ISSN: 1072-2440 Vol. 48, No. 3, September 2020
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American CONCHOLOGIST

Quarterly Journal of the Conchologists of America, Inc.

CONCHOLOGISTS OF AMERICA, INC.

In 1972, a group of shell collectors saw the need for a national organization devoted to the interests of shell collectors; to the beauty of shells, to their scientific aspects, and to the collecting and preservation of mollusks. This was the start of COA. Our membership includes novices, advanced collectors, scientists, and shell dealers from around the world. In 1995, COA adopted a conservation resolution: Whereas there are an estimated 100,000 species of living mollusks, many of great economic, ecological, and cultural importance to humans and whereas habitat destruction and commercial fisheries have had serious effects on mollusk populations worldwide, and whereas modern conchology continues the tradition of amateur naturalists exploring and documenting the natural world, be it resolved that the Conchologists of America endorses responsible scientific collecting as a means of monitoring the status of mollusk species and populations and promoting informed decision making in regulatory processes intended to safeguard mollusks and their habitats.

AMERICAN CONCHOLOGIST, the official publication of the Conchologists of America, Inc., and issued as part of membership dues, is published quarterly in March, June, September, and December, printed by JOHNSON PRESS OF AMERICA, INC. (JPA), 800 N. Court St., P.O. Box 592, Pontiac, IL 61764. All correspondence should go to the Editor. ISSN 1072-2440.

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The COA membership renewal form for 2021 has been included as an insert in this issue. Please take a moment to fill it out and send it in. Instructions are on the form.

Front cover: *Naticareus canrena* (Linnaeus, 1758) photographed at 40 feet, along the lee side of Union Island, in the Grenadines (between the larger islands of Saint Vincent and Grenada, in the Lesser Antilles) in 2009 by Charles Ralings. Charles has a new book out, "The Undersea Art of Indonesia." It will be reviewed in the December issue, but do yourself a favor and get it now.

Back cover: *Xenophora pallidula* (Reeve, 1842) with glass sponge attachment, 130mm high, 115mm wide (with attachments), taken by net off Ormoc, Leyte, in south central Philippines.

Editor's comments:

COA now has an index to all issues of the *COA Bulletin* and *American Conchologist.*

Long time friend and fellow sheller, Bruce Neville, announced the completion of the *American Conchologist Index*, or more formally, *Index to Conchologists of America Bulletin* and *American Conchologist*, 1974 - 2019, no. 1 - vol. 47, supplements, and special publications (COA Special Publication no. 4). See article on page 36. While Bruce definitely had the lead for this daunting project, he is the first to clearly state that it was a group effort. The good deal for COA is that both Bruce and his sister Tina (who volunteered to share in the index building effort) are professional college librarians, and the even better deal is that Tina had recently retired. Countless hours later, we have our index as a searchable PDF posted online on the COA website: https://conchologistsofamerica.org/wp-content/uploads/2020/07/COA-Index-1-47.pdf To date, the index is limited to an electronic format, both because of ease of updating and because the PDF version is 260 pages! Printing and mailing hard copies would involve more of an expense than justified compared to the accessibility of the online version.

