

NEW MOLLUSKS OF THE FAMILY VITRINELLIDÆ FROM THE WEST COAST OF AMERICA.

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The United States National Museum has from time to time received additions to the collections of this family, among which are quite a number of undescribed forms. These are here diagnosed and figured.

VITRINELLA OLDROYDI, new species.

Shell small, sublenticular, semitransparent, a little more convex above than below. Nephronic whorls not differentiated from the rest, the entire upper surface smooth and shining, marked only by irregularly distributed incremental lines. The upper sides of the whorls are moderately and evenly rounded. Sutures well marked. Periphery of the last whorl well rounded. Base moderately well rounded, openly



FIG. 1.—VITRINELLA OLDROYDI. a, TOP VIEW; b, SIDE VIEW; c, BASAL VIEW.

umbilicated to the very apex. Columellar wall of the base well rounded (not concave). Aperture decidedly oblique, broadly oval; outer lip thin; columella decidedly curved and somewhat expanded at its insertion; parietal wall covered by a rather strong callus which partly fills the posterior angle.

The type, Cat. No. 158777, U.S.N.M., was collected in low water at Point Loma, California. It has three and three-fourths whorls and measures: Greater diameter, 2.1 mm.; lesser diameter, 1.6 mm.; altitude, 0.8 mm.

There are five additional lots in the collection of the U. S. National Museum: Cat. No. 127563, eleven specimens from San Pedro, California, collected by Mrs. T. S. Oldroyd; Cat. No. 192684, three from Terminal Island, California, collected by Mrs. W. H. Eshnaur; Cat. No. 60911, five specimens, collected by Mr. C. R. Orcutt, at San Diego, California; two, Cat. No. 183355, collected by Mr. Bailey, at La Jolla, California; and five, Cat. No. 105485, that were collected by Mr. H. Hemphill, at Point Abreojos, Lower California.

VITRINELLA ESHNAURI, new species.

Shell moderately elevated, subglobose, thin, almost transparent, glassy. Nepionic whorls $1\frac{1}{2}$, scarcely differentiated from those which follow, well rounded, smooth. Succeeding whorls well rounded, somewhat inflated, marked only by exceedingly fine lines of growth. Sutures well impressed. Periphery of the last whorl well rounded. Base moderately rounded, marked only by incremental lines, with narrow but open umbilicus, which is obsoletely angled at the outer edge. Columellar wall of umbilicus vertical from the outer edge to

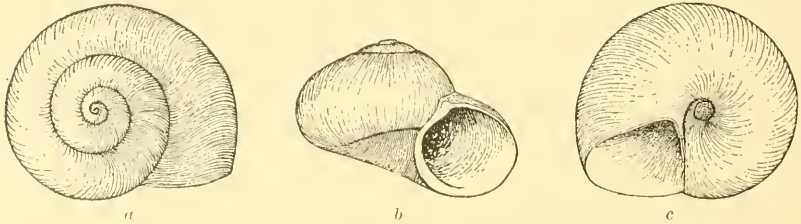


FIG. 2.—*VITRINELLA ESHNAURI*. *a*, TOP VIEW; *b*, SIDE VIEW; *c*, BASAL VIEW.

within a short distance of the parietal wall, where it bends outward to join the preceding turn. Aperture decidedly oblique, almost circular; outer lip thin and translucent; columella quite strong and decidedly curved; parietal wall covered by a moderate callus which forms an acute angle with the posterior margin of the lip.

The type, Cat. No. 127557, U.S.N.M., was collected by Mrs. Oldroyd at San Pedro, California. It has $4\frac{1}{3}$ whorls and measures: Greater diameter, 2.3 mm.; lesser diameter, 1.9 mm.; altitude, 1.3 mm.

Seven additional specimens were dredged by Mrs. Eshnaur at Terminal Island, California, three of which are entered under Cat. No. 192685, U.S.N.M., the remaining four being in Mrs. Eshnaur's collection.

VITRINELLA ALASKENSIS, new species.

