

A NEW HOLOCENE SPECIES OF *GLOBOROTALIA*

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I. INTRODUCTION

Bottom samples from the Gulf of Mexico were obtained in order to study planktonic foraminiferal assemblages. The samples represent the uppermost sediments recovered during coring operations of the U.S.N.S. *Kane* (Cruise 939014) and the R. V. *Alaminos* (Traverse 64-A-9). A new species of *Globorotalia* Cushman, 1927, is present at six of the stations (Table 1).

The sediments at Station 87 of the *Kane* consist of clay. Surface lithology from cores recovered by the *Alaminos* could not be observed because the samples were washed through sieves prior to receipt.

II. ACKNOWLEDGMENTS

The writer wishes to thank Dr. Hubert C. Skinner, Department of Geology, Tulane University, who obtained materials recovered by the R. V. *Alaminos*. Dr. Herbert C. Eppert, Jr. of the U.S. Naval Oceanographic Office supplied materials recovered during Cruise 939014 of the U.S.N.S. *Kane*. Dr. W. H. Akers of Chevron Oil Company has assisted in both taxonomic considerations and technical aspects of this study. Paul Koepfel of Chevron Oil Company photographed the specimens.

III. METHODS

All materials coarser than 0.074 mm (No. 200, U. S. Standard Sieve) were examined for planktonic foraminiferal specimens. Specimens referable to the species described herein were picked and mounted on slides.

Photographs were taken with the Cambridge scanning electron microscope at Chevron Oil Company, New Orleans, Louisiana.

Type specimens are deposited at the United States National Museum.

IV. SYSTEMATIC DESCRIPTIONS

GLOBOROTALIA AKERSI Snyder, n. sp.

Plate 1, figs. 1-6; Plate 2, figs. 1-5

Holotype: USNM 216182; maximum diameter, 0.87 mm; *Kane* Station 87.

Paratypes: USNM 216181; maximum diameter, 0.60 mm; *Alaminos* Station 27E; USNM 216183; maximum diameter, 0.61 mm; *Alaminos* Station 27E; USNM 216184; maximum diameter, 1.06 mm; *Alaminos* Station 24E; USNM 216185; maximum diameter, 0.79 mm; *Alaminos* Station 27E (not figured).

Description: The test is a large, moderately low trochospire with five to six and one-half gradually enlarging chambers in the final whorl. Coiling may be either dextral or sinistral, but the latter is dominant. The test is slightly to moderately biconvex, with the umbilical side in some specimens more strongly inflated. The outline in plan view is subquadrate, elliptical, or nearly round and the periphery is lobulate and carinate. Sutures are radial to slightly curved and depressed on the umbilical side, oblique to curved and nearly flush to limbate on the spiral side. The final chamber extends across the umbilicus to attach to earlier formed chambers of the final whorl. This chamber may continue in the same plane as earlier chambers of the final whorl or be markedly angled to that plane. It may be larger or smaller than the penultimate chamber but always extends across the umbilicus to obscure the primary aperture. The aperture lies along the basal margin of the modified final chamber and is either small and slit-like or appears as a series of small infralaminar openings.

Discussion: *Globorotalia akersi* has close morphologic affinities with *Globorotalia menardii* and *Globorotalia unguolata*. Specimens with only slight biconvexity, a nearly round equatorial profile, and sutures that are limbate on the spiral side of the test (pl. 1,

PLATE 1

Figures

1. Paratype, USNM 216181, umbilical view, X 102.
2. Paratype, USNM 216181, spiral view, X 102.
3. Paratype, USNM 216181, edge view, X 102.
4. Holotype, USNM 216182, umbilical view, X 91.
5. Holotype, USNM 216182, spiral view, X 91.
6. Holotype, USNM 216182, edge view, X 91.

