- FIG. 4. Longitudinal section showing typical occurrence of complete and incomplete diaphragms in the peripheral region. Most of the axial region is cut off. $\times 20$

PLATE II



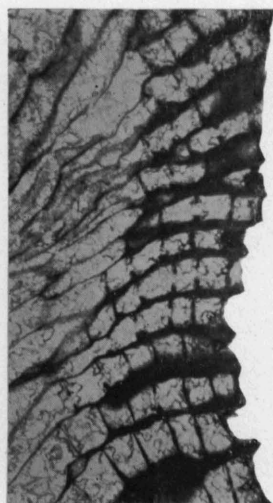
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9. Devonian Cephalopods from Alpena in Michigan, by Aug. F. Foerste. Pages 189-208, with 5 plates. Price, \$.35.
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