



SHELL-O-GRAM

Official Publication of the
JACKSONVILLE SHELL CLUB, INC.

September-October, 2024 _____ Volume 65 (No. 5)

All editions, including this one, will be sent electronically. Starting with the next issue (Nov-Dec 2024) the newsletter will be sent from the new shell club email address: jaxshellclub@gmail.com. Please ensure that we have your accurate email address so that you will continue to receive the Shell-O-Gram. Send your current email to jaxshellclub@gmail.com, Rick Edwards at edwar1@hotmail.com or to Paul Jones at jonesP0854@gmail.com.

Upcoming meetings

The Jacksonville Shell Club, Inc. (JSC) now meets on the **fourth** Sunday of each month except for November (a week earlier due to Thanksgiving) and December (traditional Xmas get-together/TBA) in the **Village Inn in St. Augustine**. The meeting will be from **5 to 7 PM**. Those who wish to have dinner prior to the meeting should be there by 4 PM to order dinner.

The next meeting will be held on Sunday, **September 22nd** the program will be Sicily Part II - Univalves by Paul Jones and Christmas Ornaments by Judith.

At the **Sunday, October 27th** meeting the program will be 1950's Kwajalein and Shell Collecting by Rick Edwards and Shell Shadow boxes by Rick.

Club Update

Our August meeting had our largest attendance in several years. Thank you. For those who cannot drive to St. Augustine for the monthly meeting, please keep informed with the Shell-o-Gram, or communicating through our new g-mail account. **Dues are due**. When submitting your dues, be sure to include your **membership form**. We are looking at the possibility of producing a membership "Sheet." Our last one that we could find was from 2011.

Election of club officers will occur at the September meeting. After discussion, members were asked to consider if they had interest in becoming an officer, and to let me know. Present officers were interested in continuing, and if, there were no other candidates, a motion would be made at the September meeting to continue with the same officers for the next year.

Programs are important. Most of you know I can talk for hours about shells. I would encourage the membership to consider doing a program or a crafts program. We are planning a shell ID program for November. However, it would be ideal to have several programs scheduled for future meetings so they can be published in the Shell-o-Gram. Several programs have been power point programs, but most any shell related topic can be considered, Delivery is up to the presenter. A guest presenter can also be an option.

If you have a favorite shell, please consider enlightening us about the shell as a Shell of the Month.

Several members have expressed interest in doing a "Shell jamboree" where individuals could bring a display of shells to show others and answer questions about their display. More on this at a later date. We used to do major Shell Shows, but manpower and locations became major obstacles for the Club. This could be one of our goals for the future?

Rick

Membership Dues are payable in **September** each year.
Many of you have complied, but if you're in arrears, please send in your dues:
Individual \$15.00; Family \$20.00, to

Jacksonville Shell Club, Inc.
Richard Edwards
572 Boxwood PL
St. Augustine, FL 32086

Managing Editor: Bill Shankle ... Email: jaxshellclub@gmail.com

The club customarily meets monthly at the Village Inn, Route 1, St. Augustine, Florida. Please address any correspondence to the club's address above. Annual membership dues are \$15.00 individual, \$20.00 family (domestic) and \$25.00 (overseas). Lifetime membership is available. Please remit payment for dues to the address below and make checks payable to the Jacksonville Shell Club. The club's newsletter and scientific journal, the *Shell-O-Gram* (ISSN 2472-2774) is issued bimonthly and emailed. An electronic (pdf) version is sent to members and to about 200 individuals who have demonstrated an interest in malacological research and/or Florida mollusks. These pdf's (ISSN 2472-2782) have also been posted to <http://jaxshells.org/letters.htm> since November, 1998. We encourage members and other friends to submit articles for publication. Closing date for manuscript submission is two weeks before each month of publication. Articles appearing in the *Shell-O-Gram* may be republished provided credit is given the author and *Shell-O-Gram* Editor-in-Chief. As a courtesy, the editor and author should receive a copy of the original and republication version respectively. Contents of the *Shell-O-Gram* are intended to enter the permanent scientific record. The club is a chartered corporation in the State of Florida and a non-profit educational organization under the provisions of Section 501(c)(3) of the US IRS Code.

Florida Mollusca Exotica: Marine Gastropods

by Robert R. Fales (Edison, NJ; fales@verizon.net)

Florida Mollusca Exotica reappears after a brief hiatus following the passing of Dr. Harry G. Lee. The remaining articles are dedicated to Harry, who challenged me to create the series and guided me through some initial rough patches: so, one last time – Thank You, Sir! The current article is the next presentation on mollusks presently or previously found in Florida that are exotic. As very little remains eternally constant, I have to report identifying additional exotic snails since Part 1 of this series issued. Thus, we shall ultimately see summaries on 54 gastropods, rather than 50. This part summarizes nine non-native gastropods of marine or marine/brackish habitats that have been identified in Florida at one time or another. They derive from three different subclasses: Vetigastropoda; Caenogastropoda; and Heterobranchia.

