

Two New Cone Species from Espirito Santo State, Brazil

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ABSTRACT Two new species of cone shells, *Dauciconus rosapex* n. sp. and *Poremskiconus poremskigrandis* n.sp., are described from the southern coast of Espirito Santo State, Brazil. This area, encompassing the southernmost section of the Bahian Subprovince, Brazilian Molluscan Province, has recently been found to contain a large number of endemic cones shells and represents a possible new infraprovince within the Bahian Subprovince.

KEY WORDS Conidae, *Dauciconus*, *Poremskiconus*, Brazil, Espirito Santo State, Brazilian Molluscan Province, Bahian Subprovince, *Dauciconus rosapex*, *Poremskiconis poremskigrandis*

INTRODUCTION

Our recent field collecting along the coastline of Espirito Santo State, in south central Brazil, has resulted in the discovery of numerous new marine mollusks, most notably several new species in the Family Conidae (Crabos, Pomponet, Queiroz, and Passos, 2023). Some of these newly-discovered Espirito Santo taxa included remarkable species such as *Dauciconus luizcoutoi* and *Poremskiconus guarapari*, indicating that the southern part of the State represents a localized “Hot Spot” of evolution (referred to as an “Infraprovince” by Petuch and Berschauer, 2020: 10-12, 43-47). Continued exploration by ourselves and fellow citizen scientists, such as Alfredo Bodart and Luiz Couto, have yielded several more unnamed cone shells, demonstrating that the malacofauna

of the southern Brazilian Province is much richer and more diverse than previously thought.

The offshore areas of southern Espirito Santo are still biologically-unexplored and the little data that is available was obtained mostly from collections taken from baited octopus pots (traps) placed in depths of 40-70 m (Crabos, Pomponet, Queiroz, and Passos, 2023). Recently, two more previously-unnamed species of deeper water (mid-Neritic Zone) cone shells have been collected in octopus pots and these are described in the following sections. The holotypes of these new taxa are deposited in the type collection of the Malacology Section of the National Museum (Museu Nacional do Rio de Janeiro), Rio de Janeiro, Brazil and bear NMRJ catalog numbers.

SYSTEMATICS

Class Gastropoda
 Subclass Sorbeoconcha
 Order Prosobranchia
 Infraorder Neogastropoda
 Superfamily Conoidea
 Family Conidae
 Subfamily Coninae (=Puncticulinae)
 Genus *Dauciconus* Cotton, 1945

Dauciconus rosapex Crabos, Pomponet,
 Queiroz, and Passos, new species
 (Plate 1, Figures A-I)

Description. Shell of average to large size for genus, compact, with straight sides and low, concave spire; shoulder angled with slightly rounded, subcarinate edge; spire whorls slightly canaliculated; body whorl smooth and polished; shell base color orange-brown with wide pink band on anterior third and mid-body, sometimes with smaller darker subsidiary band; spire with whitish pink base color, marked with 12 to 15 evenly-spaced crescent-shaped brown flammules; protoconch pink; and aperture uniformly narrow, colored deep pink inside.

Type Material. HOLOTYPE - length 63.1 mm, width 33.5 mm, from off Marataizes, Espirito Santo State, Brazil, MNRJ 24489; PARATYPES - 3 specimens, length 59.7 mm, 49.4 mm and 39.3 mm, in the Olivier Crabos collection.

Type Locality. Collected by octopus fishermen, from 60 to 70 m depth off Marataizes, 30 kms South of Guarapari, Espirito Santo State, Brazil, on fine calcareous sediments.

Range. The new species is known only from the type locality off Marataizes, Espirito Santo State, Brazil.

Etymology. Named in reference to the bright pink protoconch and early whorls of the new species, which distinguishes it from other sympatric *Dauciconus* species.