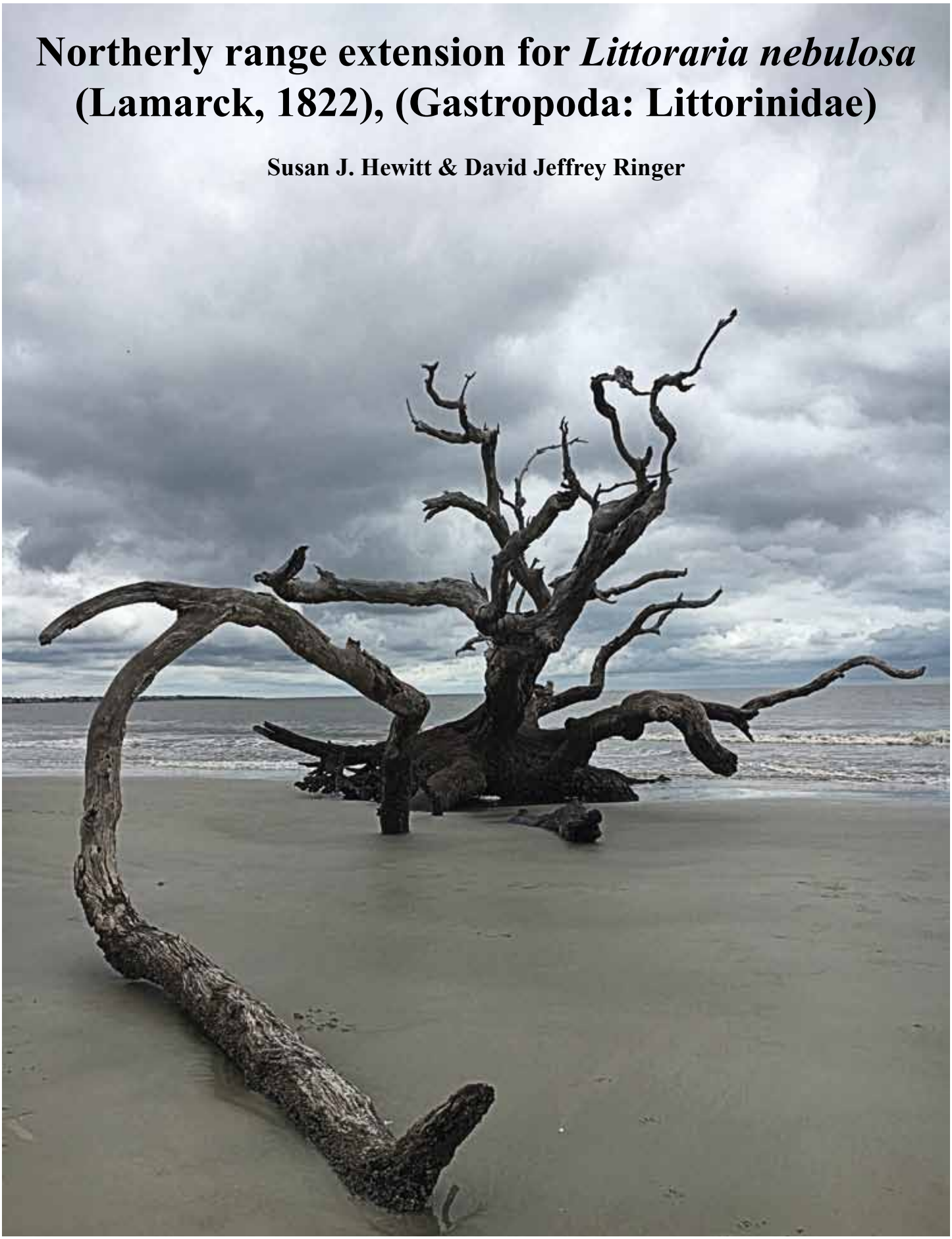
Eight large boxes of shells donated to COA!

COA member **Jack Lilien** of Atascadero, California, donated his rather extensive marine shell collection to COA in August. THANK YOU Jack! As a member you know how important such a donation is to our academic grant program. Your gift will supply both oral and silent auctions at upcoming COA conventions, and the money raised enables COA to continue to give substantial academic grant monies to molluscan research. Jack's is the third (along with Lynn Scheu and Kathy Murray) shell collection donated to COA this year.

Tom Eichhorst

Northerly range extension for *Littoraria nebulosa* (Lamarck, 1822), (Gastropoda: Littorinidae)

Susan J. Hewitt & David Jeffrey Ringer



Adult *Littoraria nebulosa* clustering on a dead oak tree on Jekyll Island, Georgia. Dead trees in the intertidal zone can serve as ideal habitat for several invertebrate species, including the cloudy periwinkle.

In August 2019, the second author photographed a population of periwinkle snails (Littorinidae) living on dead trees in the intertidal zone of Jekyll Island, Georgia. Posted to the website iNaturalist and identified by the first author as cloudy periwinkle, *Littoraria nebulosa* (Lamarck, 1822), these photographs document a small range extension for this primarily deadwood-inhabiting species.

Jekyll Island is a barrier island on the coast of the U.S. state of Georgia, accessible by causeway from the mainland. The island is approximately 7 miles long by 1.5 miles wide (11 km x 2.4 km). At its north end, on the Atlantic Ocean beach, erosion has caused saltwater to kill part of the island's maritime forest of pine and oak trees, leaving large dead trees still standing on the ocean beach and intertidal zone. This drowned forest is a popular tourist attraction known as Driftwood Beach.

On August 16, 2019, the second author visited this locality during a falling tide. Dead tree trunks in the upper intertidal zone supported several species of arthropods and crustaceans, including colonies of *Chthamalus fragilis* barnacles, numerous *Ligia* sp. isopods, and aggregations of littorinid snails, which were photographed but not identified in the field.

