

A new species of *Olivella* (Gastropoda: Olividae) from Eastern Florida

Edward J. Petuch¹ & David P. Berschauer²

¹Department of Geosciences, Florida Atlantic University, Boca Raton, Florida
ecphora3@outlook.com

²Santa Barbara Museum of Natural History
 2559 Puesta del Sol, Santa Barbara, California 93015
shellcollection@hotmail.com

ABSTRACT A new species of the olivid genus *Olivella* is described from Lake Worth Lagoon in Palm Beach County, Florida. This colorful species, here named *Olivella ellenae* n. sp., has been referred to as “*Olivella elongata*” by previous workers, but that species is now known to be a synonym of the widespread western Atlantic *Olivella floralia* (Duclos, 1835) and does not refer to this eastern Floridian endemic species. The new olivid is part of a highly endemic molluscan fauna that is found within the Palm Beach Infraprovince.

KEY WORDS Olividae, *Olivella ellenae*, Lake Worth Lagoon, Palm Beach Infraprovince, Florida

INTRODUCTION

The coastal lagoons of Palm Beach County, Florida, particularly the Lake Worth Lagoon system, have been shown to contain a distinct molluscan fauna with a large percentage of endemic species. Referred to as the Palm Beach Infraprovince by Petuch & Berschauer (2021: 23-24), this biogeographical area contain some remarkable endemic gastropods such as the muricid *Stramonita buchecki* Petuch, 2013, the cerithiid *Cerithium lutosum lindae* Petuch, 1987, the naticid *Neverita (Glossaulax) delessertiana patriceae* Petuch and Myers, 2013, and bivalves such as the semelid *Semele donovani* McGinty, 1955 and the venerid *Mercenaria hartae* Petuch, 2014 (for a complete list and illustrations of the endemic infraprovince taxa, see Petuch and Myers, 2013 and Petuch & Berschauer, 2021). The new Lake Worth and Palm Beach Infraprovince olivid, here named *Olivella ellenae* n. sp., is described in the following sections.

SYSTEMATICS

Class Gastropoda Cuvier, 1795
 Subclass Prosobranchia Milne Edwards, 1848
 Order Neogastropoda Cox, 1960
 Superfamily Olivoidea Latreille, 1825
 Family Olividae Latreille, 1825
 Subfamily Olivellinae Latreille, 1825
 Genus *Olivella* Swainson, 1831

Olivella ellenae Petuch & Berschauer,
 new species
 (Plate 1, Figures A, B)

Description. Shell small for genus, averaging only 10 mm in length, elongated and fusiform, with a narrow shell profile; spire elevated and protracted; shoulder of body whorl sloping, almost straight-sided; body whorl base color dark golden-tan overlaid with densely packed network of small dark tan triangular markings, forming wide solid color band that extends from shoulder to fasciole; anterior and posterior edges of wide color band marked with narrow band of dark brown flammules which fuse into solid brown band; edge of filament channel marked with clear narrow band of dark yellow,

without flammule markings; anterior end of body whorl pure white; spire whorls and penultimate whorl colored solid dark blue-purple; columella arcuate, white in color, with 13-15 small, poorly developed plicae; aperture proportionally wide and flaring, becoming wider toward anterior end; interior of aperture white, with band of dark brown at anterior end and small scattered pale flammules within; protoconch proportionally large, rounded, domelike, composed of two whorls, pale whitish-tan in color.

Type Material. HOLOTYPE - Length 10.1 mm, width 3.7 mm, from the Lake Worth Lagoon near Peanut Island and the Blue Heron Avenue Bridge, USNM 1762773; Paratypes - 3 specimens, 11.2 mm, 10 mm, and 9.6 mm, from the same locality as the holotype, in the collection of the senior author.

Type Locality. One meter depth in fine sand, under the Blue Heron Avenue Bridge, Singer Island, Riviera Beach, Palm Beach County, Florida, opposite the northern end of Peanut Island, Lake Worth Lagoon.

Range and Ecology. The new species has been collected primarily within the coastal lagoons of Palm Beach County but has also been found to occur in large numbers in 2-3 m depths within the adjacent Palm Beach Inlet, off the northern end of Palm Beach Island. This colorful new olivid may also range northward into the Indian River Lagoon system or possibly to Cape Canaveral.

Etymology. Named for Dr. Ellen Strong, Curator/Museum Scientist in the Division of Mollusks, Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution.

Discussion. This small, high-spired species from the Palm Beach coastal lagoons was misidentified as "*Olivella elongata* Marrat, 1871" by Petuch & Myers, 2014 (Figure 6.13 C) in their book on the mollusks of the Florida

Keys and adjacent coastal areas. That species (shown here on Figure 1 E, F) is now known to be a synonym of the widespread western Atlantic *Olivella floralia* (Duclos, 1835) (Figure 1 C, D) and is here considered to be simply a pure white color form. This same type of white variant was also given the name "*Oliva*" *alba* by Marrat in 1871 and "*Oliva*" *oryza* by Duclos in 1835 for West Indian specimens.