Vetigastropoda, Trochida, Tegulidae

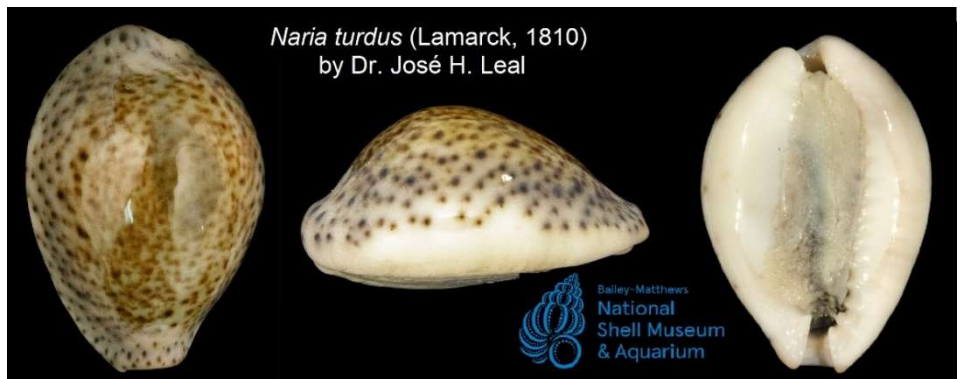
Cittarium pica (Linnaeus, 1758)¹⁻³ (West Indian Topshell): marine – Native to the West Indies. Dead shells were recorded in the Florida Keys in the early 1940s, and live specimens were recorded in 1973. "Colonization" is apparently sporadic and ephemeral, although one possibly breeding population was found in July 2019 on East Sister Rock off Marathon in the middle Florida Keys. As of August 1, 2024, the web site iNaturalist had photographs of 19 observations - live, crabbed, empty shells, and shell fragments – 16 observations were between Dry Tortugas National Park and Long Key in the middle Florida Keys, found between 2013 and 2024; two fragments were found at Miami Beach; and the one observation in the Gulf of Mexico off New Port Richey, Pasco County, is suspect as to the location.



Cittarium pica (Linnaeus, 1758)
by Marlo F. Krisberg

Caenogastropoda, Littorinimorpha, Cypraeidae

Naria turdus (Lamarck, 1810)⁴⁻⁷ (Thrush Cowrie): marine (brackish?) – The invasion history of this relatively small cowrie (30-38 mm) is well documented. The natural biogeographic range of *N. turdus* extends from the Red Sea into the tropical and subtropical shallow waters of the northwestern Indian Ocean from eastern Africa to Pakistan, India, and Sri Lanka.



Naria turdus (Lamarck, 1810)
by Dr. José H. Leal

Bailey-Matthews
National
Shell Museum
& Aquarium

The species invaded the Mediterranean Sea through the Suez Canal. *Naria turdus* was discovered in the Dutch Antilles in July 2020, and thereafter in Venezuela, Costa Rica, and Puerto Rico. On December 24, 2022, a live *N. turdus* was photographed underwater in Lake Worth Lagoon immediately south of Phil Foster Park, Riviera Beach, Palm Beach County, FL, and is the first record of this

species in U.S./Florida coastal waters. The specimen was estimated to be approximately 1x2 inches (25x51 mm), so fully adult. The species probably reached the Caribbean as veligers living in the ballast water of ships, and then spread naturally thereafter. Veligers may have reached Lake Worth Lagoon naturally through Lake Worth Inlet or artificially in ballast water from cargo or cruise ships utilizing the nearby full-service Port of Palm Beach. As of August 1, 2024, iNaturalist has records of the species range expanded south to Deerfield Beach (just below Boca Raton) and north to Coral Cove Park in Tequesta. The species is a habitat generalist living within the intertidal to upper subtidal zones and is found in warm to hot clear or rough water of different salinities on coral, rocks, rubble, seagrass meadows, and open sand. As a generalist herbivore, it is capable of survival on a wide variety of food items. Possible impacts in terms of potential food competition can be expected to affect similar-sized *Naria acicularis* (Gmelin, 1791) and *Luria cinerea* (Gmelin, 1791), which co-occur in parts of the newly established range of *N. turdus*. In Aruba, *N. turdus* seems to have displaced *N. acicularis* from shallower water where the depth ranges overlap (*N. acicularis* has a broader depth range than *N. turdus*). I could find no information on status as a parasite host.

