

A New Species of *Jaspidiconus* (Gastropoda: Conidae) from Aruba

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ABSTRACT A new species of small cone shell, in the conilithine genus *Jaspidiconus*, has been discovered from off the Malmok area of Aruba. The new species, *Jaspidiconus hendrikae*, is morphologically-closest to another Aruban endemic cone, *Jaspidiconus vantwoudti* Petuch, Berschauer, and Poremski, 2015, which was found at Arashi Beach, Noord District, Aruba.

KEY WORDS Aruba, Caribbean Sea, Caribbean Molluscan Province, Aruban Infraprovince, Conidae, *Jaspidiconus*

INTRODUCTION

The Island of Aruba, in the southern Caribbean Sea off the mouth of the Gulf of Venezuela, has long been known to house a rich and highly endemic molluscan fauna (Petuch, 2013: 134-135; Petuch & Berschauer, 2020: 41, 81; Warmke & Abbott, 1962: 14). The species richness is actually so high in the shallow neritic environments around the island that levels of endemism of several gastropod families approach or exceed 50% (*i.e.* 50% in the Conidae, 60% in the Olividae) (Petuch, 2013). This high percentage of endemism demonstrates that Aruba represents a special “evolutionary hot-spot” within the southern Caribbean, which was named the “Aruban Infraprovince of the Grenadian Subprovince, Caribbean Molluscan Province” (Petuch & Berschauer, 2020: 41). Aruba has an extremely high molluscan biodiversity, reflected by over 180 species of mollusks which were collected during a one week field survey by the junior author in Aruba. (Berschauer & Ros, 2014). Some of the more well-known Aruban Infraprovince species include the muricid *Murexiella hilli* Petuch, 1987, the olivids *Americoliva fulgurator fusiformis* (Lamarck, 1811) and *Eburna balteata*

(Swainson, 1825), and the conids *Tenorioconus curassaviensis* (Hwass, 1792), *Tenorioconus monicae* Petuch & Berschauer, 2015, and *Jaspidiconus vantwoudti* Petuch, Berschauer & Poremski, 2015, and the endemic genus *Arubaconus* and its single species *A. hieroglyphus* (Duclos, 1833) (all shown here on Figure 2).

Jaspidiconus have proportionately large paucispiral protoconchs, have lechithotrophic benthic development, never dispersing far from where they hatch (Petuch, 2013; Petuch & Myers, 2014). Given the fact that *Jaspidiconus* species have lechithotrophic benthic development, inhabit relatively shallow water, they have limited dispersal capabilities, the genus exhibits a high degree of endemism among the myriad islands and coral cays throughout the Carolinian, Caribbean, and Brazilian marine molluscan provinces (Petuch, 2013; Petuch & Myers, 2014; Berschauer, 2015).

Intensive field work and exploration by the intrepid Aruban collectors Leo G. Ros and Jordy Hendriks have recently uncovered yet another new species of cone shell from the Malmok Beach area on the northern tip of the

island. This small new species is similar to another Aruban endemic cone, *J. vantwoudti* from the Arashi area, and its discovery indicates that a complex of sibling species of tiny *Jaspidiconus* may be present around the island. This new endemic Aruban animal is described in the following section. The holotype of the new species is deposited in the Los Angeles County Museum of Natural History ("LACM") and bears an LACM catalog number.

SYSTEMATICS

Class Gastropoda

Subclass Sorbeoconcha

Order Prosobranchia

Infraorder Neogastropoda

Superfamily Conoidea

Family Conidae

Subfamily Conilithidae

Genus *Jaspidiconus* Petuch, 2004

Jaspidiconus hendrikae Petuch and
Berschauer, new species
(Plate 1, Figures 1 A-D)

Description. Shell small for genus, averaging only around 14 mm, stocky and fusiform, widest across shoulder; spire high, broadly pyramidal, with rounded, convex sides; shoulder angled, bordered by small, rounded carina; body whorl shiny, ornamented with 18-20 incised spiral sulci; low rounded cord present between each pair of sulci; sulci poorly-developed, almost obsolete on posterior one-fourth of body whorl, becoming stronger and better-developed toward anterior end; body whorl colored bright yellow or orange-yellow with scattered, small white patches; single row of small, closely-packed light brown spots on each low, rounded cord; spire white or very pale yellow-white marked with widely-scattered, large red-brown amorphous flammules; shoulder carina white, marked with evenly-spaced row of large dark reddish brown dots;

aperture wide, straight, with bright yellow interior; protoconch proportionally very large, prominent, rounded and dome-like, composed of two inflated whorls, orange in color.