Photographs of all these organisms, including the littorinid species (observations #30954227 and #30986985), were posted to the website iNaturalist.org. This site, and the corresponding smart phone app, enable discussion and identification of nature observations worldwide. On iNaturalist, the first author, a citizen malacologist, identified the snails as the cloudy periwinkle, *Littoraria nebulosa*.

Some of the snails were clustered in groups numbering dozens of individuals. The shells of the larger individuals approached 2 cm in size, with five to seven convex whorls, indented sutures, and fine spiral ribs. The body whorls were large and pale grayish-yellow in color. The earlier whorls were brown or golden yellow with pale checkers. Smaller individuals often showed more extensive checkering. All were attached to wet tree trunks, and some were actively grazing along the wood. The physical appearance and habitat choice (anchored wood in the intertidal zone) match the preferred habitat of *L. nebulosa* according to several references.[123]

The distribution of this species is gradually becoming better known and is also apparently expanding. In 2009, the final edition of Gary Rosenberg's Malacolog did not list *L. nebulosa* from anywhere on the Atlantic Coast of the US, only from the shores of the Gulf of Mexico and the Caribbean Sea: "USA: Florida: West Florida; USA: Texas; Mexico: Campeche State, Quintana Roo; Honduras, Nicaragua, Costa Rica, Panama, Colombia, Venezuela: Gulf of Venezuela, Zulia, Falcon, Carabobo; Cuba: North Havana Province, North Matanzas, Cienfuegos, Granma; Jamaica, Puerto Rico; St. Vincent & the Grenadines: Grenada; Trinidad & Tobago: Trinidad; Surinam."[4]

Since 2008, however, the species has been found in several localities on the east coast of Florida. The Jacksonville Shell Club website has a 2008 observation by Harry Lee of live specimens taken from a boulder by a boat ramp on St.

After this article was written, the authors were contacted by Norm Shea, a biologist with the Environmental Research Section of the South Carolina Department of Natural Resources, Marine Resources Division. He posted the image on the left for identification. Hewitt quickly identified the snails as *L. nebulosa*. As in the Georgia sighting, these snails were clustered in the shade on dead wood. They were at the NE end of Folly Beach in South Carolina, and thus we now have a further range extension. On the map to the left, no. 1 is the 2016 range extension at Big Talbot Island State Park, Jacksonville, Florida, reported on the Jacksonville Shell Club website. No. 2 is the 2019 Jekyll Island, Georgia sighting reported here by the authors. No. 3 is the most recent 2020 range extension reported by Norm Shea at Folly Beach, South Carolina. It would seem *L. nebulosa* is expanding its range northward at a fairly rapid pace. Shell image from www.inaturalist.org – observation 55179597.

George Island, Franklin County, Florida.[5] The same site also shows live specimens photographed in 2016, much farther north at Big Talbot Island State Park, Jacksonville, Duval County, Florida.[6] In April 2019, an iNaturalist observation (#22774909) of the species living in crevices in beach rock was posted to iNaturalist.org from near Jupiter, Florida.[7]

The presence of *L. nebulosa* on Jekyll Island appears to be a small range extension of 40-45 miles (65-70 km) north into Georgia. This new observation may simply reflect a previous lack of field studies, or it could be due to climate change, changing coastal conditions, or some other factor. The authors hope that more records of this interesting species will gradually be accumulated. We would also like to thank José H. Leal, Ph.D., Curator of the Bailey Matthews National Shell Museum, for his comments on an early draft this manuscript.

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[6]**Frank, Bill. 2020.** *Littoraria nebulosa* (Lamarck, 1822) cloudy periwinkle. Accessed through http://www.jaxshells.org/90176.htm on 7/8/2020.

[7]**elenaconser. 2019.** iNaturalist.org. *Littoraria nebulosa* from Martin County, US-FL, US on April 20, 2019 at 03:41 PM by elenaconser · iNaturalist. Accessed through https://www.inaturalist.org/observations/22774909 on 7/3/2020.

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David Jeffrey Ringer (djringer@gmail.com)

Above: juvenile *L. nebulosa* on a dead tree on Jekyll Island. Note the checkered pattern on most of these individuals. This pattern is typically absent on adult shells.

Below: another dead tree habitat, this time with loose rocks, rather than just sand, on Jekyll Island. Trees, whether surrounded by sand or rocks, were all home to clusters of dozens of *L. nebulosa*.

