

GLYPTOBAIRDIA, A NEW GENUS OF OSTRACODA¹

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ABSTRACT—A new ostracode genus, *Glyptobairdia*, is described, with *G. bermudezi* Stephenson, n. sp., from the Recent of Cuba, designated as genotype.

INCLUDED in a group of Ostracoda which I recently described (Stephenson, 1944) from subsurface middle Tertiary beds of Texas was a species defined as *Bairdia? crumena* Stephenson. This species bears some affinities to the genus *Bairdia* McCoy (1844), but likewise departs from that genus in its sculptured exterior and the development of a dentate hingement similar to some of the genera of the family Cytheridae. Material from the Recent off the coast of Cuba, in an excellent state of preservation, has yielded a similar but distinct species, the shell characters of which may be more clearly determined. These Recent specimens have formed the basis for the new genus *Glyptobairdia* herein described.

I am deeply grateful to Pedro J. Bermudez, of the Standard Oil Company of Cuba, Habana, who sent me the type material and later generously supplemented it with additional specimens of *Glyptobairdia bermudezi* Stephenson, n. sp. My thanks are likewise extended to Henry V. Howe, of Baton Rouge, Louisiana, who very kindly consented to criticize the manuscript, and forwarded several specimens of an additional species referable to the new genus from the Red Bluff Oligocene of Mississippi.

Type specimens will be deposited in the Louisiana State University Museum, Baton Rouge, Louisiana.

SYSTEMATIC DESCRIPTIONS

Order OSTRACODA Latreille

Suborder PODOCOPA Sars

Family BAIRDIIDAE Sars, 1887

Genus GLYPTOBAIRDIA Stephenson,
new genus

Genotype: *Glyptobairdia bermudezi* Stephenson, n. sp.

The carapace of members of this genus is rather heavy, in side view tending toward a subrhomboidal outline. Valves dissimilar,

the left being larger, only slightly longer than the right, but overlapping it strongly along the dorsal margin. Surface sculptured. Viewed from the inside, valves deep. Hinge structure in the right valve consists of elevated, angular teeth at the cardinal angles, truncated into a bar between them which is depressed in its central portion. A well defined furrow separates the bar from the dorsal margin. In the left valve, hinge bears terminal sockets, well incised into the margin of the valve, and partially obscured by overlying encasing folds of the dorsal margin. A bar between and somewhat below the sockets is most prominent at its center, from which it slopes gradually into the socket areas. Above the bar and continuous with the sockets is a depressed area. Marginal areas moderately broad, bearing numerous simple radial pore canals. Line of concrescence is near outer margin of carapace. Muscle-scars are about eight in number, arranged in a more or less circular rosette.

Remarks.—The general shape and muscle scar pattern exhibited by this genus are much like the genus *Bairdia*. The ornamented exterior and rather complex hingement, however, definitely set it apart from that genus. These same two factors serve to differentiate it from the genus *Bairdoppilata* Coryell, Sample and Jennings (1935), which genus is without ornamentation, and possesses a hinge line with a series of terminal teeth and sockets in each valve. Henry V. Howe has suggested² that these specimens, which exhibit a muscle scar pattern similar to *Bairdia*, are probably best placed in the *Bairdiidae*, and the genus is here included under that family.

In addition to the genotype, *G. bermudezi*, from the Recent of Cuba, two other species of the new genus are known. *G. howei*, n. sp., occurs in the Oligocene of Mississippi. *G. crumena* (Stephenson) (1944, p. 156) was

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² Personal communication to the author, under date of May 8, 1944.

described from subsurface middle Tertiary strata of Texas. The age of these beds is in question, and may be Oligocene or Miocene. The range of the genus *Glyptobairdia*, based on these three species, is therefore Oligocene to Recent.

GLYPTOBAIRDIA BERMUDEZI

Stephenson, n. sp.

Plate 42, figures 1-3

Carapace fairly heavy, in side view sub-rhomboidal. Left valve larger, subequal in length to the right, overlapping it strongly on the dorsal side and slightly on the ventral. Dorsal margin gently arched between weak cardinal angles. Ventral margin slightly concave, more strongly so in the smaller right valve. Anterior end roundly pointed, convex on its ventral half. Posterior end pointed, produced to a short, somewhat upturned beak at midpoint of shell height. A narrow, irregular flange is visible on ventral half of anterior and posterior ends. Surface strongly ornamented, with a narrow, undulating ridge extending from midpoint of anterior end in an irregular course to midpoint of dorsal margin, then curving downward to posterior beak. A short horizontal ridge occupies center of carapace. A third similar ridge on lower part of shell wall is gently arcuate toward ventral margin, and is visible on central half of shell length. Shell wall dorsal and ventral to the ridges is somewhat excavated. Entire surface, exclusive of crests of ridges, is covered with closely spaced small pits. Interior deep, fairly smooth. Hinge in the right valve shows strong, elongate, undivided teeth at the cardinal angles, which are truncated to a slender bar between them so low at its midpoint as to be scarcely visible. A well incised trench, showing exceedingly minute crenulations under favorable lighting, is present just dorsal to the bar, above which is the narrow rim of the dorsal margin, prominent at its midpoint and becoming obscure toward the cardinal angles. Hinge in the left valve consists of terminal sockets, recessed into the dorsal margin which overhangs and partially obscures them. A slender bar between the sockets is most prominent at its midpoint, slopes gently into the socket depressions, and carries very delicate, almost invisible crenula-

tions. A depressed area separates the bar from the dorsal margin. The bar between the teeth of the right valve fits just below and inside the bar of the left valve. The trench of the right valve articulates with the bar of the opposite valve. The raised dorsal margin of the right valve fits into the depressed area just below the dorsal margin of the left valve. Right valve somewhat encased by overhanging margin of left on dorsal half of carapace. Marginal areas moderately broad, steeply shelving inward on the anterior, more nearly flat on the posterior. Radial pore canals numerous, straight, simple, visible on anterior, posterior, and ventral areas. Line of concrescence near and subparallel to outer margin. The peripheral union of the two valves on ventral half of carapace is marked by a sharp break, on the outside of which the shell margin is depressed. A ventral flange near center of left valve, with a slight lip inside it, is fitted to receive the smaller right valve. Muscle scar area slightly anterior and ventral to center of carapace, consisting of a subcircular rosette of about eight small, ovoid scars.