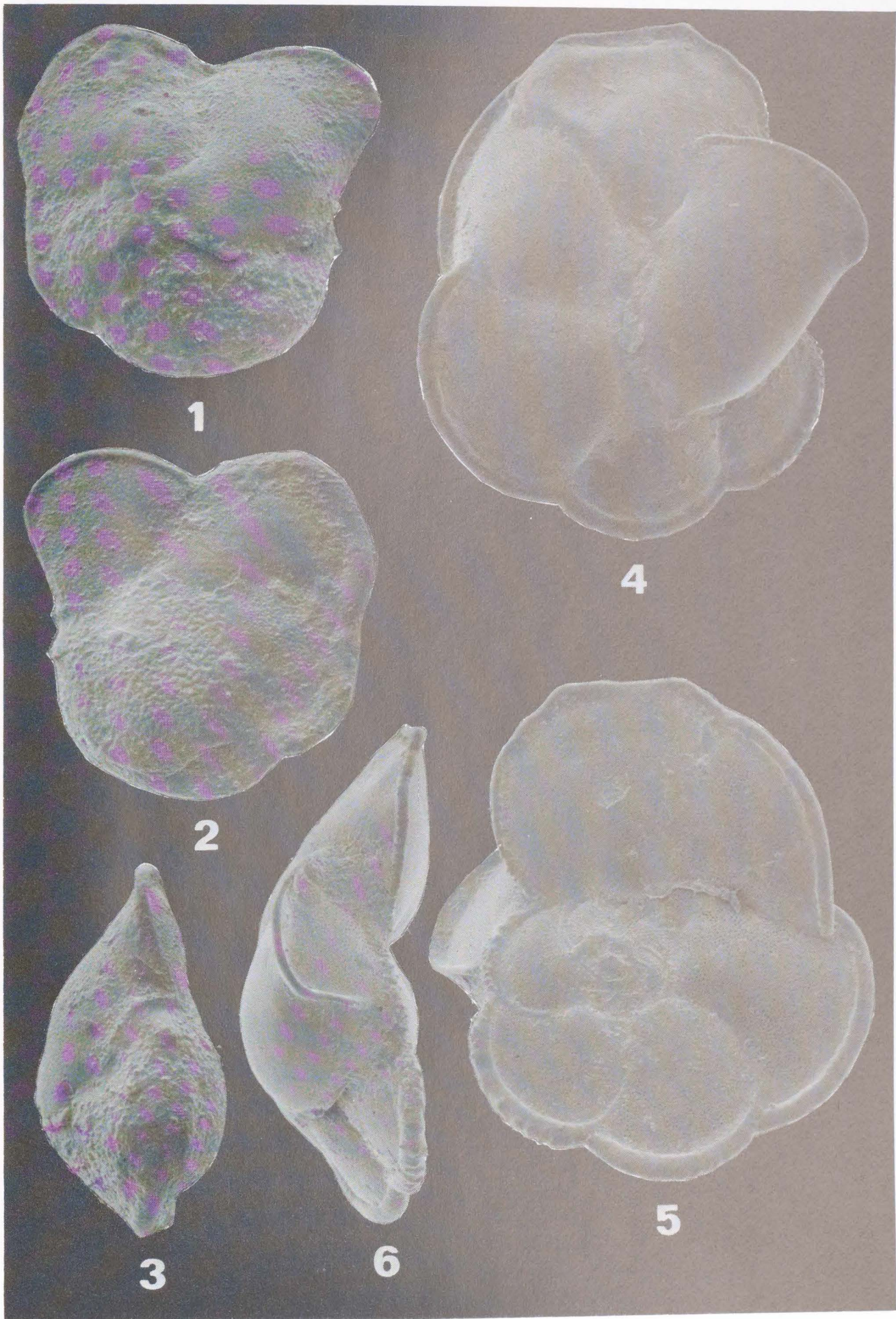


PLATE 1

TABLE 1. COLLECTING STATIONS

Station Number	Source	Location	Water Depth (meters)
87	Kane	23°38'N, 91°30'W	3685
13E	Alaminos	24°17'N, 91°07'W	2010
24E	Alaminos	22°50'N, 90°42'W	492
26E	Alaminos	22°56'N, 90°52'W	620
27E	Alaminos	23°01'N, 90°50'W	1995
30E	Alaminos	23°37'N, 91°16'W	1969

figs. 4-6; pl. 2, figs. 1-3) resemble *Globorotalia menardii*. This morphologic variant is numerically dominant. Specimens with more highly inflated chambers, an elliptical to subquadrate equatorial profile, and nearly flush to slightly limbate sutures on the spiral side of the test (pl. 1, figs. 1-3) resemble *Globorotalia unguolata*.

It is possible that the specimens included within *Globorotalia akersi* represent two lines of similar evolutionary development, one stemming from *Globorotalia menardii* and the other from *Globorotalia unguolata*. However, because of the scarcity of specimens (only 20 have been found) all variants have been assigned to a single species. About 20% of the specimens are highly contorted (pl. 2, figs. 4-5). Given the scarcity of specimens, any statement as to the significance of this would be purely speculative.

Globorotalia akersi can be distinguished from *Globorotalia menardii* and *Globorotalia unguolata* because its final chamber extends across the umbilicus and gives rise to a small, slit-like aperture or to multiple infralaminar apertures. Both *Globorotalia menardii* and *Globorotalia unguolata* lack the modified final chamber and have a large, high arched, umbilical-extraumbilical aperture.