Species number 805 on the Northeast Florida Checklist; a peripatetic periwinkle

Harry G. Lee

(Originally published in *Shell-O-Gram*, an official publication of the Jacksonville Shell Club, Inc., vol. 58, no. 5, Sept. - Oct. 2017)

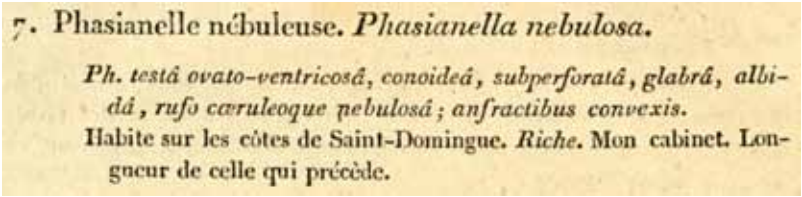
It was the last Wednesday in August when my customary hebdomadal search for microfossils at the Florida Museum in Gainesville was interrupted by a cell phone from Jacksonville collector and webmaster, Bill Frank. He had just received an email from Richard Owen, Environmental Specialist II, Florida Department of Environmental Protection, Division of Recreation and Parks. Rick was inquiring about the identity of a greenish periwinkle found in his jurisdiction, Big Talbot Island, Jacksonville. The shell in the attached crisp close-up photograph, taken on October 3, 2016, seemed to match images taken by Park colleagues the day before contact was made with Bill. I got a look at the year-old image on a department computer and became suspicious that this green periwinkle (Fig. 1) was a "new" species for NE Florida.

Within a day, an expedition was arranged with Rangers Kinsey Langshaw and Meghan Harris, Bill and wife Chin, and me to walk the Black Rock Trail from Hwy. A1A, to the shore of Nassau Sound on Friday. As we clambered down the eroded dune, an extensive wasteland of toppled trees, the victims of marine erosion, appeared before us. Within a minute, at stations a few feet above the low tide waters, we began finding clusters of mostly yellow-green snails ranging from the size of a BB to ~20mm (Fig. 2) throughout this driftwood 'jungle'. Much of the surface of these weathered skeletal remains of pines and live oaks that was not exposed to the sunlight and was capable of retaining some moisture harbored up to several dozen of the snails, which were, in fact, 'new'. Bill and I were familiar with this stretch of Big Talbot shoreline, which at first blush appears barren (Fig. 3), but neither of us had come across this extensive colony of periwinkles, now positively identifiable as *Littoraria nebulosa* (Lamarck, 1822), the cloudy periwinkle, until that moment. Furthermore, over the past fifty years, countless visits to that very stretch of shoreline by lots of Jacksonville Shell Club shellers had never evoked even a mention of such a population. When did the immigrants come ashore? Right now information is limited, but Rick Owen has another photograph of these snails in this distinctive place taken on June 11, 2015. More on this anon. Although found throughout the Gulf of Mexico and Caribbean waters to Surinam (Rosenberg, 2007), including Kice (http://www.jaxshells.org/5449.htm) and St. George Islands (http://www.jaxshells.org/8131z.htm), west

Fig. 1 ***Littoraria nebulosa*** **(the cloudy periwinkle) was a 'new snail' on Florida's Big Talbot State Park shoreline, first discovered in 2016.**

Fig. 2 ***Littoraria nebulosa*** **was found in clusters on hard surfaces on the Big Talbot State Park shoreline. This was the first time this species had been seen this far northward, even though this area had been visited numerous times in the past by shellers.**

Fig. 3 The Nassau Sound shoreline appears rather barren, but is a perfect habitat for *Littoraria nebulosa.*



7. Phasianelle nébuleuse. *Phasianella nebulosa.*

Ph. testâ ovato-ventricosâ, conoideâ, subperforatâ, glabrâ, albidâ, rufo cœruleoque nebulosâ; anfractibus convexis.

Habite sur les côtes de Saint-Domingue. *Riche.* Mon cabinet. Longueur de celle qui précède.