Type Material. HOLOTYPE - length 12.09 mm, width 5.92 mm, 7 m depth off Malmok Beach, Aruba, LACM 3811. PARATYPES - length 14.5 mm, from the same locality and depth as the holotype, in the research collection of the senior author; 3 specimens, lengths 7.35 mm to 10.70 mm, from the same locality and depth as the holotype, in the research collection of the junior author.

Type Locality. Found in fine organic detritus in sand pockets, 7 m depth off Malmok Beach, Aruba.

Etymology. Named in memory of Hendrika Wendriks of San Fuego, Aruba; mother of well-known Aruban diver and amateur malacologist, Jordy Wendriks, who collected part of the type material.

Discussion. Of the known Aruban *Jaspidiconus* species, the new Malmok species is similar only to *J. vantwoudti* from the Arashi coast (Figure 1E, F, G, H). Although similar in shape, size, and general body proportions, *J. hendrikae* differs from its Arashi sibling in being a vivid yellow color and not bright pink, in having an orange protoconch and not a bright pink one, in having rows of tiny brown dots on the body whorl, in having a proportionately narrower shoulder, in having a narrower aperture, and in having fewer incised spiral sulci. The two sibling species also differ in their ecological preferences: *J. hendrikae* lives in patches of organic detritus in sand pockets on open sandy seafloors in 5-10 m depths; *J. vantwoudti* prefers high-energy wave surge areas, on exposed rock platforms in 1-2 m depths.

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LITERATURE CITED

- Berschauer, D.P. & L.G. Ros. 2014.** A Survey of Mollusks Collected in Aruba. *The Festivus*:45(3):54-62.
<https://doi.org/10.54173/F46354>
- Berschauer, D.P. 2015.** A comparison of adaptive radiation in Conidae and Conilithidae (Gastropoda: Conoidea) in the Eastern and Western Atlantic, together with an iconography of the conilithid genus *Jaspidiconus*. *The Festivus* 47(2):99-113.
<https://doi.org/10.54173/F47299>
- Petuch, E.J. 2013.** Biogeography and Biodiversity of Western Atlantic Mollusks. CRC Press, London, New York, Boca Raton. 234 pp.
<https://doi.org/10.1201/b14798>
- Petuch, E.J. & D.P. Berschauer. 2015.** Additions to the Cone Shell Faunas of Australia and Aruba (Conidae, Conilithidae). *The Festivus* 47(4):219-228.
<https://doi.org/10.54173/F474219>
- Petuch, E.J. & D.P. Berschauer. 2020.** Tropical Marine Mollusks: An Illustrated Biogeographical Guide. CRC Press, London, New York, Boca Raton. 357 pp.
<https://doi.org/10.1201/9781003120070>
- Petuch, E.J., & R.F. Myers. 2014.** New Species of Conidae and Conilithidae (Gastropoda: Conoidea) from the Bahamas, Eastern Caribbean, and Brazil. *Xenophora Taxonomy* 3:34-47.
- Warmke, G. & R.T. Abbott. 1962.** Caribbean Seashells. Livingston Publishing Company, Narberth, Pennsylvania. 348 pp.

