

NOTES ON THE FAUNA OF THE CHIPOLA FORMATION— XLII  
A NEW SPECIES OF *OLIVA* (*OMOGYMNA*) (GASTROPODA: OLIVIDAE)

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The Olivinae of the Alum Bluff Group have been previously reviewed (Drez, 1981) with the description of two new species and one subspecies and the reassignment of previously described species to one new genus and subgenus. Recently during a visit to Tulane University to examine their paleontological collections, a new large species of Olivinae from the Chipola Formation was found in the collections, unlike anything else in the western Atlantic Tertiary. Further examination of the Tulane collections failed to produce an additional specimen.

Family OLIVIDAE Latrielle, 1825  
Subfamily OLIVINAE Swainson, 1840  
Genus *OLIVA* Bruguière, 1789

*Oliva* BRUGUIÈRE, 1789, *Encycl. Méth.* (Vers),  
v. 1, p. XV (genus without named species).

Type species: *Voluta oliva* Linnaeus, 1758  
(*Oliva ispidula* of most authors, not of Linnaeus) by tautonomy and monotypy.

*Discussion:* The reader is referred to Drez (1981) for an explanation of some of the confusion over the assignment of a type species for the genus *Oliva*.

Subgenus *OMOGYMNA*  
von Martens, 1897

*Omogymna* VON MARTENS, 1897, *Conchologische Miscellen* II, p. 157.

Type species: *Oliva paxillus* Reeve, 1850, by monotypy.

*Discussion:* *Omogymna* is characterized by a depressed posterior band on the body whorl, which may or may not be visible on the spire whorls, depending upon the amount of intrasutural callus. The width of the band may vary considerably from species to species, usually attaining a constant width by maturity. On juvenile specimens the posterior band can occupy up to two-thirds of the body whorl, gradually narrowing and becoming more depressed

with maturity. Drez (1981) provided a discussion of the designation of type species for this subgenus.

*OLIVA* (*OMOGYMNA*) *FARLEYENSIS* Drez, n. sp.  
Plate 1, figure 1

*Description:* Shell of large size for the genus, thick and heavy, body whorl smoothly rounded at both ends, slightly inflated, maximum diameter a little posterior to mid-line. Seven to eight whorls in holotype. Defective two+ whorl papillary protoconch. Spire approximately one-sixth of total height, with the profile planar in outline. Transition from protoconch to teleoconch whorl obscure, characterized by a rapid vertical flattening of last nuclear whorl and deepening of suture. The first teleoconch whorl nearly vertical in outline, with tendency to lateral flattening near end of first volution. A ribbon of callus, straight in outline, on early postnuclear whorls bordering posterior edge of previous volution, callus thickening and descending on later whorls and occupying slightly more than half of penultimate whorl with callus just touching anterior edge of posterior depressed band. Suture deeply channeled, narrow, with overhanging ribbon of callus. Depressed posterior band up to 3.0 mm wide with undulating anterior edge. Lip broken at posterior end, but appearing to be narrow, gradually widening anteriorly. Parietal callus heavy at anterior end becoming thinner toward posterior and extending to join callus on penultimate whorl. Approximately eight distinct lirae, stronger anteriorly with some secondary lirae in between, extending up to three-fourths the way to posterior end of columella. One strong and two weaker plications on base of columella, stronger posteriorly, evanescing before reaching siphonal notch. The siphonal fasciolar band intersecting parietal callus on columella a little less than half-way from anterior end of aperture, widening as it cuts obliquely across columella toward siphonal notch, fading around notch. Siphonal notch moderately deep, sides slightly flaring.

*Holotype:* USNM 496494; height 50.6 mm, maximum diameter 21.6 mm.

*Type locality:* TU 819, Chipola Formation; Farley Creek, 0.2 mile west of bridge of Florida

Highway 275 (SW 1/4 Sec. 21, T1N, R9W), Calhoun County, Florida.

*Etymology of name:* for Farley Creek, Calhoun County, Florida, origin of the holotype.