Discussion. In addition to *Dauciconus rosapex*, three similar, large *Dauciconus* occur in the southern Espirito Santo region; *Dauciconus worki* Petuch 1998 and *Dauciconus riosi* Petuch 1986 (illustrated in Petuch and Berschauer, 2020: figures 2.37K and 2.40H), and *Dauciconus luizcotoi* Crabos, Pomponet, Queiroz and Passos, 2022. *Dauciconus rosapex* is easily distinguishable from *D. worki* and *D. riosi* by its prominent bright pink protoconch and early whorls; the previously-described *D. worki* has a yellow protoconch and early whorls while *D. riosi* has a pale orange or orange-pink protoconch. In addition to the differences in general shell outline, the spire of the new species is more similar to *D. worki* than to *D. riosi*, as it is concave and not flat like the spire of *D. riosi*. In spire and protoconch color, *Dauciconus rosapex* is most similar to *D. luizcotoi* and shares the same type of pink protoconch and aperture. The new species differs from its recently-described sympatric congener in having a body whorl color pattern that is dominated by wide, discrete orange and brown bands and not elongated, longitudinal white and brown flammules arranged in a zebra pattern as seen on *D. luizcotoi*. The shell outline of the new species is also stockier and more robust than that of the much more slender *D. luizcotoi*. For comparison images to related *Dauciconus* species see Plate 3.

Genus *Poremskiconus* Petuch, 2013

Poremskiconus poremskigrandis Crabos,
 Pomponet, Queiroz, and Passos, new species
 (Plate 2, Figures A-F)

Description. Shell of large size for genus, conic, with a narrowing at anterior end; spire moderately elevated, high spire for genus; shoulder sharply-angled, subcarinate, edge decorated with prominent brown hairline flammules; spire whorls slightly canaliculated;

body whorl smooth; shell base color whitish-pink, overlaid with wide areas of solid color, usually pale yellow-orange or darker crimson-orange, with most common base color being deep salmon-orange; prominent wide, white mid-body band present, marked with scattered brown flammules and overlaid with 2-4 rows of tiny brown spots; row of smaller brown flammules present along anterior end; spire colored with approximately 30 brown, evenly-spaced crescent-shaped brown flammules; protoconch pink; aperture narrow, widening slightly toward anterior end; and interior of aperture colored pale whitish-pink.

Type Material. HOLOTYPE - length 36.5 mm, width 18.6 mm, from off Guarapari, Espirito Santo State, Brazil, MNRJ 24490: PARATYPES - 1 specimen length 33.6 mm in the Olivier Crabos collection and 2 specimens length 33.5 and 25.5 mm in the Gregorio Queiroz collection.

Type Locality. Collected by octopus fishermen, from 60 to 70 m depth, off Guarapari, Espirito Santo State, Brazil, on fine calcareous bottom.

Range. The new species is known only from the type locality off Guarapari, Espirito Santo State, Brazil.

Etymology. Named in reference to the unusually large size of the new species within the genus *Poremskiconus*, which generally contains much smaller species.

Discussion. This new *Poremskiconus* species is most similar to the Abrolhos Platform (Bahia State, 300 kms north of Guarapari) endemic *P. pseudocardinalis*, Coltro 2004, but differs primarily in being a much larger shell: *P. pseudocardinalis* ranges in size from 14 mm to 24 mm; *P. poremskigrandis* ranges in size from 25 mm to 37 mm (see Coltro, 2004 for illustrations of the variations in shell morphology of *P. pseudocardinalis*). The new species also differs from its northern congener in being a more elongated shell that is broader across the shoulder, in having a much thinner

and more fragile shell, in having a proportionally-wider aperture, and in having a shinier and more polished appearance. For comparison images to related *Poremskiconus* species see Plate 3.

