

Species of the Families Costellariidae and Mitridae Dredged by the R/V *Pelican* in the Gulf of Mexico

Emilio F. García
115 Oak Crest Dr.
Lafayette, LA 70503
Emilio.Garcia1@louisiana.edu

ABSTRACT This paper reports 12 species of Costellariidae and 6 species of Mitridae dredged by the R/V *Pelican* in the Gulf of Mexico off the coasts of Louisiana, Mississippi, Alabama, Florida and Bahía de Campeche, Mexico, between 1996 and 2019. Each species is accompanied by accurate coordinates and depth and, in most cases, benthic composition.

KEYWORDS Gulf of Mexico, Costellariidae, Mitridae, geographic distribution, habitat

INTRODUCTION

This is a continuing report of species collected by the R/V *Pelican* between 1996 and 2019 in the Gulf of Mexico (hereinafter abbreviated as “GOM”). The Family Costellariidae is represented by 12 species: 1 species in the genus *Latiromitra*, 1 in *Mitromica*, and 12 in *Vexillum*. The Family Mitridae is represented by 6 species: 1 in *Dibaphimitra*, 3 in *Isara*, 1 in *Neotiara*, and 1 in *Subcancilla*; the latter, an undescribed species, is the first Recent species of that genus recorded in the GOM.

A number of the dredged samples consist of single specimens. This taxonomic paucity is due to the rarity of the species, usually because they inhabit very deep water, or because most *Pelican* stations were from water deeper than the normal species habitat. Most of the sampling took place off Louisiana, with five “short” expeditions to Alabama and Mississippi, five to Florida and one to Bahía de Campeche, Mexico; therefore, the Louisiana molluscan fauna is the best represented. On the other hand, the three-week, single campaign in Campeche yielded a number of new finds, and added 17 % to the number of species recorded from the

southwestern quadrant of the GOM (Rosenberg *et al.*, 2009).

SYSTEMATICS

List in alphabetical order by genus of the families Costellariidae and Mitridae:

Family Costellariidae McDonald, 1860

Latiromitra niveobabelis García, 2015 (Figure 1) - The genus *Latiromitra* had been traditionally placed in the family *Ptychatractidae*, but more recent studies consider it to be better placed in *Costellariidae*. A single specimen of this species was dredged off FLORIDA: 25°51.104'N, 84°52.278'W, in 1737 m, in rubble/mud.

Mitromica foveata (Sowerby, 1874) (Figure 2) - The westernmost record for this species is 89.7° N (Rosenberg, 2009); this find extends its western geographical distribution. MEXICO: 21°51.32'N, 92°03.68'W, in 66-68 m, in mud/shells; 20°52.40'N, 92°24.83'W, in 77-81 m in mud.

Vexillum articulatum (Reeve, 1845) (Figure 3) - This species is similar to *V. histrio* (Reeve, 1844), with which it has been confused in the past (see García, 2011). It has also been confused with *V. pulchellum*; figures 3-3a in Tunnell *et al.* (2010:228), identified as *V. puchellum*, are *V. articulatum*. FLORIDA: 24°37.51'N, 83°36.57'W, in 70.4-93.4 m; 24°48.61'N, 83°40.59'W, in 65.9-66.6 m; 24°48.929'N, 83°40.609'W, in 65 m, in rubble and crushed shells. LOUISIANA: 27°57.599'N, 92°02.619'W, in 67 m, in rubble; 28°05.793'N, 91°01.607'W, in 56-57 m, in rubble; 28°05.945'N, 91°02.163'W, in 53.8-56.1 m, in rubble; 28°05.845'N, 91°01.817'W, in 54-58 m, in rubble; 28°05.605'N, 91°01.778'W, in 57 m, in rubble; 28°05.54'N, 91°01.38'W, in 54.8-56.6 m, in rubble.

Vexillum epiphaneum (Rehder, 1943) (Figure 4) - FLORIDA: 25°01.354'N, 83°43.559'W, in 82-85 m, in rubble. LOUISIANA: 28° 03.439'N, 92° 26.978'W, in 71-74 m, in calcareous rubble; 28°06.066'N; 91°02.418'W, in 57-65 m, in calcareous rubble; 28°05.760'N, 91°01.147'W, 64.7-62.1 m, in rubble; 28°05.508'N, 91°01.611;W, in 56m, in fine rubble.

