

A RECENT CARIBBEAN SPECIES OF THE GENUS *NERITOPSIS*

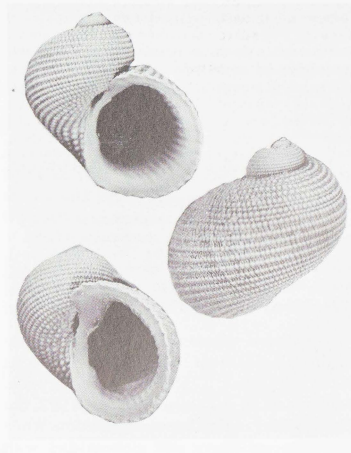
(MOLLUSCA: GASTROPODA)

ROBERT C. HOERLE

WEST PALM BEACH, FLORIDA

The writer's article regarding the first New World occurrence of the genus *Neritopsis* in the late lower Miocene Chipola Formation of northwestern Florida (Hoerle, 1972, p. 23) has had an interesting sequel. In early 1973 Thomas L. McGinty, of Boynton Beach, Florida, discovered the existence of a Caribbean species of *Neritopsis* in his collection of Recent mollusks. Subsequently Charles J. Finlay of Newark, Delaware, and Dan L. Steger of Tampa, Florida, produced additional specimens of this undescribed *Neritopsis*; all were collected by Mr. Finlay during the period from 1944 through 1953. To date a total of nine individuals have been located in the three collections and all are from the northern coastal area of Cuba. Collecting localities are between Banes, a small village located just west of Havana in easternmost Pinar del Rio Province, and Varadero, in Matanzas Province, about eighty miles east of Havana. The Chorrera Sands area near Havana yielded four specimens. Both the Banes and Chorrera Sands localities were large sandy banks created by extensive dredging for construction purposes while the Varadero site is a natural beach and the specimens were obtained there only after strong northwest winter storms.

These specimens previously have been misidentified as species of the families Neritidae or Vanikoridae, and understandably so, because of a number of reasons. Although there is a fair amount of literature available for the sole previously known Recent species, *Neritopsis radula* (Linné) of the Indo-Pacific region (e.g., Cooke, 1895; Hirase, 1951; Kira, 1955 & 1962), none of the existing illustrations show the very distinctive apertural notch, which is one of the primary distinguishing characteristics of the genus. The Recent Caribbean specimens were all collected dead, and hence lacked the unusual trapezoidal calcareous operculum, the second characteristic. Further examination of other Caribbean collections should reveal additional specimens of this new species.



Text figure 1. *Neritopsis finlayi* R. C. Hoerle, n. sp. USNM 739425 (holotype), X 2.

Order ARCHEOGASTROPODA Thiele, 1931

Superfamily NERITACEA Rafinesque, 1815

Family NERITOPSIDAE Gray, 1847

Subfamily NERITOPSINAE Gray, 1847

Genus NERITOPSIS Grateloup, 1832

Neritopsis GRATELOUP, 1832, Actes Soc. Linn. Bordeaux, v. 5, p. 129; [1847] Conchyl. Foss. Bassin Adour, Neritines, pl. 1 [pl. 5], figs. 36-38. Type species: *Neritopsis moniliformis* Grateloup, by monotypy, [= *Radula* Gray, 1842; and (based on opercula) *Peltarion* Deslongchamps, 1858; *Cyclidia* and *Scaphandia* Rolle, 1862; *Rhynchidia* Laube, 1868].

NERITOPSIS FINLAYI R. C. Hoerle, n.sp.

Text figure 1

Diagnosis: Shell heavy, globose, spire high for the genus. One and one-quarter smooth nuclear whorls, three plus teleoconch whorls in adult specimens. Teleoconch ornament initiated by spiral threads and faint, sharp, widely-spaced axial growth lines for the first half turn, becoming stronger and forming beads. Nineteen to twenty-seven beaded, unevenly spaced, narrow spiral cords on final turn; interspaces of varying widths, ornamented by scabrous incrementals. Aperture circular; outer lip sharp, crenulated by spiral ribs, thickened within and marked with numerous short, coarse lirations. Inner lip heavily calloused with an elongated square notch in central area. Umbilicus narrow, deep. Color grayish white. Operculum and soft parts unknown.

Dimensions of holotype: height 17.4 mm, diameter 15.9 mm.

Holotype: USNM 739425.

Type locality: Chorrera Sands, Havana, Cuba.

Occurrence: Recent only, north coast of Cuba.

Figured specimen: USNM 739425 (holotype).

Other occurrences: Beach at Kilometer 27, Via Blanca Highway, Varadero, Matanzas Province, Cuba; Banes, Pinar del Rio Province, Cuba.

Discussion: *Neritopsis finlayi* is clearly distinguishable from both the Recent species *N. radula* (Linné, 1758), of the Indo-Pacific region, and *N. vokesorum* Hoerle, 1972, the fossil species of the Chipola Formation. While all three are heavy and globose and with beaded spiral cords there are marked morphological differences. *N. radula* is non-umbilicate; consisting of two and one-half teleoconch whorls; ornamentation commencing on first post-nuclear whorl with spiral cords only. *N. vokesorum* is slightly umbilicate; moderately high spired; three and one-half teleoconch whorls; the beaded sculpture is initiated immediately following the protoconch. *N. finlayi* has the highest spire of the three species; ornamentation on first post-nuclear whorl consisting of spiral cords and faint, but sharp, widely-spaced axial growth lines.

The development from the slight umbilicus of the Chipola species to the deep umbilicus of the Recent Caribbean form and the almost equal number of teleoconch whorls in the two

indicates the close affinity of *Neritopsis vokesorum* to *Neritopsis finlayi*. The Indo-Pacific *N. radula* bears a great similarity to the European Miocene *N. moniliformis*, as was previously mentioned by the writer: "The resemblance of *N. moniliformis* to *N. radula* has led numerous authors in the past to synonymize the two species..." (Hoerle, 1972, p. 24). As these two forms have numerous morphological characteristics in common, it may be assumed that *N. moniliformis* is the ancestor of *N. radula*. The genus, although dating back to the European Mesozoic, is not known earlier than the lower Miocene in the New World and the manner in which the genus migrated to the New World is purely a matter of speculation.

This new species, *Neritopsis finlayi*, is dedicated to C. J. Finlay of Newark, Delaware, who kindly donated the specimen for the holotype, also a paratype that remains in the writer's collection. Acknowledgments are given to P. L. and T. L. McGinty and D. L. Steger, all of whom provided specimens for study. These paratypes will be distributed to scientific institutions by the aforementioned individuals.

LITERATURE CITED

- CERNOHORSKY, W. O., 1972, Marine Shells of the Pacific, v. 2. Pacific Publications, Sydney, 411 p., 69 pls.
- COOKE, A. H., 1895, Cambridge Natural History, v. 111, Mollusca, 459 p., 311 text figs., 3 maps.
- HIRASE, SHINTARO, 1951, Illustrated Handbook of Shells. Tokyo, Japan, p. i-xxvii, 1-46, 134 pls.
- HOERLE, R. C., 1972, Notes on the fauna of the Chipola Formation—IV. A new species of *Neritopsis* (Mollusca: Gastropoda): Tulane Stud. Geol. Paleont., v. 10, no. 1, p. 23-24, text fig. 1.
- KIRA, TETSUAKI, 1955, Coloured illustrations of the shells of Japan. Osaka, Japan. 204 p., 67 pls.
- KIRA, TETSUAKI, 1962, Shells of the western Pacific in colour; v. 1. Osaka, Japan. 224 p., 72 pls.