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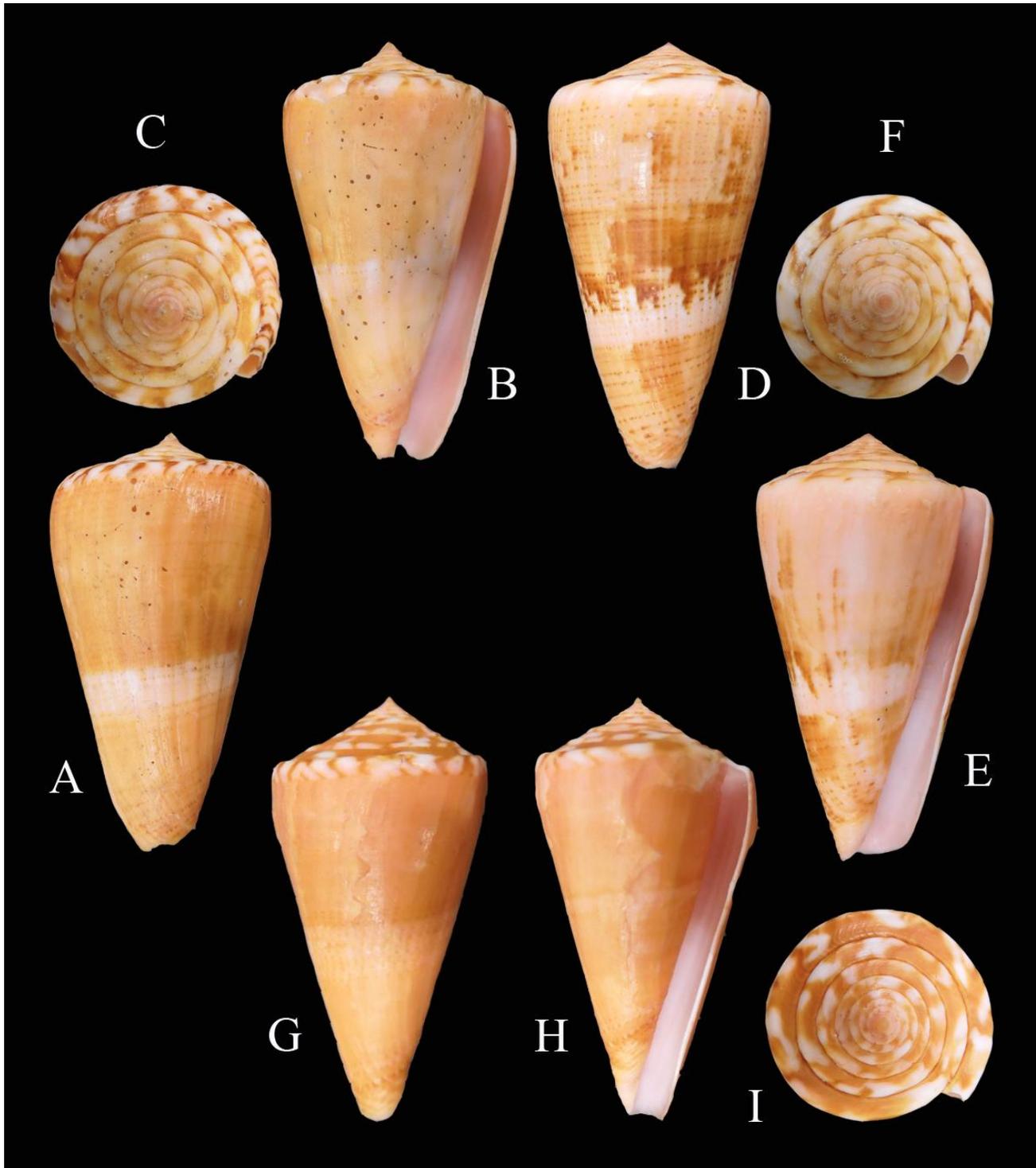


Plate 1. *Dauciconus rosapex* new species, from Espirito Santo State, Brazil.

A, B, C= holotype, length 63.1 mm; D, E, F= paratype, length 59.7 mm; G, H, I= paratype length 49.4 mm. All specimens were collected in octopus pots (traps) placed in 60-70 m depths, off Marataizes, southernmost Espirito Santo State, Brazil.