Vexillum garciai Salisbury & Wolff, 2009 (Figure 5) - This previously undescribed species was dredged at three stations in Bahía de Campeche, MEXICO: 20°52.40'N, 92°24.83'W, in 77-81 m, in mud; 20°51.49'N, 92°21.44'W, in 63-65 m, in mud; 20°00.35'N, 92°26.10'W, 73-77 m, in mud.

Vexillum hendersoni (Dall, 1927) (Figure 6) - Dredged only as single specimen, it was collected alive only once. FLORIDA: 27°37.16'N, 84°00.32'W, in 57.6-57.6 m. LOUISIANA: 27° 56.358'N, 92° 00.540'W, in 60 m, in calcareous rubble; 28° 03.439'N, 92° 26.978'W, in 71-74 m, in coralline rubble; 28°4.57'N, 90°59.99'W, in 87.9 m; 28°4.57'N,

90°59.99'W, in 87.9 m; 28°38.16'N, 89°33.19'W, in 60-70 m; 28°03.71'N, 92°27.77'W, in 59-62 m, in medium-size rubble, alive; 28°03.44'N, 92°27.32'W, in 65-73 m, in rubble/mud; 28°37.85'N, 89°33.23'W, in 63.3-66 m; 27°51.103'N, 92°55.180'W, in 75-108 m, in sediment; 27°59.28'N, 91°39.28'W, in 77-79 m, in rubble. MEXICO: 20°50.22'N, 92°18.91'W, in 53 m, in mud; 20°00.35'N, 92°26.10'W, 73-77 m, in mud.

Vexillum cf. hendersoni (Dall, 1927) (Figure 7) - This may be an abnormal specimen of *V. hendersoni* but, besides different coloration, it has more numerous axial ribs. LOUISIANA: 27°59.28'N, 91°39.28'W, in 77-79 m, in rubble.

Vexillum moniliferum (C. B. Adams, 1850) (Figure 8) - Although Rosenberg (2009) reports this species from the Florida Keys, Rosenberg *et al.* (2009) do not record it from the GOM. This seems to be the only confirmed record from the GOM. MEXICO: 20°39.66'N , 91°57.09'W, in 29-33 m.

Vexillum pulchellum (Reeve, 1844) (Figure 9) - Before the *Pelican* findings, this species had been reported in the GOM only from the Florida Keys (Rosenberg, 2009). Figures 3-3a in Tunnell *et al.* (2010:228), identified as *V. puchellum*, are *V. articulatum*. FLORIDA: 29°43.08'N, 85°53.16'W, in 39-38.7 m. LOUISIANA: 27°53.418'N 93°18.219'W, in 50-65 m, in calcareous rubble; 27°58.947'N, 91°39.382'W, in 66-79 m, in rubble.

Vexillum styria (Dall, 1889) (Figure 10) - Only poorly preserved specimens were collected; before the *Pelican* findings, records from Louisiana had not been previously reported. ALABAMA: 29°21'N, 87°42'W, in 140 m; 29°28'N, 87°27.30'W, in 173 m. FLORIDA: 27° 34' N; 84° 30' W, in 140 m, in rubble/sand; 27°48.62'N, 84°45.80'W, in 205-210.5 m.

LOUISIANA: 27°53.65'N, 91°21.48'W, in 219-221 m, in mud. MEXICO: 22°16.28'N, 91°30.42'W, in 107-108, in mud.

Vexillum sykesi (Melvill, 1925) (Figure 11) - This was the most commonly dredged costellariid in the Louisiana offshore banks. FLORIDA: 24°59.14'N, 83°39.39'W, in 71.7-73.0 m; 27°42.20'N, 84°10.25'W, in 57.5-57.9 m; 24°58.61'N, 83°39.28'W, in 75.8-76.8 m; 28°55.45'N, 85°09.20'W, in 54 m. LOUISIANA: 27°48.7'N, 93°02.88'W, in 55-65 m; 27°54.895' N 92° 22.594' W, in 60 m, in calcareous rubble; 28°05.897'N 91°02.169'W, in 56 m, in calcareous rubble; 27° 59.141'N, 91° 38.832'W, in 91-65 m in calcareous rubble/sponges; 28°06.066'N, 91°02.418'W, in 57-65 m, in calcareous rubble; 28°5.85'N, 91°1.28'W, in 68.3 m; 28°38.16'N, 89°33.19'W, in 60-70 m; 28°36.905'N, 89°32.658'W, in 65-80 m; 28°44.76'N, 90°14.15'W, in 27-28 m, in rubble /sponges; 28°05.041'N, 91°01.648'W, in 70-75 m, in rubble. MEXICO: 20°39.59'N, 91°57.06'W, in 30-31 m, in rubble/sponges/gorgonian; 22°08.04'N, 91°23.67'W, in 52-53 m, in rubble; 22°10.42'N, 91°09.55'W, in 46-48 m, in rubble.

