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TWO NEW SPECIES OF NASSARIUS FROM  
THE PLIOCENE OF LOS ANGELES  
COUNTY, CALIFORNIA

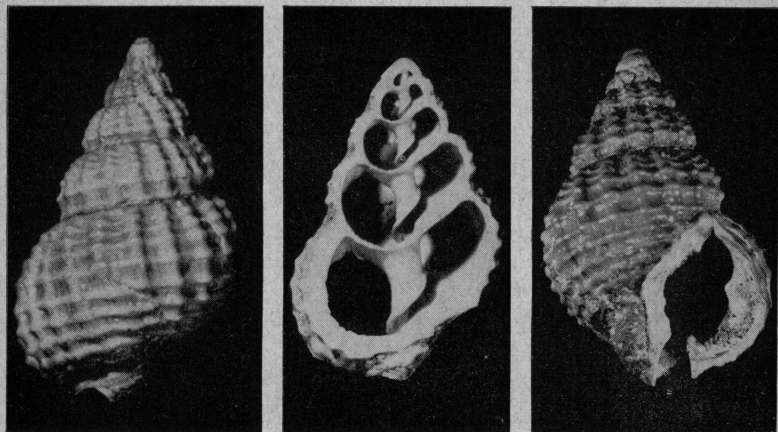
By GEORGE P. KANAKOFF

In May, 1954, the author reported a new *Kelletia* from the Upper Pliocene of the Pico Formation from Humphreys Quadrangle in Los Angeles County<sup>1</sup>. During the following months the several tons of silt collected from the locality yielded a large marine fauna in a good state of preservation. The lumps of matrix, ranging from almost black to light gray in color and from silt to shale in consistency, had first to be dried, then soaked in sieves half-submerged in water to separate the shell material from the matrix. When again dried so that the shell material was hard enough to handle, the specimens were sorted and studied.

Among the forms segregated are two new species of *Nassarius*, one very abundant, the other comparatively rare. These are the subject of the present paper.

*Nassarius stocki* sp. nov.

HOLOTYPE: The holotype No. 1109 in the Los Angeles County Museum (Pl. 30, figs. A and C), collected by the author, May 10, 1954.



A.

B.

C.

PLATE 30.

*Nassarius stocki* sp. nov.

Holotype L.A. County Museum #1109—"A" and "C."

Paratype L.A. C. M. (a longitudinal section—"B.")

<sup>1</sup>Kanakoff, G. P., 1954, Bull. So. Calif. Acad. Sci. V. 53, pl. 2, pp. 114-117.

**TYPE LOCALITY:** LACMIP 291 (Los Angeles County Museum, Invertebrate Paleontology, Locality 291). An exposed stratum of black silt, weathering into gray, in a gully in the center of the south half of Sec. 27, T. 4N, R. 15W, Mt. San Bernardino B. and M., (which is probably the same as Kew's Loc. No. 3590)<sup>2</sup>; it is exactly  $\frac{1}{2}$  mile south of the Humphreys RR Station, Los Angeles County, Calif.

**AGE AND FORMATION:** Upper Pliocene, Pico formation.

**DIAGNOSIS:** Shell small for the genus, ovate-conical; whorls seven, convex, strongly cancellated by prominent axial ribs (sloping posteriorly at 5 degrees to the axis of the shell) and overlying (less prominent) thinner ridges, together forming squarish concave interspaces on the last five whorls; spire acuminate at an angle of 62 degrees; sutures deep, sharply defined; the body whorl with 15 ribs, the sixth whorl with 19, the fifth with 16, the fourth with 16, the third with 14 obsolete riblets, and the first two whorls bare, forming a simple smooth nucleus; inner lip thin, reflected, with four prominent parietal bar-like tubercles, forming upper and lower pairs; outer lip thick (with an inner thickening resembling an internal varix) with one prominent tooth in the middle and three lesser bar-like tubercles, one above and two below it; columella extended, with a strong plication on the inner side, and a deep, narrow groove, around it at the base of the body whorl. The holotype, a large adult, measures: length 9.6 mm., breadth 5.5 mm. The holotype has the outer lip interiorly extended by an elongated tubercle which deepens the canal (See Pl. 30 fig. C); sectioned paratype No. 142 shows the tubercle to be continuous with the columella.

**PARATYPES:** Out of 500 plus specimens of the species available, 130 near-perfect adults were selected and measured. A longitudinal section of one (L.A. Co. Mus. No. 142) is figured (pl. 30, fig. B).