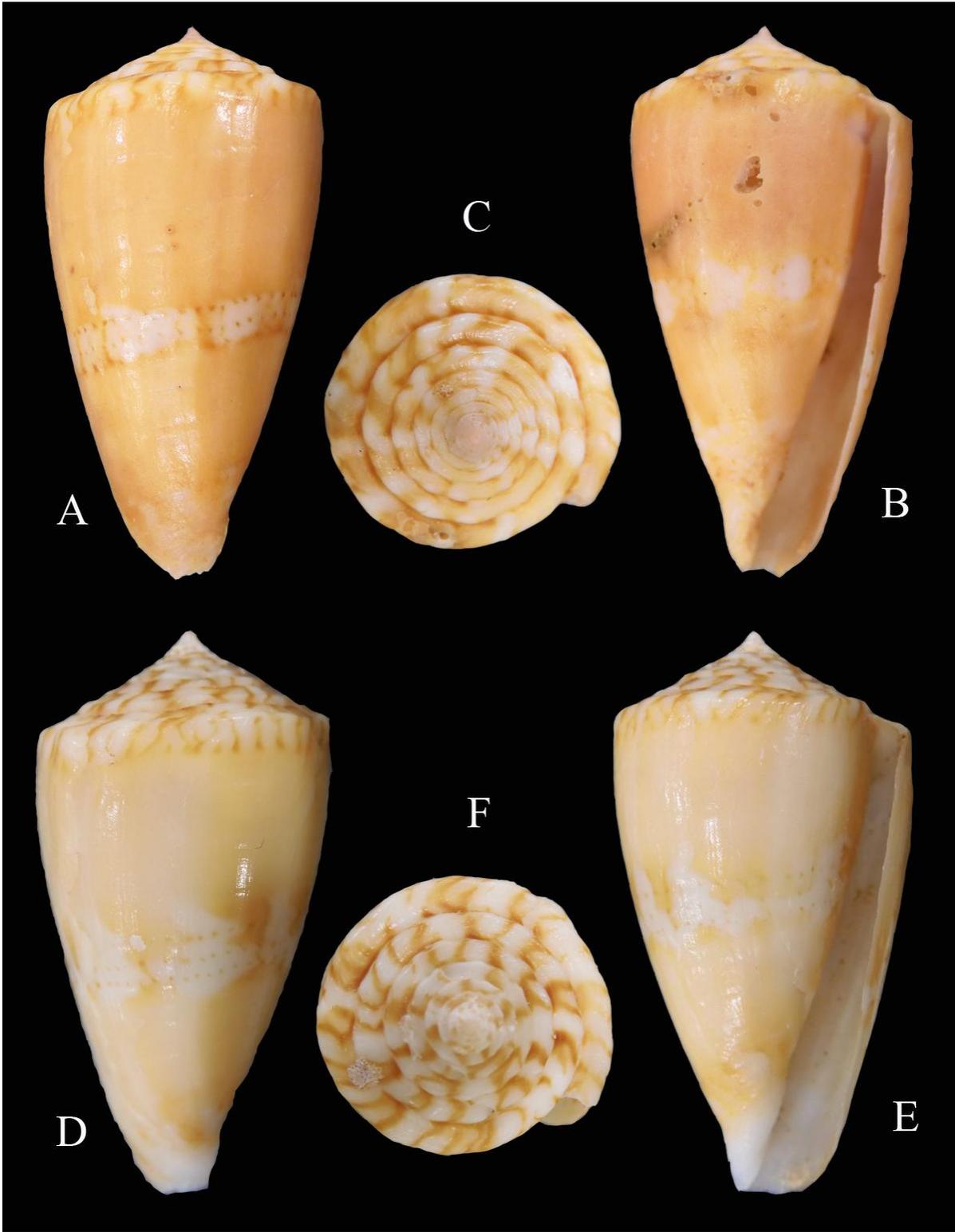


Plate 2. *Poremskiconus poremskigrandis* new species, from Espirito Santo State, Brazil.
A, B, C= holotype, length 36.5 mm; D, E, F= paratype, length 33.5 mm. Both specimens were collected in octopus pots (traps) placed in 60-70 m depths, off Guarapari, Espirito Santo State, Brazil.