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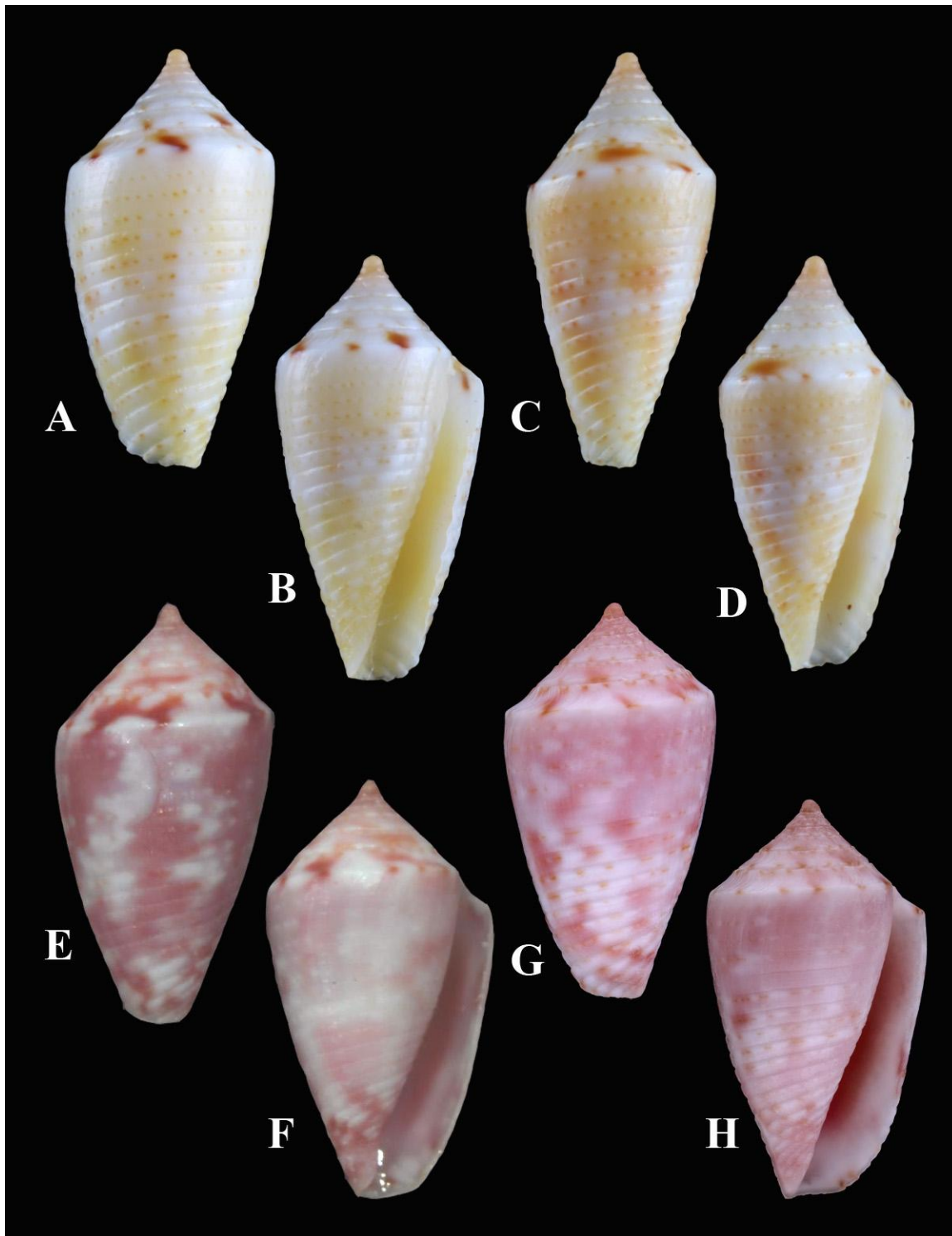


Figure 1. Endemic *Jaspidiconus* species from Aruba.

A, B= *Jaspidiconus hendrikae* Petuch & Berschauer, new species, holotype from Malmok Beach, Aruba, length 12.09 mm, LACM 3811; **C, D=** *Jaspidiconus hendrikae* Petuch & Berschauer, new species, length 10.70 mm, Malmok Beach, Aruba, in the Berschauer research collection; **E, F=** *Jaspidiconus vantwoudti* Petuch, Berschauer & Poremski, 2015, holotype, length 12.4 mm, Arashi Beach, Aruba; **G, H=** *Jaspidiconus vantwoudti* Petuch, Berschauer & Poremski, 2015, length 12 mm, Arashi Beach, Aruba.

