

NOTES ON THE FAUNA OF THE CHIPOLA FORMATION—XXI
A NEW SPECIES OF THE GENUS *LOPHA* (MOLLUSCA:BIVALVIA)

HAROLD E. VOKES
TULANE UNIVERSITY

The shallower water deposits of the Chipola Formation exposed in the section along Farley Creek eastward from the Chipola River contain many specimens of a relatively small species of the ostreid genus *Lopha*. All are elongate and most show evidence that they were attached, during life, to a tubular dasycladacian alga that is common in all collections from that area; a few, however, were attached to small cerithioid and *Turritella* shells.

Genus *LOPHA* Röding, 1798

Type species (by subsequent designation, Dall, 1898): *Mytilus cristagalli* Linnaeus, 1758. Recent, tropical Indo-Pacific.

Stenzel, in discussing the genus *Lopha* in the *Treatise on Invertebrate Paleontology* (1971, Part N, vol. 3, p. N1157), recognizes two "ecomorphs" of very different external appearance that result from differing habits of growth. One, typified by the type species of the genus, has both valves convex and equivalved, and is globular to irregularly rounded in shape with a few deep plications. It is generally found growing on mangroves or on the shells of other bivalves. The second ecomorph, of which the present species is an example, lives somewhat more offshore than the first and attaches, in the recent species, primarily to stems of sea fans and other Gorgonians, although we have in the Tulane collections a number that were attached to slender branching corals. It tends to be elongate-ovate to lanceolate in outline, and to have the valves outside of the area of attachment marked by relatively numerous radial plications with, on the upper (right) valve a tendency to develop a rounded, longitudinal ridge extending the length of the valve, in a position corresponding to the concave trough on the left valve that resulted from the surface of attachment. In the past, the species referred to this ecomorph were assigned to the genus *Dendostrea* Swainson, 1835 (type, *Ostrea folium* Linnaeus, 1758).

LOPHA FRONDICULA H. E. Vokes, n. sp.
Text figures 1-8

Description: Shell small, attached by the left valve, which is somewhat more convex than the right, elongate-ovate to lanceolate in outline, with, however, the anterior margin tending to be more produced and rounded than the posterior. Two differing variations represented, apparently reflecting differences in the width of the algal "stem" to which they attached. In those forms fixed to a slender dasycladacian tube the left valve, outside of the attachment groove, ornamented by numerous (25 to 40) low, rounded ribs that plicate the shell only in the marginal area, external to the pallial line; the upper, right valve but weakly ornamented, almost smooth, with thickened marginal denticulations fitted into the plicate folds. Forms with a broader attachment area tending to have fewer (about 20) stronger folds that plicate both valves from the outer margin to a point inside of the pallial line. Specimens of the former type narrower and more lanceolate in profile than those more ovate forms attached to a broader surface; the former almost always smaller than the more strongly plicate forms, perhaps because their weight causes the thin tubes to break off and fall, along with their attached shells, into the entombing sediment. Ligamental area subtriangular in outline, usually somewhat oblique with a moderately broad median depression deeper in the left valve than in the right. Margins of the right valve adjacent to the area raised to form narrow elongate ridges, received almost as crural ridges in grooves in the margin of the area of the left. Muscle scar moderately large and elongate to sub-elliptical in outline. Valve margins obscurely and minutely pustulate but the surface inside of the pallial line apparently smooth.