*Occurrence:* Chipola Formation, Florida.

*Figured specimen:* USNM 496494 (holotype).

*Discussion:* It is unfortunate that only one specimen of this impressive species has been found in the Chipola Formation, and that specimen is damaged.

Previously (Drez, 1981), *Oliva liodes* (Dall, 1903) was assigned to the subgenus *Omogymna* based on the occurrence of a minute depressed posterior band on the whorls (1.2 mm or less) (pl. 1, fig. 2). The posterior band on *O. farleyensis* is much thicker (3.0 mm) and is as thick as the posterior band on the body whorl (after reaching a constant width) of the type species of the subgenus *Omogymna*, *Oliva paxillus* Reeve (pl. 1, fig. 3).

Because of the large size of *O. farleyensis* as a species of the subgenus *Omogymna*, there are only two other species described which might be confused with *O. farleyensis*: *O. liodes* Dall, 1903, from the Chipola Formation and *O. valens* Jung (1971, pl. 13, figs. 7, 8), from the early middle Miocene of Carriacou, West Indies. *Oliva farleyensis* may be discriminated from contemporaneous *O. liodes* by its larger size, wider posterior band, and more rounded outline. Jung figured the holotype (pl. 13, fig. 7) and paratype (pl. 13, fig. 8) for *O. valens*. *Oliva farleyensis* can be separated from the holotype of *O. valens* by its larger size, planar outline for the spire, and wider posterior depressed band. The holotype and paratype of *O. valens* differ in outline and may actually be a mixture of two species of *Omogymna*.

The occurrence of two large species of *Omogymna*, *O. liodes* and *O. farleyensis* in a single formation (Chipola) is unique, since the only other occurrence of a large species of *Omogymna* is from Carriacou. Jung (1971) tentatively assigned *O. valens* to the subgenus *Omogymna* because of its large size, as no comparably sized species of *Omogymna* had been described at that time. The occurrence of the two large species of *Omogymna*, *O. liodes* and *O.*

*farleyensis*, in the Chipola Formation confirms the tentative assignment of the similar *O. valens* to *Omogymna* by Jung (1971).

In addition to *O. liodes* and *O. farleyensis*, the Chipola also contains another species of *Omogymna*, *O. martensii* Dall, 1903 (see Drez, 1981). This gives the Chipola Formation the distinction of being the only known formation with three species of *Omogymna*.

