

A NEW SUBGENUS AND SPECIES OF *PETRICOLA* (MOLLUSCA: BIVALVIA)
FROM THE PLIOCENE OF SOUTHERN FLORIDA

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Mrs. R. C. Hoerle of West Palm Beach, Florida, recently sent an unusual bivalved mollusk requesting information as to its possible systematic position. It was collected from a coral-rich faunal association that had been dredged from a drainage canal southwest of Immokalee in northern Collier County, Florida. The associated fauna in the spoil bank is thought to be predominantly of Caloosahatchee (upper Pliocene) age although a few forms suggest an upper Pinecrest (middle Pliocene) assignment.

The hinge and pallial line of the species clearly reveal its relationship with the genus *Petricola* Lamarck, 1801, but the ornamentation is wholly different from that to be observed in that genus and, in a general way, is somewhat reminiscent of that observed in some unionid forms. Accordingly, the species is here described as representative of a new subgenus of *Petricola*.

Family PETRICOLIDAE Deshayes, 1839

Genus PETRICOLA Lamarck, 1801

Type species, by subsequent designation, Schmidt, 1818: *Petricola costata* Lamarck = *Venus lapicida* Gmelin. Pliocene to Recent, South Carolina to Texas, the Antilles and Caribbean region.

Petricola s.s. includes nestling species, often found in holes in coral heads, with an external ornament of fine, radial to zigzag riblets. Most specimens in the Tulane University collections are less than 25 mm in length.

Subgenus PETRICOXENICA

H. E. Vokes, new subgenus

Type species: *Petricolaria (Petricoxenica) concoralla* n. sp. Pliocene; Caloosahatchee Formation (?), Florida.

Etymology: Combination of *Petricola* and *xenikos* (Gr.), strange; gender-feminine.

Diagnosis: Shell larger than most species of *Petricola* s.s., elongate-ovate in profile, moderately inflated. Ornament strongly nodose upon a pustulate shell-surface. Hinge similar to that of *Petricola* s.s., having two cardinals in the right valve and three in the left with the median left cardinal bifid. Pallial line with a wide pallial sinus whose rounded anterior end is situated approximately at the anterior third of the total length of the valve and whose ventral side is co-extensive with the pallial line over the posterior third of its length.

The feature that serves to distinguish *Petricoxenica* from *Petricola* s.s. and its other subgenera is the unusual nodose ornamentation associated with the pustulate shell surface.

PETRICOLA (PETRICOXENICA)
CONCORALLA H. E. Vokes, n. sp.

