

CONTRIBUTIONS FROM THE MUSEUM OF PALEONTOLOGY

THE UNIVERSITY OF MICHIGAN

Vol. 24, No. 7, p. 65-67 (1 pl.)

OCTOBER 4, 1973

*EUGLYPHELLA BELLENSIS*, A NEW  
MIDDLE DEVONIAN OSTRACOD FROM MICHIGAN

BY

ROBERT V. KESLING



PUBLISHED WITH GENEROUS SUPPORT OF  
JOHN W. ARMSTRONG PALEONTOLOGY ASSISTANCE FUND

MUSEUM OF PALEONTOLOGY  
THE UNIVERSITY OF MICHIGAN  
ANN ARBOR

## CONTRIBUTIONS FROM THE MUSEUM OF PALEONTOLOGY

*Director:* ROBERT V. KESLING

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 48104.

VOLS. 2-23. Parts of volumes may be obtained if available. Price lists available upon inquiry.

### VOLUME 24

1. A new species of *Porocrinus* from the Middle Ordovician Kimmswick Limestone of Missouri, by Robert V. Kesling. Pages 1-7, with 2 plates and 8 text-figures.
2. *Strataster devonicus*, a new brittle-star with unusual preservation from the Middle Devonian Silica Formation of Ohio, by Robert V. Kesling. Pages 9-15, with 2 plates and 3 text-figs.
3. Coccoliths and related calcareous nannofossils from the Upper Cretaceous Fencepost Limestone of northwestern Kansas, by John M. Huh and Charles I. Smith. Pages 17-22, with 2 plates.
4. Ordovician vertebrates from Ontario, by Kathleen Anne Lehtola. Pages 23-30, with 2 plates and 1 text-figure.
5. New *Botryocrinus* and *Glossocrinus* from the Middle Devonian Bell Shale of Michigan, by Robert V. Kesling. Pages 31-46, with 8 plates and 2 text-figures.
6. Evolution of Middle Devonian species of *Euglyphella* as indicated by cladistic analysis, by Sabeekah Abdul-Razzaq. Pages 47-64, with 12 text-figures.

*EUGLYPHELLA BELLENSIS*, A NEW  
MIDDLE DEVONIAN OSTRACOD FROM MICHIGAN

ROBERT V. KESLING

---

ABSTRACT—A new species of *Euglyphella* from Michigan agrees closely with a hypothetical species derived from cladistic analysis of previously known members of the genus. Its complex ridge pattern shows similarities to those of *E. sigmoidalis* and *E. compressa*.

---

INTRODUCTION

LAST YEAR, when Miss Sabeekah Abdul-Razzaq needed a project for her master's thesis, I suggested a cladistic analysis of the Middle Devonian ostracods included in the genus *Euglyphella*. With slight revision, her work is presented as Volume 24, Number 6, in this series. The hypothetical species which she arrived at cladistically provided an incentive for me to search for new species in the Middle Devonian formations of Michigan and adjacent areas. I found one.

Actually, a specimen of the new *Euglyphella* had been known for several years. It is catalogued as UMMP 43008. Dr. Rex Peterson, another of my students, gave it special attention in 1966. Although he assigned it to *Euglyphella sigmoidalis*, he stated (1966, p. 9):

Some Bell Shale specimens of *E. sigmoidalis* have upper and lower anterocentral projections, postero-central ridges between the inner and outer ridges, and an anterodorsal gap in the outer ridge of the left valve. . . These features suggest *E. compressa* Coryell & Malkin and it is postulated that the *E. compressa* group descended from *E. sigmoidalis*.

Washing of additional Bell Shale samples and thorough searching of the concentrates revealed additional specimens of the new species. Still more specimens would be desirable, to establish the limits of individual variation. I am very much impressed by the close resemblance of my new *Euglyphella* to the simulation of Abdul-Razzaq's hypothetical X<sub>2</sub>.

*EUGLYPHELLA BELLENSIS* n. sp.  
Pl. 1

*Euglyphella sigmoidalis* Peterson (in part), 1966, p. 7—9, pl. 1, fig. 23.

*Description*.—Carapace moderately elongate, subpyriform in lateral view, tapering posteriorly. Most ridges well developed. Dorsal border gently arched, anterior border subround,

ventral border nearly straight. Posterior margin provided with short small spines. Anterior corner without spine.