Globorotalia akersi is encountered only in a small area of the south-central portion of the Gulf of Mexico. Within this restricted range it comprises less than 1% of the planktonic foraminiferal assemblage.

V. REFERENCES CITED

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PLATE 2

Figures

1. Paratype, USNM 216183, umbilical view, X 99.
2. Paratype, USNM 216183, spiral view, X 99.
3. Paratype, USNM 216183, edge view, X 99.
4. Paratype, USNM 216184, contorted variant, umbilical view, X 82.
5. Paratype, USNM 216184, contorted variant, spiral view, X 82.

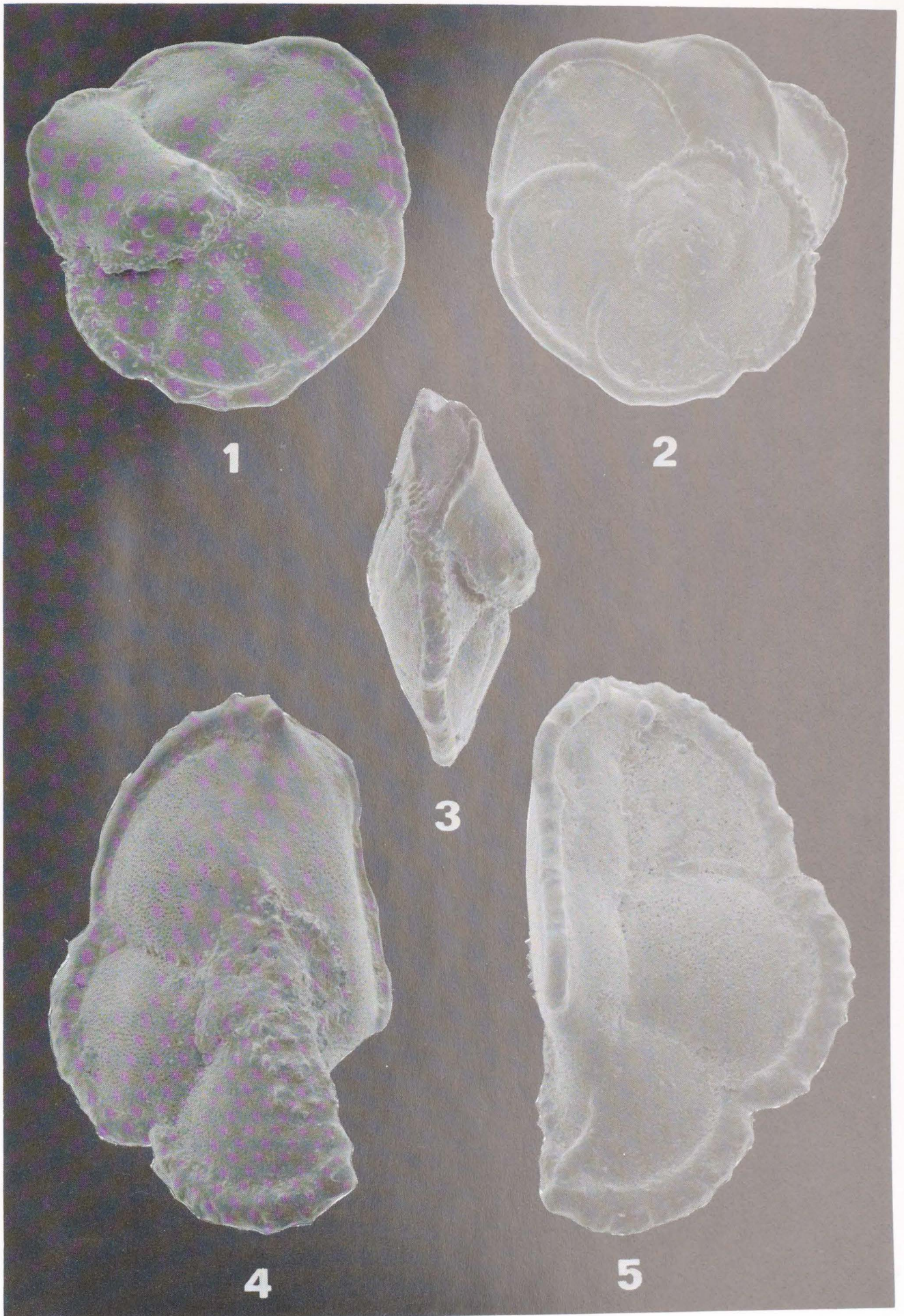


PLATE 2