Shell small, subglobose, semitransparent. Nepionic whorls $1\frac{1}{3}$, well rounded, smooth. Succeeding turns somewhat inflated, well rounded, separated by strongly impressed sutures, marked only by incremental lines. Periphery and base of the last whorl well rounded. The latter

narrowly and openly umbilicated to the very apex. Columellar wall of the umbilicus not flattened nor angulated at the outer edge, but evenly rounded with the rest of the base. Aperture forming a broad semioval, of which the columellar side forms the short diameter; outer



FIG. 3.—VITRINELLA ALASKENSIS. a, TOP VIEW; b, SIDE VIEW; c, BASAL VIEW.

lip thin and semitransparent; columella slender and curved; parietal wall covered by a thin callus.

The type and eight additional specimens, Cat. No. 109470, U.S.N.M., were collected by Dr. William H. Dall at Unalaska, Alaska. The type has $3\frac{1}{2}$ whorls and measures: Greater diameter, 1.6 mm.; lesser diameter, 1.2 mm.; altitude, 1.2 mm.

DOCOMPHALA, new subgenus.

Shell like typical *Vitrinella* except in the structure of the umbilicus. In *Vitrinella* ss. the columellar wall of the umbilicus is smooth. In the present group it is divided into two parts, the basal half of which is devoid of sculpture, excepting incremental lines, while the inner half is marked by strong, oblique, rounded ribs.

Type.—*Vitrinella* (*Docomphala*) *stearnsi*.

VITRINELLA (DOCOMPHALA) STEARNSI, new species.

Shell depressed, lenticular, a little more convex above than below. The nepionic portion of the shell consists of the first one and a half turns, which are small, slightly convex, and smooth. The turns which succeed the nepionic part of the shell are strongly, obliquely, transversely ribbed on the upper side, but these ribs gradually grow weaker as the shell increases in size and disappear entirely after one and one-half turns, the remaining portion being marked by mere lines of growth on the upper surface. Periphery of the last whorl well rounded. Base very gently rounded, crossed by rather strong incremental lines. Umbilicus wide and open to the very apex, decidedly angulated at the outer margin. The columellar wall is strongly concave from the outer angulation to the junction with the preceding whorl, the inner half of it bears a series of strong ribs behind the aperture. Aperture decidedly oblique; outer lip acute, forming a regular semioval of which the parietal wall and columella form the short diameter; columella short, stout, concave; parietal wall covered

by a thick callus, which renders the peristome continuous and forms an acute angle with the outer lip posteriorly. The parietal callus and columella form a strongly sigmoid curve.

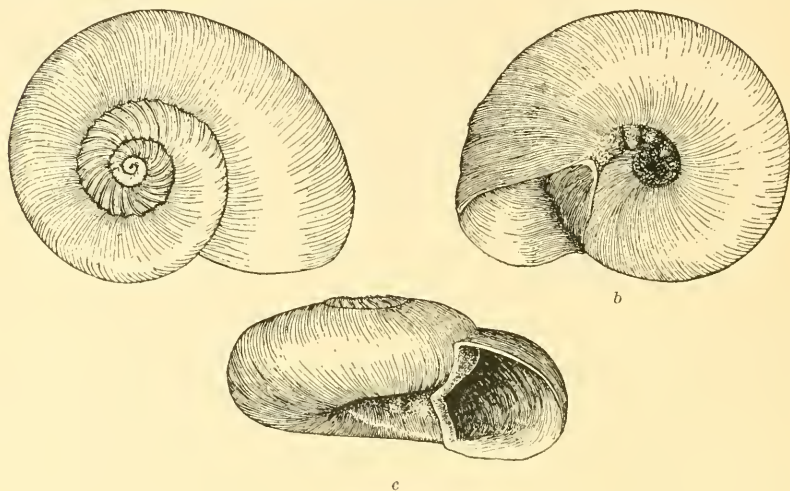


FIG. 4.—*VITRINELLA (DOCOMPHALA) STEARNSI*. *a*, TOP VIEW; *b*, BASAL VIEW; *c*, SIDE VIEW.

The type and three young individuals are part of the Stearns Collection and are entered as Cat. No. 74011, U.S.N.M., and come from Monterey, California.

The type has $4\frac{1}{2}$ whorls and measures: Greater diameter, 3.8 mm.; lesser diameter, 3 mm.; altitude, 1.5 mm.

VITRINELLA (DOCOMPHALA) BERRYI, new species.

Shell small, semitransparent, lenticular, with the upper part only slightly more convex than the base. Nepionic whorls forming a little more than one and two-thirds turns, smooth, and moderately convex.