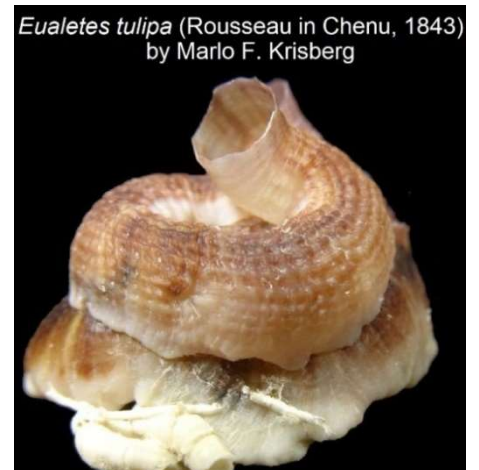
Caenogastropoda, Littorinimorpha, Littorinidae

***Littorina littorea* (Linnaeus, 1758)^{8,9}** (Common Periwinkle): marine – Native to Europe from the White Sea, Russia, to Gibraltar. Now found from New Brunswick, Canada, to Wachapreague, VA, and spottily from California to Washington. A single specimen was reported collected in Monroe County in 1952. The snail has had several negative impacts on invaded habitat: it outcompetes *Ilyanassa obsoleta* (Say, 1822) and causes decreased numbers; benefits two invading crab species, the Green Crab (*Carcinus maenas*) and Asian Shore Crab (*Hemigrapsus sanguineus*) by serving as a food source; and it is a host to several parasites, including the invading trematode *Cryptocotyle lingua*, which eventually infects fish, birds, and mammals, including humans if infected raw fish is consumed.

Caenogastropoda, Littorinimorpha, Vermetidae

***Eualetes tulipa* (Rousseau in Chenu, 1843)^{8,10}** (unnamed vermetid): marine – Likely of tropical Eastern Pacific origin; now widely established worldwide. First reported in Miami in 1970 (misidentified at that time as *Petalconchus mcgintyi* (Olsson & Harbison, 1953)). This fast-growing species may be an agent of habitat change where established, leading to modification of natural benthic communities, and may become a source of fouling.

***Thylacodes vandyensis* Bieler, Rawlings & Collins, 2017^{8,11}** (unnamed vermetid): marine – May be a recent arrival from the Pacific. In Florida, known only from an artificial reef between Western Sambo Reef and Sand Key, about 11 km off Key West. Possible negative effect on hard corals; may serve as an intermediate host for a blood fluke that parasitizes loggerhead turtles.



Caenogastropoda, Neogastropoda, Muricidae

***Rapana rapiformis* (Born, 1778)¹²** (Turnip Whelk): marine – Native to the Indo-West Pacific area. A single specimen was collected near Fiesta Key, Florida Keys, in July 1973; failed to establish. Would expect negative impacts similar to those of the established invasive *Rapana venosa* (Valenciennes, 1846).

Heterobranchia, Nudibranchia, Chromodorididae

***Chromolaichma sedna* (Ev. Marcus & Er. Marcus, 1967)¹³** (unnamed dorid nudibranch): marine – Native to the tropical eastern Pacific. Four specimens were recorded from the Florida Keys in the early 1980s; unknown if established.

Heterobranchia, order unassigned (superfamily Pyramidelloidea), Amathinidae

***Cyclothyca pacei* Petuch, 1987^{8,11,14}** (unnamed amathinid): marine – Origin unknown, possibly Pacific (cryptogenic); may be ecophenotypic descendant of an immigrant *Amathina tricarinata* (Linnaeus, 1767) from Japan. Observed live on artificial reef off Key West, and as beach shells from "southeast" Florida, including Boca Raton.

Heterobranchia, Ellobiida, Ellobiidae

***Myosotella myosotis* (Draparnaud, 1801)¹⁵** (European Melampus, Mouse-eared Snail): marine (brackish?) – Native to the eastern Atlantic coastlines from the British Isles and western Baltic to the Mediterranean; now widely distributed around the world by shipping. The southernmost record on the east coast of the United States is from St. Augustine, Florida, in 1997. No impact is reported for this species in its introduced range.

In the next part of this series, we shall begin to look at non-native terrestrial gastropods.

Acknowledgments:

The author acknowledges Marlo F. Krisberg of the *Let's Talk Seashells* web site, and Dr. José H. Leal of the *Bailey-Matthews National Shell Museum & Aquarium* for permission to use their photographs in this article.