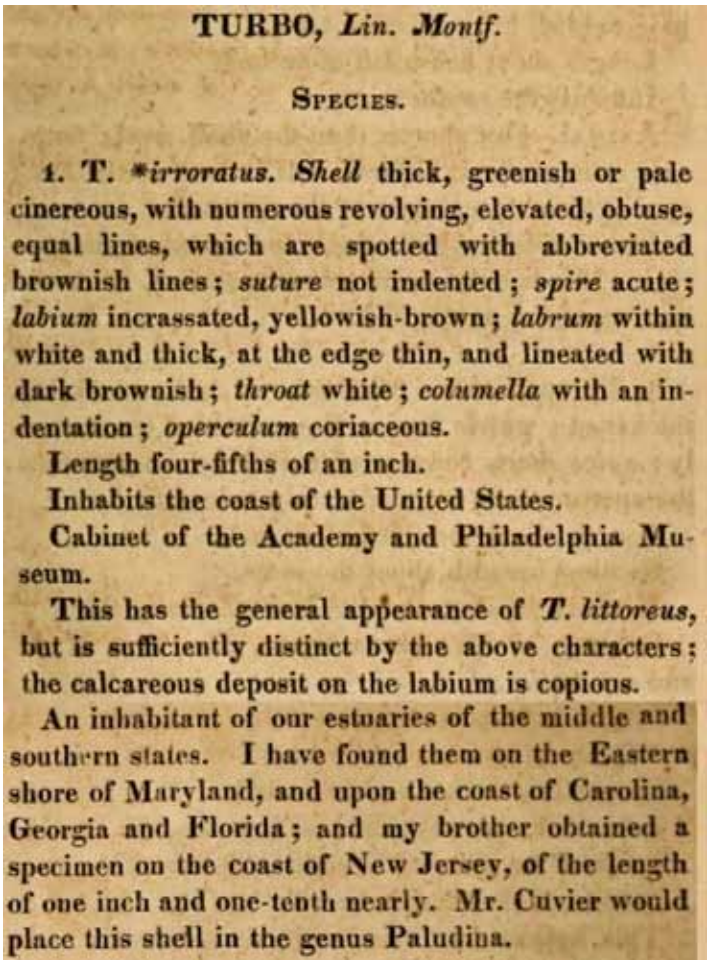
Fig. 4 Lamarck's description of *Littoraria nebulosa* (his *Phasianella nebulosa*) was detailed enough to distinguish this species from the similar appearing *Littoraria irrorata* named the same year by Thomas Say.

Fig. 5 *Littoraria nebulosa* (Lamarck, 1822).

Fig. 6 *Littoraria irrorata* (Say, 1822).

Florida; the northernmost east Florida record is Ft. Pierce, St. Lucie Co., by Marlo Krisberg, some 200 miles distant. His website, "Let's Talk Seashells" treats this species in detail; (see: http://z14.invisionfree.com/Conchologist_Forum/index.php?showtopic=2222).

Postponing reflections on this quantum range extension, let's take a glimpse at the taxonomic origin of this peripatetic periwinkle and a now sympatric (but allotopic) congener more proximally native to Big Talbot Island. *Phasianella nebulosa* Lamarck, 1822 (p. 54) was described (Fig. 4) from the island of Hispaniola (likely modern Haiti). Forgetting the generic assignment of his species, and forgiving the brevity of the noble Jean Baptiste Pierre Antoine de Monet Comte de Lamarck's description, we can see his use of the Latin "*glabra*" (shiny), "*rufo caeruleoque nebulosa*" (clouded with red and blue-gray), and "*anfractibus convexis*" (convex whorls) are quite helpful in defining the shell (Fig. 5). The familiar marsh periwinkle, *Littoraria irrorata* (Fig. 6) was named by Thomas Say the same year (1822: 239-240; Fig. 7) but across the Pond from Paris, in Philadelphia. Say's somewhat more detailed description mentions the greenish color, likely due to commensal algae



TURBO, *Lin. Montf.*

SPECIES.

1. T. **irroratus*. *Shell* thick, greenish or pale cinereous, with numerous revolving, elevated, obtuse, equal lines, which are spotted with abbreviated brownish lines; *suture* not indented; *spire* acute; *labium* incrassated, yellowish-brown; *labrum* within white and thick, at the edge thin, and lineated with dark brownish; *throat* white; *columella* with an indentation; *operculum* coriaceous.

Length four-fifths of an inch.

Inhabits the coast of the United States.

Cabinet of the Academy and Philadelphia Museum.

This has the general appearance of *T. littoreus*, but is sufficiently distinct by the above characters; the calcareous deposit on the labium is copious.

An inhabitant of our estuaries of the middle and southern states. I have found them on the Eastern shore of Maryland, and upon the coast of Carolina, Georgia and Florida; and my brother obtained a specimen on the coast of New Jersey, of the length of one inch and one-tenth nearly. Mr. Cuvier would place this shell in the genus Paludina.

Fig. 7 Thomas Say's description of *Littoraria irrorata* (his *Turbo irroatus*) was detailed and accurate.