Left valve larger than right, overlapping it on all borders. Left valve with dorsal (A) ridge bifurcated at about midpoint of the length (as in *E. sigmoidalis* and *E. numismoides*), confluent with anterior and ventral (D) ridges to form a broad C-shaped ridge concentric to the borders of the valve. Dorsocentral (B) ridge linked to ventrocentral (C) ridge by a well-developed anterocentral B–C connector ridge. B ridge sloping ventrally parallel to C ridge, posteriorly terminating without joining posterior ridge. C ridge joined to D ridge between middle of valve and end of D ridge. Posterior ridge not as prominent as other ridges, decreasing in height ventrally to become flush with surface of valve just above end of B ridge. Short A–B connector ridge just behind the bifurcation of the A ridge. No development of subcentral spot or space to accommodate one.

Row of weak papillae parallel to anterior border, effaced in worn specimens. Very weak reticulation in triangular space outlined by A, B, and posterior ridges. Two rather prominent short ridges projecting forward from ends of B–C connector ridge, with weak reticulation between them.

Right valve with ridges similar to those of left valve except that A and anterior ridges definitely separated (as in *E. sigmoidalis*). Reticulation very faint and irregular.

*Remarks*.—This ostracod has greater similarity to *E. sigmoidalis* than to *E. compressa*, although, as Peterson observed, some features do suggest *E. compressa*. From the specimens available to me, I consider *E. bellensis* to be a distinct species and not a subspecies or variety of *E. sigmoidalis*. The main differences between *E. bellensis* and *E. sigmoidalis* concern the A, B, and posterior ridges and the ornamentation: in the new species, the posterior

halves of the A and B ridges diverge, the B and posterior ridges fail to make contact, and an irregular reticulation is present between ridges in the posterodorsal and anterocentral areas of the valve; in *E. sigmoidalis*, however, the posterior halves of the A and B ridges are subparallel, the B and posterior ridges meet (although the junction is very low in some specimens), and the interridge areas are smooth (although a few low irregular elevations are present in rare specimens). Two prominent ridges project forward from the ends of the B-C connector ridge in *E. bellensis*, whereas the ridges are absent or very short and weak in *E. sigmoidalis*.

The new species differs from the hypothetical  $X_2$  only in the separation of B and posterior ridges. It differs from *E. compressa* in having the two branches of the A ridge still connected, a junction of the A and anterior ridges, no spine at the upper end of the anterior ridge, and no development of a subcentral spot. In *E. bellensis*, as in *E. sigmoidalis*, the B and C ridges are rather close-set and parallel, leaving no space for a subcentral spot.

*Occurrence*.—Ostracods occur in the upper part of the Bell Shale, which is exposed in two places, as listed above under Localities and Occurrences, in quarries at Calcite in Presque Isle County, Michigan, and at Rockport in Alpena County.

*Types*.—Holotype UMMP 60512, a left valve from Rockport. Paratypes UMMP 60504–60511, 60513–60519, including five carapaces from Calcite (60504, 60505, 60516–60518), two carapaces from Rockport (60507, 60513), three left valves from Calcite (60509, 60511, 60515), four left valves from Rockport (60506, 60508, 60510, 60514), and a right valve from Rockport (60519).

#### LITERATURE CITED

- ABDUL-RAZZAQ, SABEEKAH, 1973, Evolution of Middle Devonian species of *Euglyphella* as indicated by cladistic analysis: Contrib. Mus. Paleontology Univ. Mich., v. 24, no. 6, p. 47–64, 12 text-figs.
- PETERSON, R. M., 1966, Ostracodes of the genera *Bujina* and *Euglyphella* from the Middle Devonian of New York, Ohio, Michigan, and Ontario: Jour. Paleontology, v. 40, no. 1, p. 1–20, pls. 1–4, 2 text-figs.

---

#### EXPLANATION OF PLATE 1

All figures  $\times 50$ ; specimens coated with sublimate of ammonium chloride

*Euglyphella bellensis* n. sp. 1, holotype UMMP 60512, left valve from Rockport; reticulation well developed in triangular area bounded by A, B, and posterior ridges. 2, 4, paratypes UMMP 60518 and 60517, left lateral views of two carapaces from Calcite. 3, paratype UMMP 60519, right valve from Rockport; broad area between A and B ridges with low reticulation. 5, 7, 9, paratypes UMMP 60509, 60511, and 60515, three left valves from Calcite. 6, 8, paratypes UMMP 60510 and 60514, two left valves from Rockport, showing differences in ridge pattern, reticulation, and height/length ratio. 10, 11, paratype UMMP 60507, right and left lateral views of carapace from Rockport. 12, 13, paratype UMMP 60505, right and left lateral views of carapace from Calcite; left valve has exceptional spinelike dorsal extension of anterior ridge; both valves have very strong reticulation. 14, paratype UMMP 60516, left lateral view of carapace from Calcite. 15, 16, paratype UMMP 60513, right and left lateral views of large carapace from Rockport. 17, 18, paratypes UMMP 60508 and 60506, two left valves from Rockport. 19, 20, paratype UMMP 60504, right and left lateral views of carapace from Calcite.