Literature Cited:

(Note: If a link does not open the reference when clicking on it, copy/paste or type the URL into the address bar of your web browser.)

1. Abbott, R.T., 1976. *Cittarium pica* (Trochidae) in Florida. *The Nautilus* 90(1):24. <<https://www.biodiversitylibrary.org/page/8276382>> Last accessed 2024-08-01.
2. iNaturalist. 2024. *Cittarium pica*. <https://www.inaturalist.org/observations?d2=2024-08-01&place_id=21&taxon_id=133677> Last accessed 2024-08-01, 6:20 PM EDT.
3. Oleinik, A.E., A.B. Modys, and A.M. Tetu, 2020. *Cittarium pica* (Linnaeus, 1758) (Gastropoda: Trochoidea: Tegulidae) in southeastern Florida. *The Nautilus* 134(1):36-44.
4. Dekkers, A.M. and L.G. Ros, 2022. On the invasion of *Naria turdus* (Gastropoda, Cypraeidae) in the Dutch Caribbean, with taxonomic notes on the species. *The Festivus* 54(3):269-273. <<https://www.researchgate.net/publication/362430905>> Last accessed 2024-08-01.

5. Oleinik, A.E., 2023. Introduction of *Naria turdus* (Lamarck, 1810) (Gastropoda: Cypraeidae) from the western Indian Ocean to the island of Aruba, western Atlantic Ocean. *The Nautilus* 137(1):24-30.
6. Oleinik, A.E., J.H. Leal, A. DuPont, and N. Uthairat, 2023. A prediction held true: First record of the non-indigenous Thrus Cowrie *Naria turdus* (Lamarck, 1810) (Gastropoda: Cypraeidae) in south Florida. *The Nautilus* 137(1):31-34. <<https://www.researchgate.net/publication/369229299>> Last accessed 2024-08-01.
7. iNaturalist. 2024. *Naria turdus*. <https://www.inaturalist.org/observations?d2=2024-08-01&place_id=21&taxon_id=747581> Last accessed 2024-08-01, 6:30 PM EDT.
8. Wells, F.E. and R. Bieler, 2020. A low number of introduced marine species at low latitudes: A case study from southern Florida with a special focus on mollusca. *Management of Biological Invasions* 11(3):372-398. <<https://pdfs.semanticscholar.org/b1bc/3332e4d6ef21cc39c4c26bf3399f199c1fc9.pdf>> Last accessed 2024-08-01.
9. N.E.M.E.S.I.S., 2023. *Littorina littorea*. National Estuarine and Marine Exotic Species Information System, Smithsonian Environmental Research Center, Edgewater, MD. <https://invasions.si.edu/nemesis/species_summary/70419> Last accessed 2024-08-01.
10. Miloslavich, P., 2009. *Eualetes tulipa*. CABI Digital Library, CABI Compendium. <<https://www.cabidigitallibrary.org/doi/10.1079/cabicompendium.108326>> Last accessed 2024-08-01.
11. Bieler, R., C. Granados-Cifuentes, T.A. Rawlings, P. Sierwald, and T.M. Collins, 2017. Non-native molluscan colonizers on deliberately placed shipwrecks in the Florida Keys, with description of a new species of potentially invasive worm-snail (Gastropoda: Vermetidae). *PeerJ* 5: e3158 (on line). <<https://peerj.com/articles/3158/>> Last accessed 2024-08-01.
12. Fales, R.R., 2022-2023. Mystery mollusk: *Rapana rapiformis* (Born, 1778) in Florida. *Shell•O•Gram* 63(6):3-6; 64(1):9. <<http://www.jaxshells.org/pdfs/novdec22.pdf>> and <<http://www.jaxshells.org/pdfs/janfeb23.pdf>> Last accessed 2024-08-01.
13. Bertsch, H., 1988. Anatomy and zoogeography of *Glossodoris sedna* and *Chromodoris grahami* (Opisthobranchia: Nudibranchia) in the tropical western Atlantic and Caribbean. *The Veliger* 30(4):395-399. <<https://www.biodiversitylibrary.org/page/42468301>> Last accessed 2024-08-01.
14. Lee, H.G., 2011. *Amathina* in the western Atlantic - or - What is *Cylothyca pacei*? *Shell•O•Gram* 52(5):5,7. <<http://www.jaxshells.org/pdfs/sepoct11.pdf>> Last accessed 2024-08-01.
15. N.E.M.E.S.I.S., 2023. *Myosotella myosotis*. National Estuarine and Marine Exotic Species Information System, Smithsonian Environmental Research Center, Edgewater, MD. <https://invasions.si.edu/nemesis/species_summary/-63> Last accessed 2024-08-01.