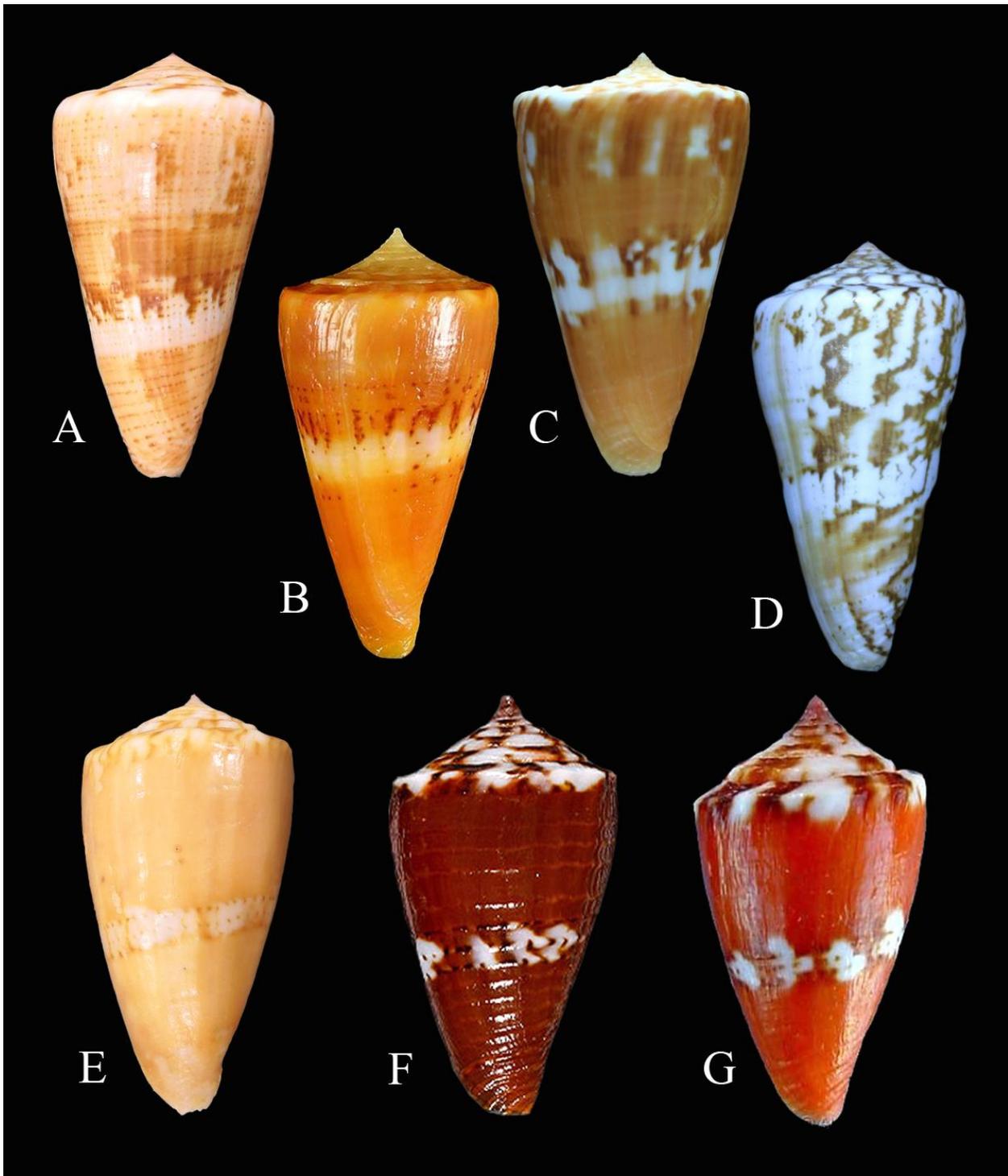


Plate 3. Comparison Plate - *Dauciconus* and *Poremskiconus* species.

A= *Dauciconus rosapex*, n.sp., holotype 63.1 mm in length; **B=** *Dauciconus worki*, Petuch 1998, 32.2 mm in length; **C=** *Dauciconus riosi*, Petuch 1986, 49.0 mm in length; **D=** *Dauciconus luizcouthoi*, Crabos, Pomponet, Queiroz and Passos, 2022, holotype 58.1 mm in length; **E=** *Poremskiconus poremskigrandis*, n. sp., holotype 36.5 mm in length; **F=** *Poremskiconus pseudocardinalis*, Coltro 2004, 17.7 mm in length; **G=** *Poremskiconus pseudocardinalis*, Coltro 2004, 20.1 mm in length.