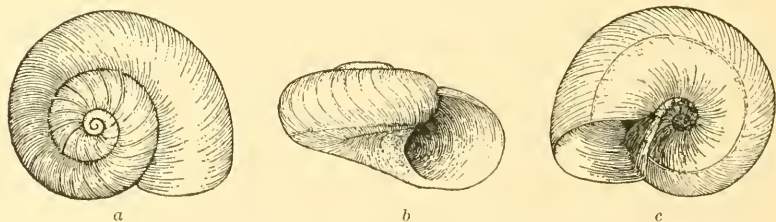


FIG. 5.—*VITRINELLA (DOCOMPHALA) BERRYI*. *a*, TOP VIEW; *b*, SIDE VIEW; *c*, BASAL VIEW.

The portion following the nepionic part is crossed on the upper surface by quite regularly spaced, sublamellar riblets, which become weaker as the shell increases in size, and disappear completely after one and one-half turns; the remaining part of the upper surface being marked by weak incremental lines only. Sutures well marked. Periphery

of the last whorl well rounded, the first half showing continuations of the ribs, the rest being smooth. Base moderately rounded with a fairly strong spiral keel which is situated about one-third of the way toward the umbilical angle from the periphery. Umbilicus much narrower than *V. stearnsi*, its outer edge terminating in a blunt angle. Columellar wall decidedly concaved, the inner half marked by a series of strong riblike nodules as in *V. stearnsi*. Aperture decidedly oblique, subcircular; outer lip thin; columella very thick, concaved, provided with a moderately strong callus which bends back into the umbilicus.

The type, Cat. No. 192686, U.S.N.M., and another specimen in the collection of Mr. S. S. Berry were dredged by that gentleman in 12 fathoms, off Del Monte, Monterey Bay, California. It has 4 whorls and measures: Greater diameter, 2.2 mm.; lesser diameter, 1.7 mm.; altitude, 1 mm. Another specimen of this species, Cat. No. 192687, U.S.N.M., was collected by Mrs. T. S. Oldroyd at San Diego, California.

CYCLOSTREMA XANTUSI, new species.

Shell small, transparent, with moderately elevated spire. Nephionic whorls $1\frac{2}{3}$, well rounded, smooth. The succeeding turns are marked by a strong peripheral cord and another spiral cord which is situated

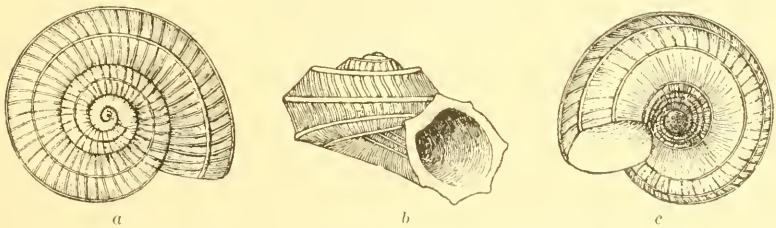


FIG. 6.—CYCLOSTREMA XANTUSI. a, TOP VIEW; b, SIDE VIEW; c, BASAL VIEW.

a little nearer the summit than the periphery of the whorls. In addition to this spiral sculpture there are many (about 48 on the last turn) regular, equally spaced, low riblets, which coincide with the lines of growth and are about one-third as wide as the spaces that separate them. Periphery of the last whorl strongly angulated by the spiral cord. The base is marked by three spiral keels—one at the edge of the umbilicus, the other two divide the space between this and the peripheral keel into three equal parts. The riblets of the upper surface continue equally strong over the space between the peripheral and the first basal keels, but between this and the second basal keel they become decidedly enfeebled, while they are almost absent between the second keel and the one that bounds the umbilicus. Umbilicus broadly open. Columellar wall of the last whorl well rounded and marked by three equally spaced spiral threads, the inner one of which is decidedly

weaker than the rest. Aperture decidedly oblique, polygonal, the angles being formed by the spiral keels, the posterior angle of the aperture, and the insertion of the stout and strongly curved columella.

The unique type, Cat. No. 4035, U.S.N.M., was collected by J. Xantus at Cape St. Lucas, Lower California. It has little more than four whorls and measures: Greater diameter 1.4 mm.; lesser diameter 1.15 mm.; altitude 0.5 mm.

CYCLOSTREMA DIEGENSIS, new species.