Vexillum variatum (Reeve, 1845) (Figure 12) - This Campeche specimen is the first record of the species from the GOM. MEXICO: 22°19.42'N, 90°21.84'W, in 54-49 m, in rubble.

Vexillum wandoense (Holmes, 1859) (Figure 13) - A widely spread species, but dredged at only two stations in west Florida, perhaps due to its small size and shallower habitat. FLORIDA: 27° 37'N, 83° 46' W, in 40 m; 27°42.71'n, 84°13.09'W, in 68- 68.5 m.

Family *Mitridae* Swainson, 1831

Dibaphimitra florida (Gould, 1856) (Figure 14) - Only two empty specimens were dredged off

Dry Tortugas. FLORIDA: 24°35.36'N, 83°24.62'W, in 64.0-64.1 m, in rubble & sand; 24°58.70'N, 83°39.23'W, in 75.9-76.1 m.

Isara antillensis (Dall, 1889) (Figure 15) - Also reported from Texas (Tunnell *et al.*, 2010: 229), it is a rare species in the northern GOM. LOUISIANA: 27° 49.24N 92° 53.71W, in 75-85 m, in calcareous rubble; 27°59.189'N, 91°39.466'W, in 77-79 m, in rubble; 28°08.534'N, 90°53.517'W, in 100 m, in mud; 27°53.711'N, 91°21.506'W, in 120 m; rocks/ lg. rubble; 27°55.14'N, 92°22.71'W, in 168-160 m.

Isara straminea (A. Adams, 1853) (Figure 16) - Considered to be a rare species, it seems to live in large colonies in mud bottom. The figured specimen is one of some twelve specimens collected alive in the same dredge haul. ALABAMA: 29°21'N.; 87°42'W, in 140 m; 29°15.512'N, 88°20.269'W, in 85 m, in shelly mud. LOUISIANA: 28°38.06'N; 89°33.13'W, in 66 m; 28°06.975'N; 90°58.150'W, in 89-92 m, in mud, alive, common; 28°38.16'N, 89°33.19'W, in 60-70 m; 28°37.327'N, 89°33.046'W, in 77-85 m; 28°03.080'N, 91°58.641'W, in 101-100 m, in mud; 28°05.068'N, 91°11.360'W, in 110 m, in packed mud; 27°49.34'N, 93°05.92'W, in 195-196 m; 27°53.56'N, 91°21.6'W, in 95-95 m; 27°53.65'N, 91°21.48'W, in 219-221 m, in mud.

Isara ulala (García, 2011) (Figures 17-18) - In spite of the frequency with which it was found in Louisiana, it was not found anywhere else in the GOM. LOUISIANA: The species was dredged at 19 stations on calcareous tops of pinnacles between 57 and 100 m. [cf. *Isara lenhilli* (Petuch, 1988) (holotype = USNM 859944) which the author distinguishes on a number of characters including axial sculpture, protoconch structure, isolated locality, etc.]

Neotiara nodulosa (Gmelin, 1791) (Figure 19) - Although commonly dredged on the offshore

pinnacles of Louisiana, the largest specimen, figured here, measures only 21.2 mm. Tunnell *et al.* (2010:229) report it from Texas, but show only a 7 mm juvenile specimen. ALABAMA: 29°15.00'N, 88°20.77'W, in 80 m, in rubble with gorgonians. FLORIDA: 24°37.51'N, 83°36.57'W, in 70.4- 93.4 m; 28°10.28'N, 84°01.95'W; in 41-41.5 m. LOUISIANA: This species was dredged at 13 stations on top of pinnacles between 55 and 79 m.