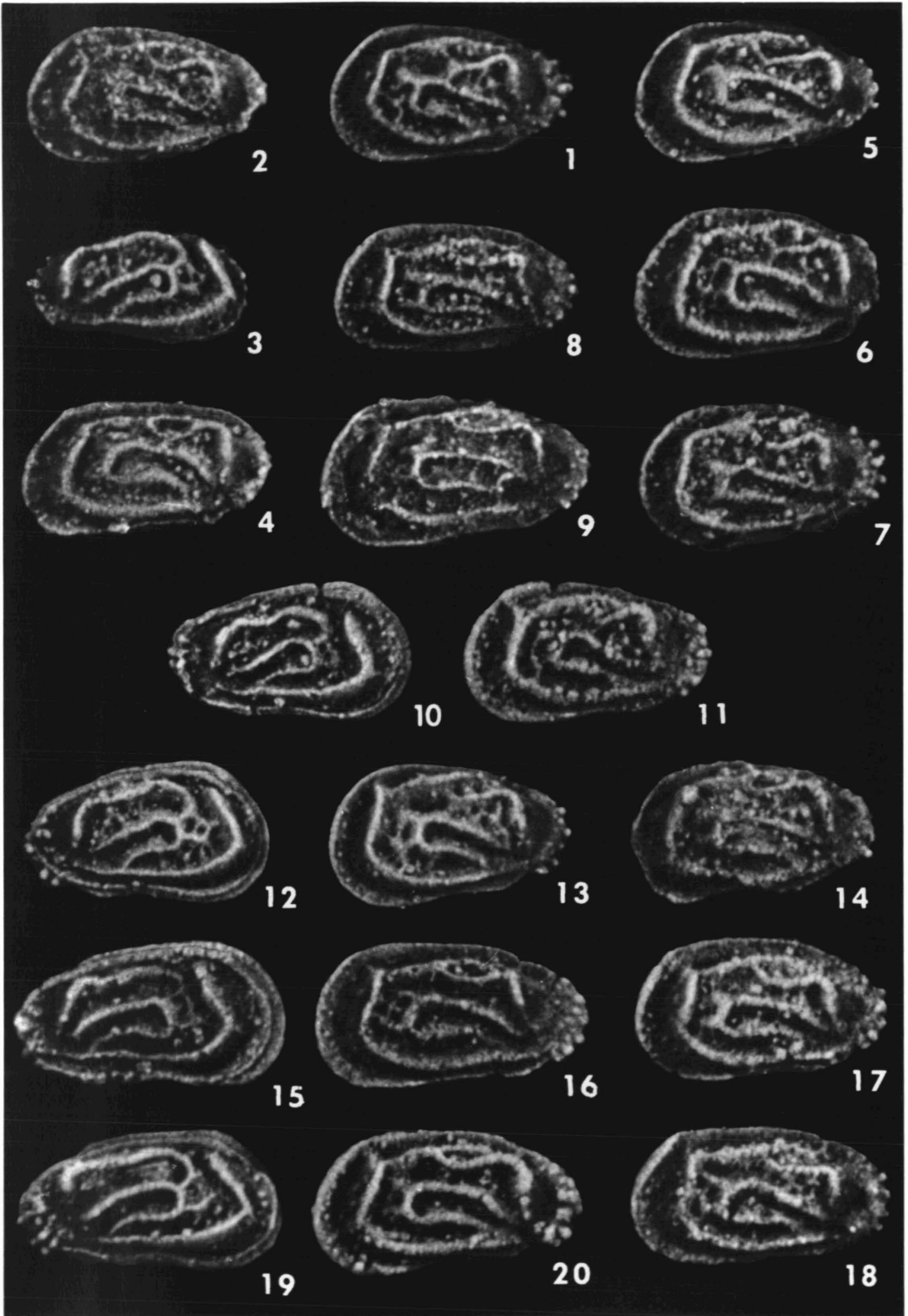


PLATE 1