Shell exceedingly small, thin, planorboid, with a prominent, compressed peripheral keel, translucent, yellow horn-colored. Nepionic whorls $1\frac{1}{2}$, moderately rounded, not elevated, smooth. The succeeding turns have their highest elevation at about one-third of the distance from the suture to the periphery, at which place they are raised into a broad, well-rounded ridge from which they slope abruptly, convexly rounded, to the suture and more gently concavely to the angulated periphery. On the upper surface the whorls are ornamented with slender, regularly spaced, oblique riblets, which are

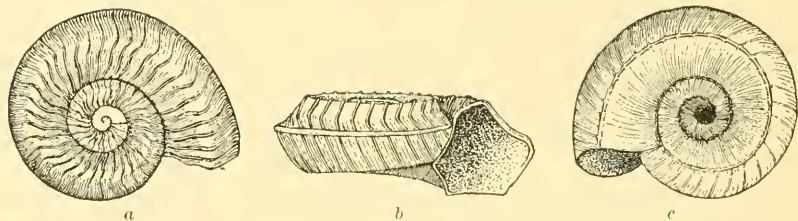


FIG. 7.—CYCLOSTREMA DIEGENSIS. a, TOP VIEW; b, SIDE VIEW; c, BASAL VIEW.

best developed on the elevated ridge, where they are about one-fourth as wide as the spaces that separate them. Sutures strongly marked. Periphery with a compressed, obtuse angle. Base moderately rounded, broadly openly umbilicated, with a slender thread bounding the outer edge of the umbilicus and a slender spiral cord situated about halfway between the umbilical thread and the periphery. The riblets seen on the upper surface extend feebly beyond the peripheral keel to the first basal cord but are reduced to simple incremental lines between this and the umbilical thread; columellar wall well rounded, marked by incremental lines only. Aperture oblique, irregularly pentagonal, one blunt angle being formed by the elevated part of the whorl, another equally obtuse one by the periphery, the third by the basal keel, the fourth by the umbilical angle, and the fifth by the junction of the columella with the parietal wall. Outer lip thin, showing the sculpture of the shell within. Columella straight and very obliquely placed. Parietal wall covered by a thin callus.

There are five specimens of this species in the collection of the U. S. National Museum, Cat. No. 105488, all from San Diego, California.

The type, which is one of these specimens, has $3\frac{2}{3}$ whorls and measures: Greater diameter 1.0 mm.; lesser diameter 0.8 mm.; altitude about 0.25 mm.

CIRCULUS COSMIUS, new species.

Shell decidedly depressed, planorboid, creamy white, shining. Nepionic whorls 2, well rounded, helicoid, polished. Succeeding turns marked by a low, rather broad spiral thread at the summit and a strong, acute, lamellar ridge at the periphery, and another equally strong halfway between the periphery and the summit. The last has the free edge pointing outward, forming an angle of 45° with the peripheral lamella. The spaces between these keels are gently rounded and marked by incremental lines only. The middle keel forms the most elevated portion on each whorl, the summit of the whorl at the suture being considerably lower. Base very broadly umbilicated, marked by a spiral, lamellar carina, which is as strong as the peripheral one and is situated halfway between this and the umbilical angle. In addition to this carina the entire base shows fine incremental lines.

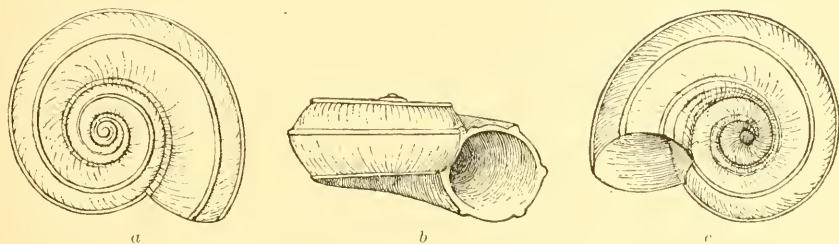


FIG. 8.—*CIRCULUS COSMIUS*. a, TOP VIEW; b, SIDE VIEW; c, BASAL VIEW.

Umbilicus limited by an obtuse angle; columellar wall almost vertical, marked by three slender, equally spaced, spiral lirations. Aperture decidedly oblique, pentagonal, the angles being formed by the three carinae, the posterior angle of the aperture, and the umbilical angle; outer lip thin; columella decidedly curved; parietal wall covered by a strong callus, which renders the peritreme almost continuous.