Subcancilla sp. (Figure 20) - This was an unexpected find, as no *Subcancilla* had been recorded from the GOM. The greatest depth reported for a western Atlantic *Subcancilla* is 100 m (Rosenberg, 2009). MEXICO: 22° 46.25'N, 9016.52'W, in 350 m, in mud.

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Cite as:

García, E.F. 2023. Species of the Families Costellariidae and Mitridae Dredged by the R/V *Pelican* in the Gulf of Mexico. The Festivus 55(1):65.70. <http://doi:10.54173/F55165>

ERRATA for The Festivus 54(4): 287-293 (November 2022)

<http://doi:10.54173/F544287>

In the paper entitled “Four New Cone Shells from Northern and Central Brazil”, one of the four authors of the new taxa, Gregorio Pereira de Queiroz, had his surname misused in the naming of the new species. Due to their lack of knowledge of the formation of compound surnames in Latin cultures, the editors chose the wrong surname, Pereira, to attribute to the four new taxa. The new species, *Jaspidiconus barragrandsis*, *Jaspidiconus tibauensis*, *Dauciconus luizcotoi*, and *Poremskiconus guarapari*, were all attributed to the authors Crabos, Pomponet, Pereira, and Passos and are considered *nomina imperfecta*. That should now be changed to Crabos, Pomponet, Queiroz, and Passos, and presented as *nomina correcta*. The final and correct taxa should be as follows:

***Jaspidiconus barragrandsis* Crabos, Pomponet, Queiroz, and Passos, 2022**

***Jaspidiconus tibauensis* Crabos, Pomponet, Queiroz, and Passos, 2022**

***Dauciconus luizcotoi* Crabos, Pomponet, Queiroz, and Passos, 2022**

***Poremskiconus guarapari* Crabos, Pomponet, Queiroz, and Passos, 2022**

These changes are submitted as Justifiable Emendations and the name “Pereira” should not be used in any subsequent list of authors for these taxa.