Absolute means of the measurements of the paratype lot are:

1. length—7.282 mm.
2. width—4.581 mm.
3. ratio length to width—1.589.

**DISTRIBUTION:** Known only from the type locality.

<sup>2</sup>Kew, W.S.W., USGS Bull. 753, pp. 77-81.

## DISCUSSION

The striking feature of this lot is the uniformity of this small species, where the general shape and sculpture are concerned. The most variable feature noticed is the number of denticles in the aperture, varying from strongly serrate to obsolete serrate, and from 2 to 8 denticles in the outer lip.

This species is named for one of the most highly honored and foremost paleontologists of the United States, who in addition to his scientific achievements was also outstanding for his qualities as a human being, Dr. Chester Stock (1892-1950), under whose guidance the author had the privilege of working for over eleven years.

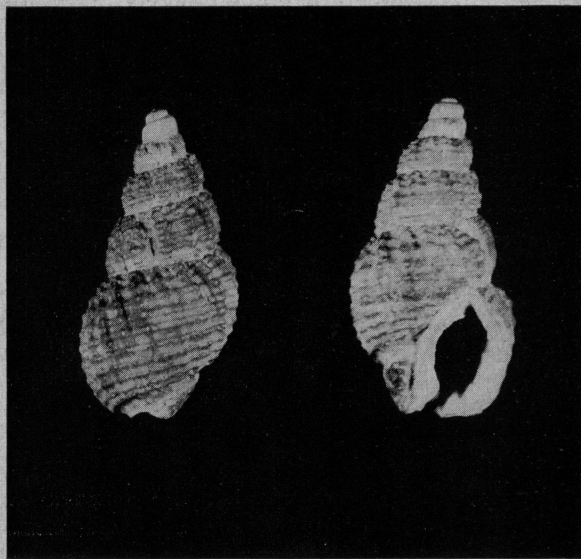


PLATE 31

*Nassarius hildegardae* sp. nov. Holotype L.A. Co. Museum #1110

*Nassarius hildegardae* sp. nov.

HOLOTYPE: The holotype No. 1110 in the Los Angeles County Museum collected by the author May 10, 1954 (pl. 31).

TYPE LOCALITY: LACMIP 291.

AGE AND FORMATION: Upper Pliocene, Pico formation.

DIAGNOSIS: Shell smallest in the genus, elongate-conic; whorls

seven, flattened-convex, four of them with rugosely cancellated sculpture; ribs 12 on the fourth whorl, 13 on the fifth, 15 on the sixth and 16 on the body whorl, crossed by overlying thinner, raised uniform spiral ridges; 4 on the fourth whorl, 6 on the fifth whorl, 5 on the sixth, and 8 on the body whorl, forming bead-like effect on the crossing, and rhomboid cavities in the interspaces; spire acuminate at 40 degrees; first three whorls bare, forming a simple, smooth nucleus; sutures deeply incised; aperture narrowly-oval, its axis at 25 degrees to the axis of the shell; inner lip thick, reflected, free, with 2 bar-like tubercles at the anterior end, and 3 round tubercles at the posterior end; outer lip thick, with 6 bar-like tubercles evenly spaced throughout its inner length; canal short, broad; siphonal notch profound. The holotype, a large adult, measures: length 9.2 mm., breadth 4.0 mm., and length of the aperture (canals included) 3.2 mm.

PARATYPES: Out of 70 plus specimens, 44 adults in a good state of preservation were selected and measured. Slight variations were noticed in the thickness of the outer and inner lips, which range from almost-smooth to strongly serrated, and the inner lip from thin and attached, to thick and detached, the denticles on it ranging from 2 to 6 in number; in all other respects exteriorly being very uniform.

Absolute means of measurements of the paratype lot are:

1. length—5.604 mm.
2. width—3.014 mm.
3. ratio length to width—1.859.

DISTRIBUTION: Known only from the type locality.

## DISCUSSION

At a glance, this species resembles young specimens of *Nassarius mendicus* Gould, but differs in size, more acuminate spire, sculpture, and in the shape of the aperture, both lips being proportionately much thicker in this species.

*Nassarius hildegardae* is named for the noted avian paleontologist, Dr. Hildegard Howard, Chief Curator, Division of Science, Los Angeles County Museum, who has given so willingly and unstintingly of her time, knowledge, and friendship to the author, and whose help and many years of pleasant association are gratefully acknowledged.