There are two specimens in the collection of the U. S. National Museum, Cat. No. 192708, both dredged by the U. S. Bureau of Fisheries steamer *Albatross*, at Station 2799, near Atacames, Ecuador, in $29\frac{1}{2}$ fathoms of water. The type, which is one of these two specimens, has $4\frac{1}{2}$ whorls and measures: Greater diameter, 2.5 mm.; lesser diameter, 2.1 mm.; altitude, 1 mm.

CIRCULUS CERROSENSIS, new species.

Shell decidedly depressed, planorboid, semitransparent, yellowish horn colored. Nepionic whorls 2, moderately elevated, polished. Succeeding turns marked by a feeble spiral thread at the summit and a strong, acute spiral lamella at the periphery and another equally strong

about halfway between the two. In addition to these keels the surface on the upper side is marked by many fine incremental lines and numerous equally fine spiral striations. The greatest elevation of the whorls falls in the region of the middle keel, from there they slope roundedly downward to the sutural thread. Base very broadly umbilicated, showing all the whorls within the umbilicus to the very apex. A strong spiral keel, somewhat stronger than the peripheral one, is situated almost halfway between the umbilical edge and the periphery. In addition the base is marked by fine incremental lines and scarcely perceptible spiral striations. The umbilical edge is marked by a moderately strong carina and the columellar wall, which is moderately rounded, bears immediately below this three equally spaced threads, the outer two of which are as strong as the carina at the edge, while the inner one is only feebly developed. Aperture extremely oblique, pentagonal, the angles being formed by the keels, the posterior angle of the aperture and the umbilical carina; outer lip thin; columella strongly curved; parietal wall with a faint callus.

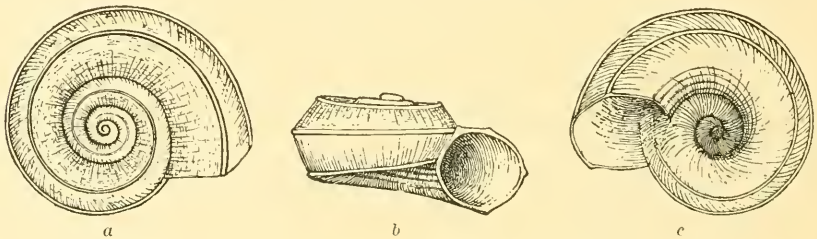


FIG. 9.—*CIRCULUS CERROSSENSIS*. *a*, TOP VIEW; *b*, SIDE VIEW; *c*, BASAL VIEW.

The type and only specimen known, Cat. No. 151942, U.S.N.M., was dredged by the U. S. Bureau of Fisheries Steamer *Albatross* at Station 2827 off Cerros Island, Lower California, in 10 fathoms of water. It has 5 whorls and measures: Greater diameter, 2.5 mm.; lesser diameter, 2.1 mm.; altitude, 1.1 mm.

While this specimen resembles *C. cosmius* closely in general outline, it can nevertheless be distinguished quite readily by the fine spiral sculpture between the keels on the upper surface, which is absent in *C. cosmius* and by the much more strongly developed spiral cords on the columellar wall of the umbilicus.

CYCLOSTREMELLA CALIFORNICA, new species.

Shell small, planorboid, semitransparent, closely spirally striated. Nepionic whorls $1\frac{1}{4}$, moderately rounded, smooth and shining. Succeeding turns increasing regularly in size like *Planorbis*, rendering the apex considerably lower than any of the succeeding turns, the last being the most elevated. Whorls well rounded, separated by strongly impressed sutures and marked by many equally strong and equally

spaced, somewhat wavy, incised spiral lines and fine incremental lines. At more or less regular intervals there appear slight constrictions which coincide with the lines of growth. Periphery of the last whorl well rounded. Base well rounded, very broadly and openly umbilicate to the very apex, marked like the upper surface. Aperture oblique, suboval; outer lip thin; columella short, forming almost a straight line with the faint callus of the parietal wall. The type has a little more than three and a half whorls and measures. Greater diameter, 2.3 mm.; lesser diameter, 1.8 mm.; altitude, 0.8 mm.

The type and another specimen were collected by Mrs. Oldroyd at Long Beach, California, and are entered under Cat. No. 125537, U.S.N.M.