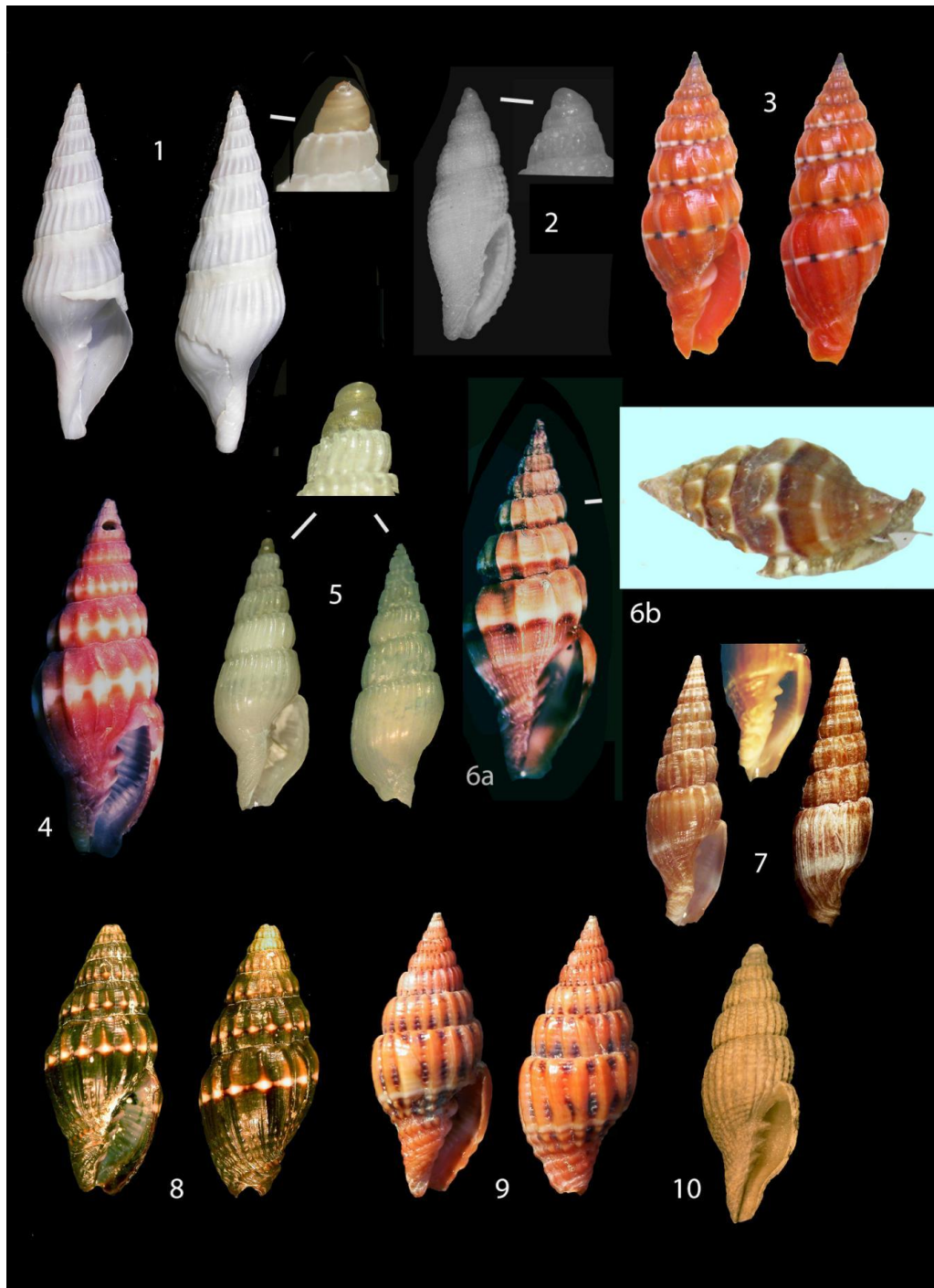


Plate 1. Figure 1= *Latiromitra niveobabelis* García, 2015, 25°51.104'N, 84°52.278'W, in 1737 m, in rubble/mud, 45.9 mm; **2**= *Mitromica foveata* (Sowerby, 1874), 21°51.32'N, 92°03.68'W, in 66-68 m, in mud/shells, 7.6 mm; **3**= *Vexillum articulatum* (Reeve, 1845), 28°05.793'N, 91°01.607'W, in 56-57 m, in rubble, 22.4 mm; **4**= *Vexillum epiphaneum* (Rehder, 1943), 28° 03.439'N, 92° 26.978'W, in 71-74 m, in calcareous rubble, 26.9 mm; **5**= *Vexillum garciai* Salisbury and Wolff, 2009, 20°51.49'N, 92°21.44'W, in 63-65 m, in mud, 5 mm; **6**= *Vexillum hendersoni* (Dall, 1927), 28°03.71'N, 92°27.7, in 59-62 m, in medium-size rubble, 19.3 mm; **7**= *Vexillum* cf. *hendersoni* (Dall, 1927), 27°59.28'N, 91°39.28'W, in 77-79 m, in rubble, 15.6 mm; **8**= *Vexillum moniliferum* (C. B. Adams, 1850)- 20°39.66'N ; 91°57.09', in 29-33 m, 16 mm; **9**= *Vexillum pulchellum* (Reeve, 1844), 27°53.418'N 93°18.219'W, in 50-65 m, in calcareous rubble, 16.9 mm; **10**= *Vexillum styria* (Dall, 1889), 27°48.62'N, 84°45.80'W, in 205- 210.5 m, 14 mm.