Text figure 1

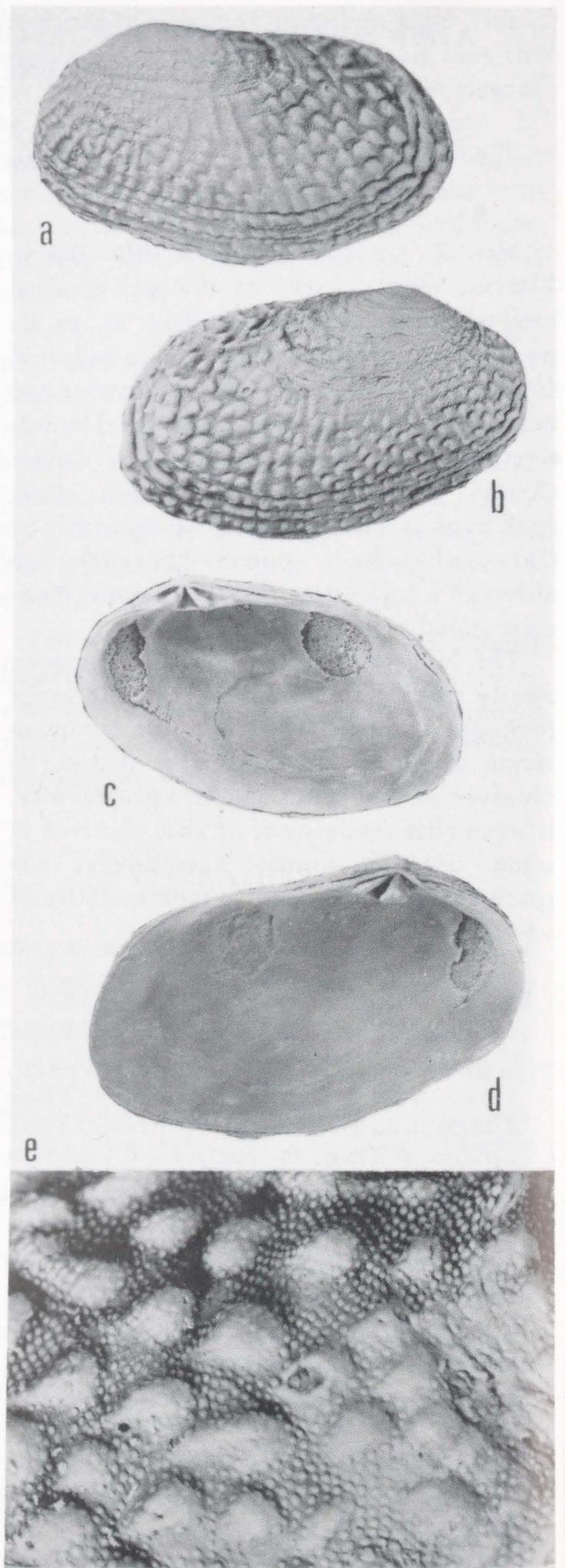
Diagnosis: Shell elongate-ovate in profile, moderately inflated; umbones low, not prominent, situated in advance of the anterior fourth of the length of the valve; anterior margin rounded, ventral broadly and regularly arched rounding rather sharply postero-ventrally to the gently convex posterior end, which in turn gently curves into the relatively straight dorsal margin. Ornament distinctive, the low umbones being essentially smooth (possibly slightly worn) but with a rather strong pustulation soon developing, initially upon the postero-dorsal area, but rapidly coming to overlie all parts of the valve surface. Ventral and lateral to the first initiation of the pustules the valves develop a strongly nodose ornament that on the anterior and medial areas is crudely aligned in a manner suggestive of interrupted and irregular radial ribbing. On the specimen at hand this ribbing is more pronounced and least interrupted at about the midlength of the left valve. The postero-umbonal ridge and the surface dorsal to it are marked by strong, rounded to slightly drawn out and almost comma-shaped nodes whose arrangement suggests a possible origin on crudely divaricate ribbing. Towards the margins of the valves there are growth interruptions over which the coarsely nodose ornament persists but with the surficial pustulation absent on all but the posterior

end. Lunule absent, but a flattened, exceedingly narrow smooth area posterior to the narrow ligamental groove suggestive of an escutcheon is to be noted, more prominently developed upon the left valve than on the right.

Hinge typically petricolid: two cardinals in the right valve and three in the left with the anterior left cardinal immediately adjacent to and fused with the valve margin, the median cardinal bifid, strong, subtriangular, and the posterior one laminar; no lateral teeth in either valve. Anterior adductor scar slightly elongate, posterior one is almost round. Pallial line impressed, with a large pallial sinus that is almost one-half as wide as long with its rounded anterior end reaching almost to the anterior third of the total length. Inner valve margins smooth.

Holotype: USNM 647650, length 32.6 mm, height 18.3 mm, diameter (paired valves) 13.2 mm. Locality TU 1175; spoil bank on south side of canal 0.6 mile south of State Highway 858 at a point 2.0 miles east of the junction of Highway 858 with State Highway 846, Collier County, Florida.

Remarks: The paired valves of the holotype specimen show a sharp posterior deflection toward the right. Mrs. Hoerle (*in litt.*) states that individual valves in her collection show no trace of such a feature, hence it is here interpreted as one evidence of a nestling habit for the species and as representing an individual reaction to conditions in its own immediate nestling situation rather than being a specific or subgeneric characteristic.



Text figure 1. *Petricola (Petricoxenica) concoralla* H. E. Vokes, n. sp. Holotype, USNM 647650. (a & d) right valve; (b & c) left valve. X 1½ approx. (e) portion of surface, enlarged.