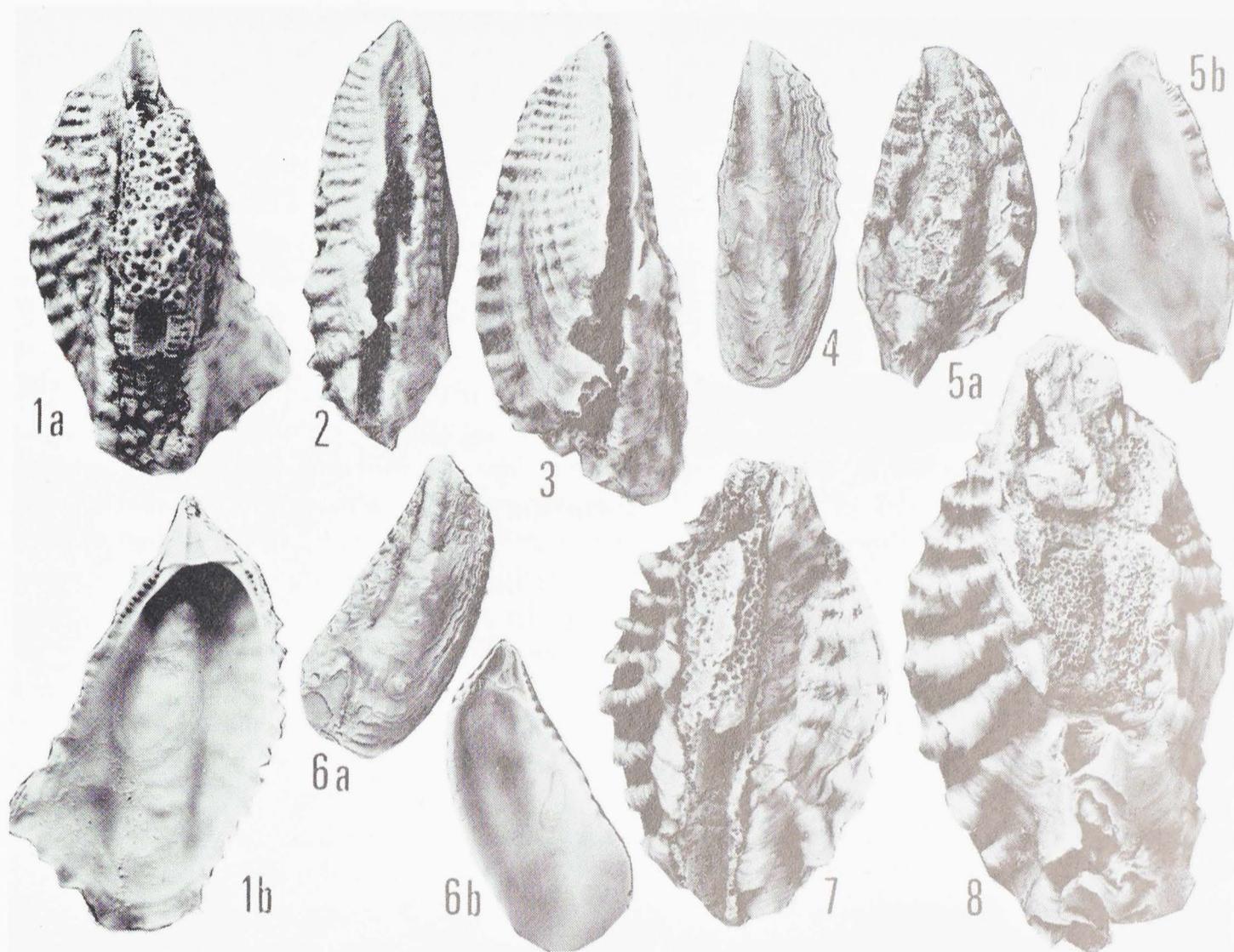
Type locality: TU 999, Farley Creek, about 900 feet west of bridge of Florida Highway 275 (SW $\frac{1}{4}$ Sec. 21, T1N, R9W), Calhoun County, Florida.

Remarks: The vast majority of the specimens of this new species in the Tulane collections represent the lanceolate form, the broader ovate type being relatively rare. They differ from the Recent warm-water western Atlantic *Lopha frons* (Linnaeus, 1758) in the much smaller size, and more abundant plications and/or costae. "*Ostrea (Lopha) folioides*" Woodring (1925, p. 61, pl. 7, figs. 3-5) from the Bowden Formation of Jamaica is also larger and differs in having

the plications only on the margin with the central part of the shell almost smooth.

(For bibliographic references and locality descriptions see preceding paper.)

November 16, 1977



Text figures:

1. USNM 248185, Holotype (left valve); height 23.3 mm, length 13.8 mm, diameter 5.1 mm; locality TU 999.
2. USNM 248186, Paratype (left valve); height 22.2 mm, length 7.6 mm, diameter 3.7 mm; locality TU 826.
3. USNM 248187, Paratype (left valve); height 24.0 mm, length 10.8 mm, diameter 3.6 mm; locality TU 1048.
4. USNM 248188, Paratype (right valve); height 18.2 mm, length 6.6 mm, diameter 2.7 mm; locality TU 1048.
5. USNM 248189, Paratype (right valve); height 17.7 mm, length 9.0 mm, diameter 4.0 mm; locality TU 818.
6. USNM 248190, Paratype (right valve); height 16.3 mm, length 7.3 mm, diameter 2.2 mm; locality TU 820.
7. USNM 248191, Paratype (left valve); height 24.5 mm, length 15.3 mm, diameter 5.5 mm; locality TU 820.
8. USNM 248192, Paratype (left valve); height 32.6 mm, length 18.1 mm, diameter 6.8 mm; locality TU 826.

(All figures magnified X 2)