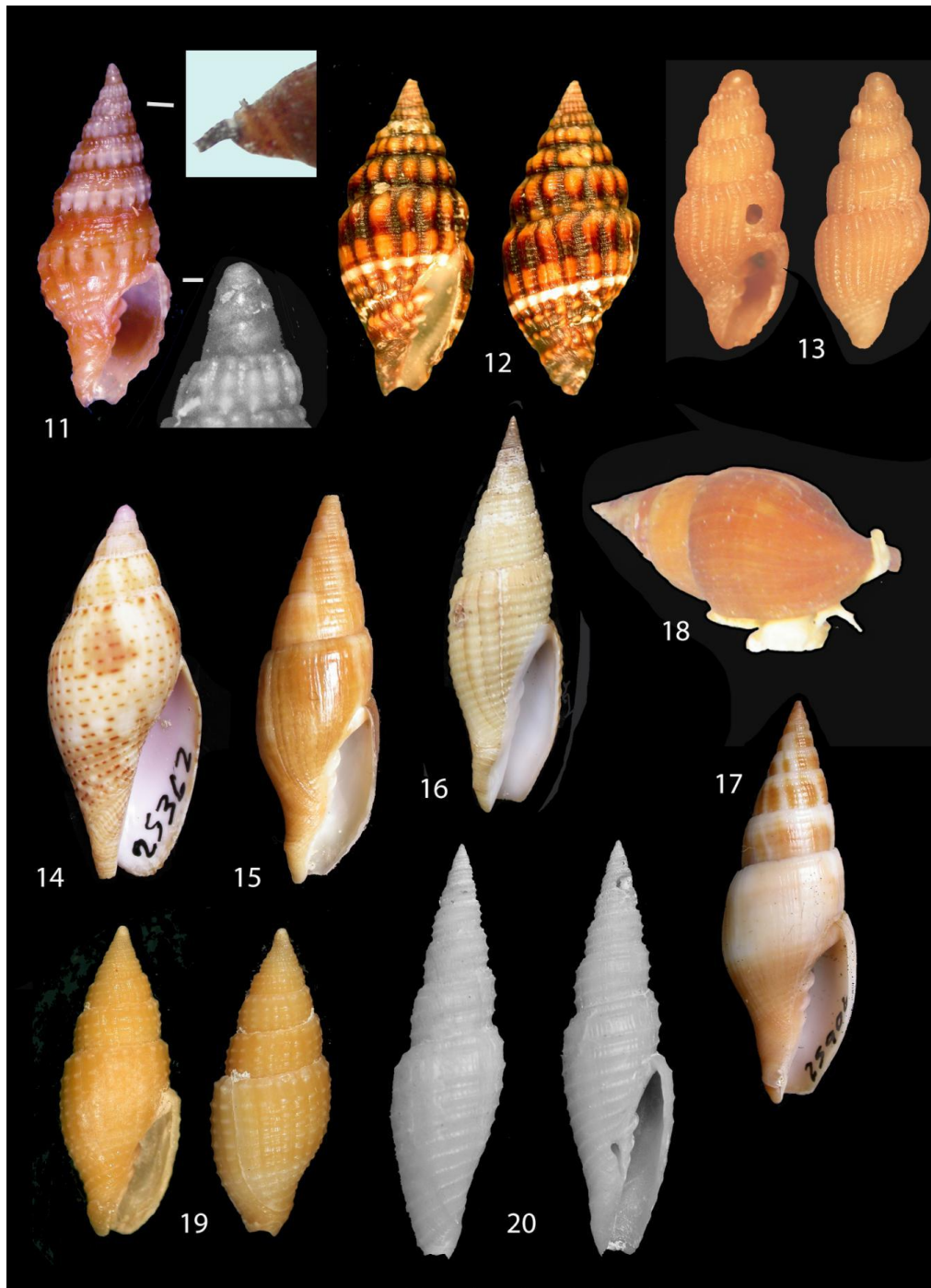


Plate 2. Figures 11= *Vexillum sykesi* (Melvill, 1925), 28°05.041'N, 91°01.648'W, in 70-75 m, in rubble, 9.3 mm; 12= *Vexillum variatum* (Reeve, 1845)- 22°19.42'N, 90°21.84'W, in 54-49 m, in rubble, 20.6 mm; 13= *Vexillum wandoense* (Holmes, 1859), 27° 37' N., 83° 46' W, in 40 m, 4.6 mm; 14= *Dibaphimitra florida* (Gould, 1856), 24°58.70'N, 83°39.23'W, in 75.9-76.1 m, 33.5 mm; 15= *Isara antillensis* (Dall, 1889), 27°59.189'N, 91°39.466'W, in 77-79 m, in rubble, 26.7 mm; 16= *Isara straminea* (A. Adams, 1853), Diaphus Bank:28°06.975'N; 90°58.150'W- dredged in 89-92 m in mud, 28.3 mm; 17= *Isara ulala* (García, 2011), holotype, 28°05.95'N, 91°01.34'W, in 69-68 m, in rubble, 30.5 mm; 18= *Isara ulala*, Jakkula Bank: 27°58.925'N, 91°39.779'W, in 72 m, fine rubble/shell hash; 19= *Neotiara nodulosa* (Gmelin, 1791), 28°05.605'N, 91°01.778'W to 28°05.360'N, 91°01.674'W; 57 m in rubble, 21.2 mm; 20= *Subcancilla* sp., 22°46.25'N, 9016.52'W, in 350 m, in mud, 30.4 mm.