The new Palm Beach species, *Olivella ellenae*, differs from *O. floralia* in being consistently a smaller, less elongated shell with a lower spire and a more rounded and inflated shell outline. The aperture of the new species is also wider and more flaring than that of the slender *O. floralia*, which has a much narrower apertural area. The columellar plicae of *O. floralia* are also proportionally larger than those of *O. ellenae*, which are poorly developed and proportionally small (see Plate 1, Figure B). The most strikingly consistent difference between the two congeners is that of the shell color and color patterns: on *O. floralia*, the shell is pure white, overlaid with a sparse network of reddish-brown zig-zag lines on the body whorl and the edge of the shoulder is characteristically marked with prominent, large, widely-separated brown crescent-shaped flammules; on *Olivella ellenae* the shell is consistently a deep golden-tan color with tan triangle markings, dark brown bands, and deep purple-blue spire whorls. Some specimens of *O. floralia*, such as the forms that were named *oryza*, *alba*, and *elongata*, are pure white and lack the network pattern.

LITERATURE CITED

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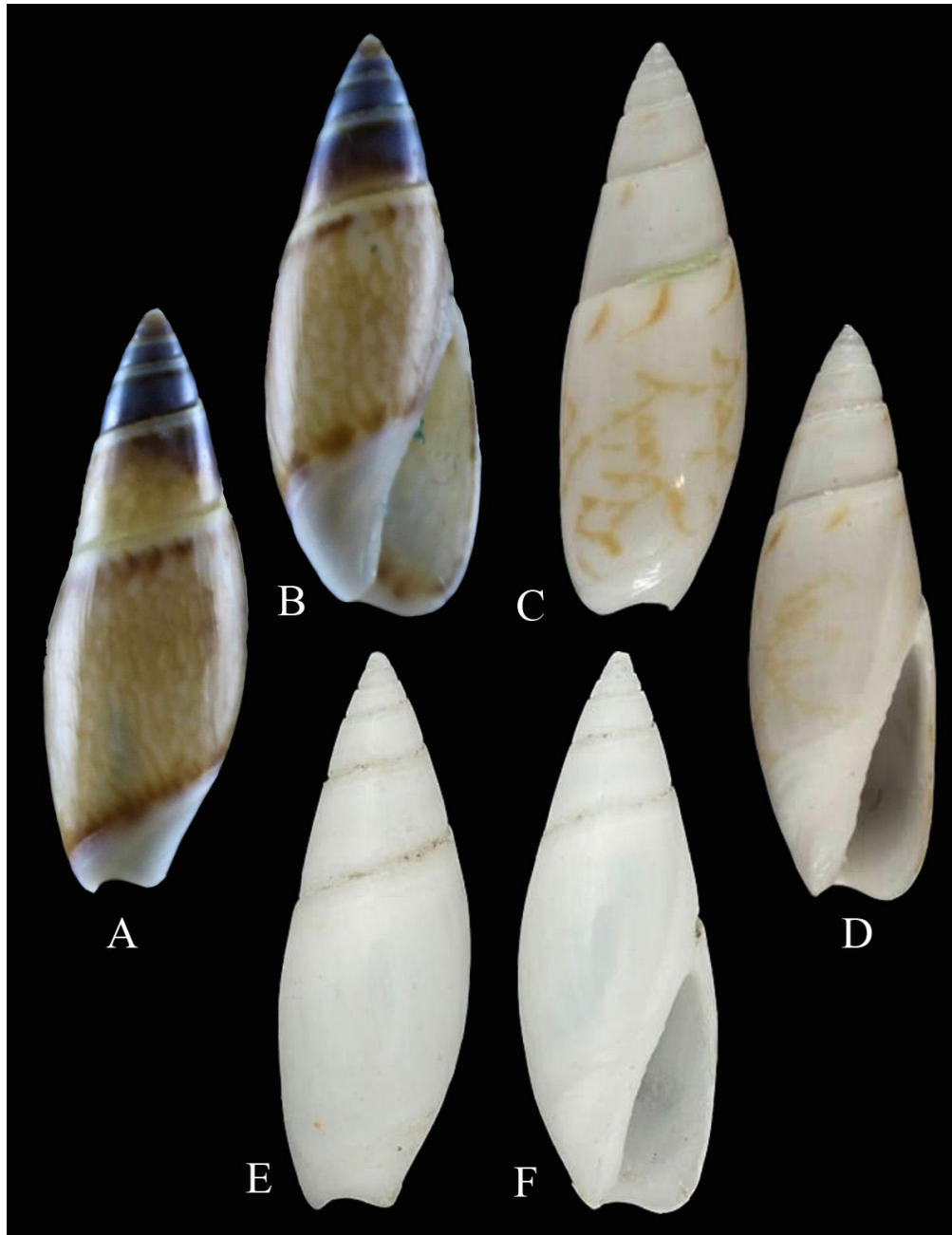


Plate 1. *Olivella* species from the coasts of Florida.

A, B= *Olivella ellенаe* Petuch & Berschauer, new species, holotype, USNM 1762773, length 10.11 mm, from the Lake Worth Lagoon, Palm Beach County, Florida; **C, D= *Olivella floralia*** (Duclos, 1835), syntype, length 15 mm; **E, F= *Olivella elongata*** (Marrat, 1871), syntype, length 7 mm (considered to be a synonym of *Olivella floralia* by most olivid workers).