

Hybridization of *Strombus pugilis* Linné, 1758 and *Strombus alatus* Gmelin, 1791 in the Lake Worth Lagoon, a salt-water estuary, located in Palm Beach County, Florida, U.S.A.

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Palm Beach County is located on southeastern Florida's Atlantic coast. It is unique in the fact that it serves as a junction or overlap for the ranges of molluscan fauna of the Georgian Subprovince, the Floridian Subprovince and the Bahamian Subprovince forming the Palm Beach Provinciatone. This area ranges from Southern Martin County to Northern Broward County and it contains species from all three areas living together.

The existence of hybridization between *Strombus pugilis* Linné, 1758 and *Strombus alatus* Gmelin, 1791 has been known to Florida collectors from some time, however; it has not been widely publicized. The center of this activity appears to be in the Lake Worth Lagoon. This is a salt water estuary located between Singer Island and the Town of Palm Beach (located on a barrier island) and the Florida mainland with North Palm Beach at the northern terminus extending southward to Boynton Beach. This habitat consists of a sandy bottom with a limestone base underlayment containing areas of turtle grass on the shallow flats and mangrove jungles along the undeveloped shorelines. Peanut Island has been the historical type locality for many species and forms of molluscan fauna. Unfortunately, the County of Palm Beach has recently developed this pristine area into a public park with marinas and a sandy beach destroying the habitat and eliminating much of the unique fauna. Among the forms that appear to be lost is the bizarre "paddle wheel spined" form "*sloani*" which occurs in both *Strombus alatus* and *Strombus pugilis*. I have added photos of both at the end of this paper.

All of the hybrids of *alatus* and *pugilis* that are known to me have been found in the Lake Worth Lagoon near or around Peanut Island. This island is located inside the Palm Beach Shores Inlet which allows passage of water and fauna from the lagoon to the open Atlantic Ocean. All of the specimens in my collection were collected by known shell dealer and SCUBA diver Tom Honker. All of the hybrids that he has seen or collected have come from the Lake Worth Lagoon. This is significant as he has been diving the entire area from the deeper reefs in the Atlantic to the intercoastal waters of southern Florida, the Bahamas and the Florida keys for the past thirty plus years.

The *Strombus alatus x pugilis* hybrids are interesting as they range from looking like either *alatus* or *pugilis* with only slight differences to obvious hybrid specimens having characteristics of both species. I have arranged the attached plates ranging from *Strombus alatus* to *Strombus pugilis*.

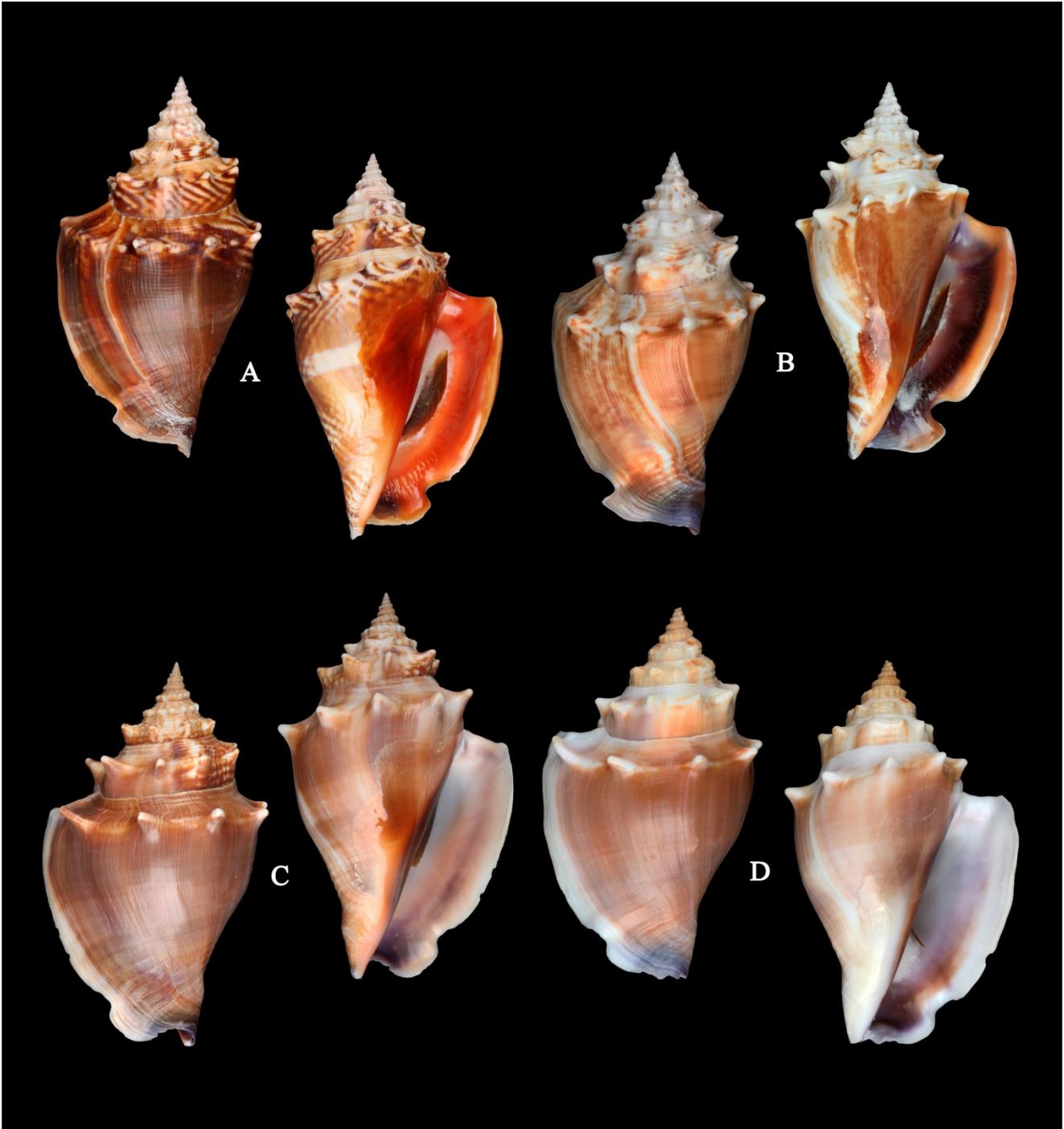


Figure 1.

- A.** *Strombus alatus* Gmelin, 1791, Length 92.95 mm. Lake Worth Lagoon
- B.** *Strombus alatus* Gmelin, 1791, Length 88.88 mm. Lake Worth Lagoon
- C.** *Strombus alatus* x *pugilis* hybrid, Length 90.68 mm. Peanut Island
- D.** *Strombus alatus* x *pugilis* hybrid, Length 90.26 mm. Peanut Island



Figure 2.

- A. *Strombus alatus* x *pugilis* hybrid Length 89.71 mm. Peanut Island, note spire
- B. *Strombus pugilis* Linné, 1758, Length 82.42 mm. Peanut Island
- C. *Strombus pugilis* Linné, 1758, Length 85.01 mm. Peanut Island



Figure 3. Both *Strombus alatus* and *Strombus pugilis* can exhibit the anomaly that was described as “*sloani* Leach, 1814” This name has no validity and is considered a synonym.

- A. *Strombus pugilis* Linné, 1758, Length 82.22 mm. Peanut Island**
- B. *Strombus alatus* Gmelin, 1791, Length 99.31 mm. Peanut Island**