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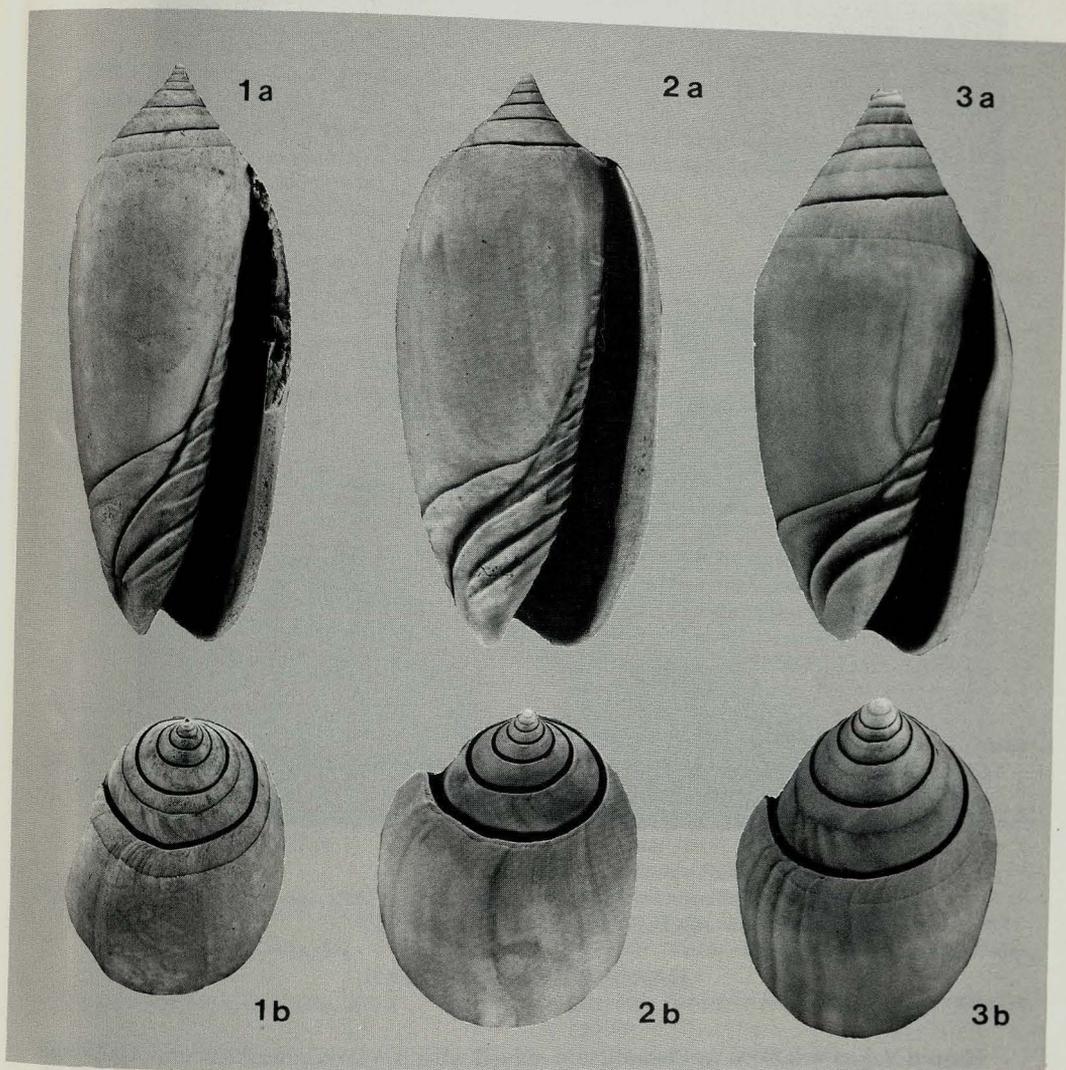
#### LOCALITY DATA

The following Tulane University localities are from the Chipola Formation, Calhoun County, Florida:

546. Tenmile Creek, about 1 3/4 miles west of Chipola River (NE 1/4 Sec. 12, T1N, R10W) (=USGS 2212, "one mile west of Bailey's Ferry").  
819. Farley Creek, 0.2 mile west of bridge of Florida Highway 275 (SW 1/4 Sec. 21, T1N, R9W).

#### LITERATURE CITED

- DALL, W. H., 1903, Contributions to the Tertiary fauna of Florida: Wagner Free Inst. Sci., Trans., v. 3, no. 6, p. 1219-1654, pls. 48-60.  
DREZ, P. E., 1981, Olivinae (Mollusca: Gastropoda) from the Alum Bluff Group of Northwestern Florida: Tulane Stud. Geol. Paleont., v. 16, no. 3, p. 105-122, pls. 1-2.  
JUNG, PETER, 1971, Fossil mollusks from Carriacou, West Indies: Bulls. Amer. Paleontology, v. 61, no. 269, 119 p., 21 pls.



## PLATE 1

## Figures

1. *Oliva (Omogymna) farleyensis* Drez, n. sp.  
(X 1.5) USNM 496494 (holotype); height 50.6 mm, diameter 21.6 mm.  
Locality: TU 819, Farley Creek, Florida: Chipola Formation.
2. *Oliva (Omogymna) liodes* Dall  
(X 2.5) USNM 247895; height 30.5 mm, diameter 13.6 mm.  
Locality: TU 546, Ten Mile Creek, Florida: Chipola Formation.
3. *Oliva (Omogymna) paxillus* Reeve.  
(X 3.5) USNM 880194, height 31.7 mm, diameter 10.2 mm.  
Locality: west coast of Mauritius.