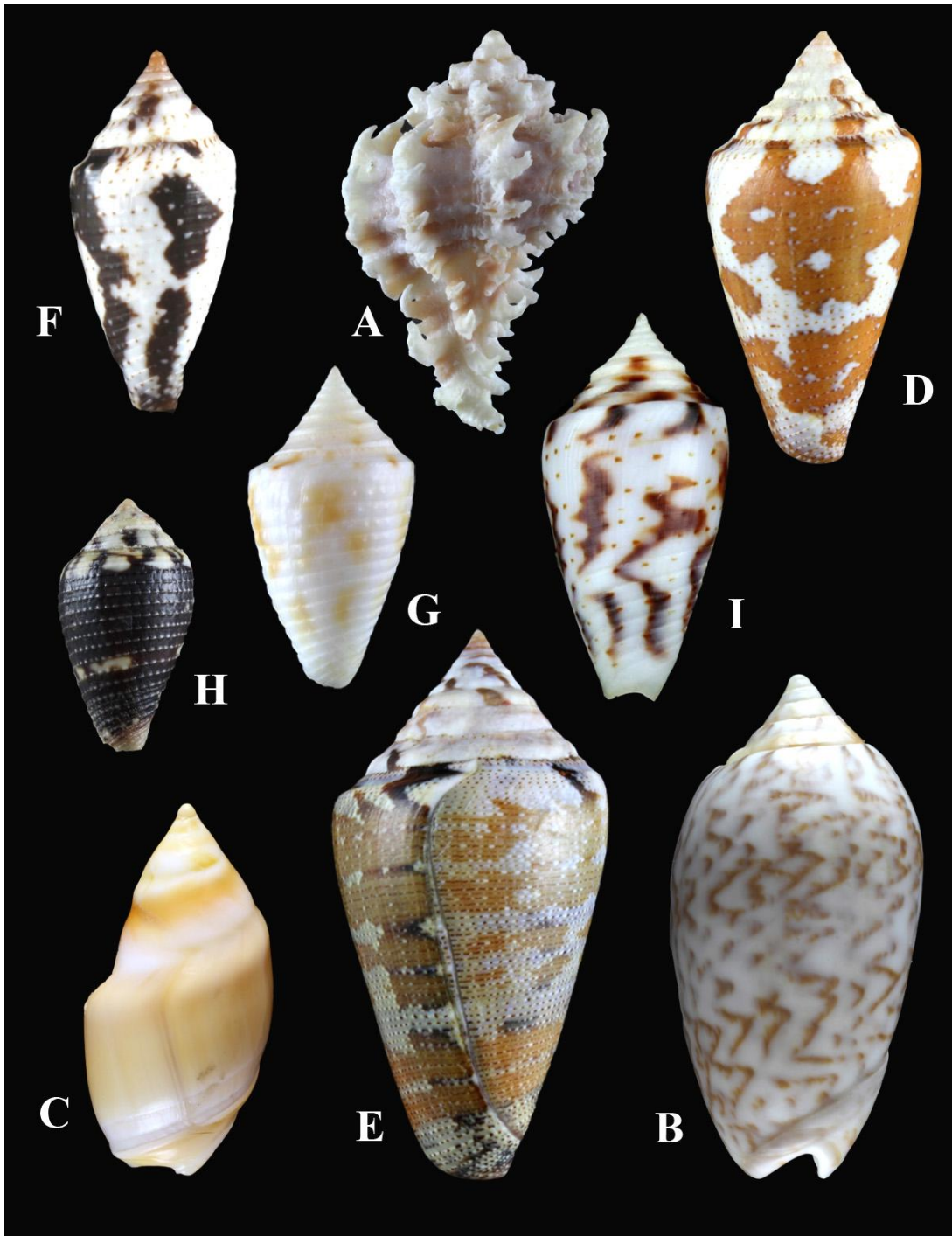


Figure 2. Endemic Gastropods from Aruba and the Aruban Infraprovince.

A= *Murexiella hilli* Petuch, 1987, from Malmok Beach, Aruba, length 35.80 mm; **B=** *Americoliva fulgurator fusiformis* (Lamarck, 1811), from Mangel Halto, Aruba, length 49.05 mm; **C=** *Eburna balteata* (Swainson, 1825), from Mangel Halto, Aruba, length 33.17 mm; **D=** *Tenorioconus curassaviensis* (Hwass, 1792), from Malmok Beach, Aruba, length 33.89 mm; **E=** *Tenorioconus monicae* Petuch & Berschauer, 2015, from Malmok Beach, Aruba, length 60.80 mm; **F=** *Tenorioconus rosi* Petuch & Berschauer, 2015, from Malmok Beach, Aruba, length 15.07 mm; **G=** *Jaspidiconus booti* Petuch, Berschauer & Poremski, 2017, holotype, from Malmok Beach, length 19.70 mm; **H=** *Arubaconus hieroglyphus* (Duclos, 1833), from Malmok shipwreck, Aruba, length 15.16 mm; **I=** *Perplexiconus wendrosi* Tenorio & Afonso, 2013, from Mangel Halto, Aruba, length 15.86 mm.