There are five additional lots in the collection: Cat. No. 192709, one specimen collected by Mr. S. S. Berry in 12 fathoms off Del Monte, Monterey, California; Cat. No. 127561 U.S.N.M., three specimens

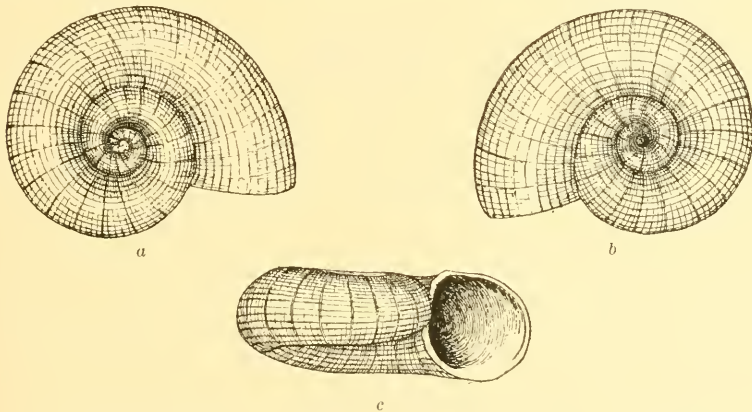


FIG. 10.—CYCLOSTREMELLA CALIFORNICA. a, TOP VIEW; b, BASAL VIEW; c, SIDE VIEW.

from San Pedro, California, collected by Mrs. Oldroyd; Cat. No. 192710, U.S.N.M., 25 specimens dredged at Terminal Island by Mrs. W. H. Eshnaur, and 50 additional specimens from the same place are in the collection of Mrs. Eshnaur; Cat. No. 192711, U.S.N.M., three specimens collected by Mrs. Oldroyd at San Diego, California; and lastly Cat. No. 7963, six fossil specimens collected by Mr. Henry Hemphill in the Postpliocene beds of San Diego, California.

SCISSILABRA, new genus.

Vitrinella-like shells with the middle of the outer lip deeply and broadly notched, the center of the notch coinciding with the periphery of the shell.

Type.—*Scissilabra dalli*.

SCISSILABRA DALLI, new species.

Shell small, depressed, lenticular, with acutely angulated periphery, having $3\frac{1}{2}$ transparent, vitreous whorls which are separated by well-marked sutures. The nepionic portion consists of the first $1\frac{1}{2}$ turns and is scarcely differentiated from the rest of the shell. The upper surface is evenly and gently rounded from the summit to the periphery, which is strongly and sharply carinated. Under side openly umbilicated, much less convex than the upper. The umbilical edge is marked by an acute carina from which the columellar wall in the last whorl extends almost vertically to where it joins the preceding turn. This carina and vertical umbilical wall are characteristic of the last turn only; in all the others which are visible in the umbilicus it appears

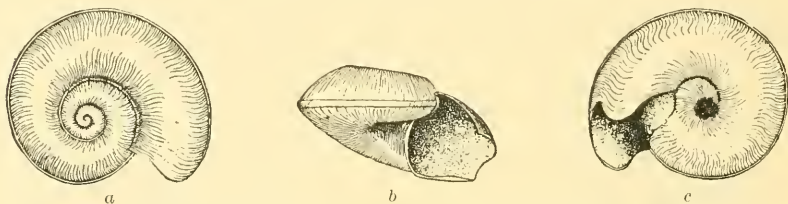


FIG. 11.—SCISSILABRA DALLI. a, TOP VIEW; b, SIDE VIEW; c, BASAL VIEW.

evenly rounded. Aperture very large, decidedly oblique; outer lip very broadly and strongly notched, the blunt angle of the notch coinciding with the periphery of the shell; the portion of the lip posterior to the sinus and its basal part somewhat sinuous; columella vertical and slightly concave; parietal wall covered by a thick callus which renders the peritreme almost continuous.

The type, Cat. No. 192712 U.S.N.M., was collected in the beach drift, San Diego, California. It measures: Greater diameter, 2 mm.; lesser diameter, 1.5 mm.; altitude about 0.75 mm.

Another specimen, Cat. No. 127562, U.S.N.M., comes from San Pedro, California. A third specimen, Cat. No. 192713, U.S.N.M., was dredged in 12 fathoms, blue mud bottom, at Monterey Bay by Mr. S. S. Berry, and an additional specimen from the same locality is in Mr. Berry's collection.