Length (complete specimen) 0.74 mm., height 0.42 mm., width 0.32 mm. Length (right valve) 0.76 mm., height 0.37 mm. Length (left valve) 0.76 mm., height 0.44 mm.

Type locality.—La Chorrera, Habana, Cuba, near mouth of Almendares River, at depth of 2 to 5 fathoms. (Pedro J. Bermudez Station Recent no. 1.)

In addition to the type locality, *G. bermudezi* occurs in the Recent, in harbor dredgings from depth of about 6 fathoms from the Port of San Juan, Puerto Rico, in material collected by F. M. Setzer.

Types.—Holotype no. 3318, a complete specimen. Paratypes nos. 3319, 3320, consisting of the separated right and left valves of a single complete specimen.

GLYPTOBAIRDIA CRUMENA (Stephenson)

Bairdia? crumena Stephenson, 1944, Jour. Paleontology, vol. 18, p. 156, pl. 28, fig. 5.

This species, questionably referred by me to the genus *Bairdia*, is here assigned to the new genus *Glyptobairdia*. It differs from *G. bermudezi* most noticeably in the position of the ridges. The lower ridge is also thickened at its center, and the central ridge is absent.

G. crumena was described from subsurface middle Tertiary beds of Texas.

GLYPTOBAIRDIA HOWEI Stephenson, n. sp.

Plate 42, figures 5, 6; Text figures 1, 2

Carapace in side view subquadrate, with left valve larger and much higher than right. Dorsal margin well arched, more strongly so in left valve. Ventral margin indented, curving upward and bearing very short, blunt spines near anterior and posterior ends. Anterior end rather narrowly rounded; posterior end compressed, produced to bluntly pointed beak. Entire surface closely covered with well impressed, ovoid pits of moderate size. On right valve, a pronounced ridge with narrow crest outlines dorsal margin, and another broader ridge arcs downward from anterior end, extending horizontal to posterior beak at about one-third the shell height above ventral margin. Shell wall is excavated below dorsal ridge and recedes abruptly below ventral ridge. On left valve, dorsal ridge is very weak along hinge line, arcing downward onto shell wall at cardinal angles, becoming stronger on anterior and pronounced on posterior. Ventral ridge is visible only on posterior half of shell. Hinge structure is similar to that of genotype, but with terminal teeth in right valve greatly reduced. Left valve is channelled on posterior to receive and partially encase right valve. Marginal zones of moderate width, with line of concrescence near outer margin of shell on anterior and posterior.

Length (right valve) 0.60 mm., height 0.31 mm. Length (left valve) 0.60 mm., height 0.33 mm.

Remarks.—From the standpoint of outline, overlap, and surface sculpturing, this species agrees well with the genotype. There is some variation in the hinge structure, however, as *G. howei* exhibits a very weak development of terminal teeth in the right valve, and rather poorly defined corresponding sockets in the left valve. Doctor Howe suggested³ the possibility that the strong teeth present on the genotype may have been developed progressively between Oligocene and Recent times.

³ Personal communication.

Type locality.—The type specimens were collected from the Red Bluff formation of the Oligocene by Henry V. Howe, 250 feet west of the railway station at Hiwannee, Mississippi, at the top of the exposure, 20 feet above the *Balanophyllia* bed. Specimens of *G. howei* are rather rare in my slide from this locality, which carries a rich ostracode fauna. I have a single right valve

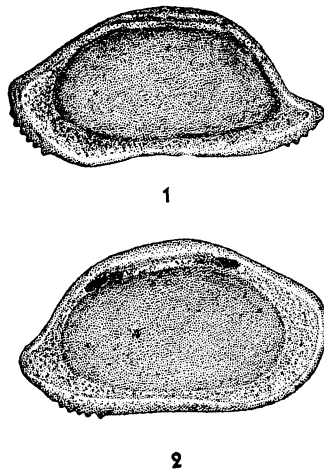


FIG. 1, 2—*Glyptobairdia howei* Stephenson, n. sp.
1, Interior of right valve, syntype no. 3321.
2, Interior of left valve, syntype no. 3322.
×70. Red Bluff Oligocene, Hiwannee, Mississippi.

in a molt stage, which is smaller than the adult, showing a fine, less pronounced pitting, and the ridges characterizing mature specimens are almost entirely wanting. Doctor Howe kindly forwarded a single specimen taken from 10 feet above the *Balanophyllia* bed at the same exposure. These are the only occurrences of the new species known to me.

Types.—Syntypes, no. 3321 (right valve), no. 3322 (left valve).

REFERENCES

- CORYELL, H. N., SAMPLE, C. H., and JENNINGS, P. H., 1935, *Bairdoppilata*, a new genus of Ostracoda, with two new species: Amer. Mus. Novitates, no. 777.
McCoy, F., 1844, Carboniferous limestone fossils of Ireland, p. 164.
STEPHENSON, M. B., 1944, New Ostracoda from subsurface middle Tertiary strata of Texas: Jour. Paleontology, vol. 18, pp. 156-161.