Fig. 5 *Littoraria nebulosa* demonstrating both the typical clustering behavior of this species and the green coloring caused by algae. These snails are some of those discovered on the Big Talbot shoreline. The much smaller snail pictured on the far left is *Echinolittorina placida* Reid, 2009 (calmwater periwinkle), which shares the habitat. This locality is 200 miles north of the previously recorded range for this species along Florida's Atlantic coast.

in this case (and proven with the immigrants' shells), but "thick... elevated obtuse equal lines ... suture not indented ... labrum within white and thick" are sufficient to distinguish the two species. At this point I'm tempted to mention that some species descriptions penned nearly two centuries later are not as rigorous. Original descriptions aside, a critical difference between these two presently congeneric periwinkles is their microhabitat, upon which neither of the masters touched. Say's species has become known as the 'marsh periwinkle', a more apt cognomen than what his chosen Latin specific epithet, *irrorata*, meaning granular, connotes. It is a creature of the salt marshes of New Jersey to Texas (Rosenberg, Ibid). I have observed it ascend the stalks of *Spartina* (cordgrass) with the flood tide and descend from those retreats with the ebb. It feeds on fungi, which it helps propagate by etching the cordgrass surface to provide a foothold for this symbiont (Silliman and Newell, 2003). In contradistinction, the cloudy periwinkle lives on hard surfaces and thrives principally in the 'splash zone' above mean high water, where it likely feeds on a thin veneer of microalgae (Reid, 2009). Whereas the marsh periwinkle is a creature of the mucky backwaters, the cloudy periwinkle is wed to areas of generally higher salinity with hard substrate, usually facing the open sea. Thus it is difficult to envision any competition between the two somewhat similar-appearing species – at least for food.

Hard substrate is a scarce commodity along the Atlantic and Gulf coasts of the American southeast. Before the European immigration, there was essentially no such habitat. As seen with the dissemination of the calmwater periwinkle, *Echinolittorina placida* Reid, 2009 (http://www.jaxshells.org/ramaaa.htm), which, incidentally, we collected in lesser numbers alongside *L. nebulosa* (Fig. 5) in the driftwood 'jungle'; man-made structures, e.g., piers, jetties, seemed to be the only suitable habitat along this vast stretch. As adventitious rocks serve *E. placida*, is this relatively novel niche the *raison d'être* for both these vagrant periwinkle populations, or are there other environmental drivers such as climate change? Will these two species compete, and one emerge the victor? Further observations in this unique outdoor laboratory may provide some answers to the important posers.

The author credits Bill Frank, Marlo Krisberg, and Rick Owen for the photographs used above. Bill, Chin, and I are indebted to Rangers Harris, Langshaw, and Owens of Big Talbot Island State Park for access and guidance in this provocative reconnaissance.

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In memoriam:

George G. Gundaker (page: 22)

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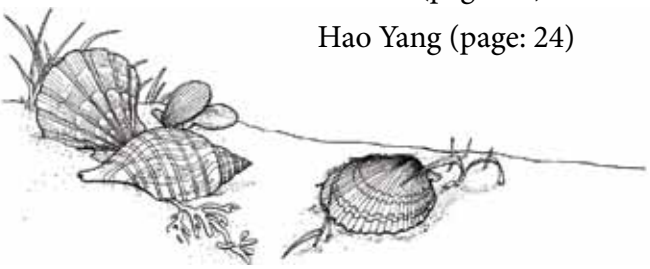

COA's John Timmerman featured on Cape Fear Museum website

Above is a screen shot from a short video by John Timmerman about the importance of proper data and labeling of specimen shells (www.capefearmuseum.com/programs/create-an-exhibit-at-home/). In this video, John explains how he curates his own collection and the necessity of proper collection data, stressing the importance of the 'where' and 'when' over the 'what'. John designs and fabricates exhibits for the Cape Fear Museum, New Hanover County, Wilmington, North Carolina. John also works behind the scenes at COA providing computer and graphics support for our annual shell auction catalogue.

cape fear museum
NEW HANOVER COUNTY
Cape Fear Museum

Hitchhikers in the molluscan world

Tom Eichhorst

Shell collectors know that the life of mollusks is most often a complex affair involving the need for security (thus the shell on many mollusks), the need to reproduce the species, and the need to obtain food (various predator – prey relationships). Of course, this is all made more complex by changing environmental conditions (some natural, some man-made) and the chance of an invasive hitchhiker. All of the shells pictured here suffered this last fate. Such a hitchhiker is called an epibiont (an organism that attaches to and lives on another organism). With most cases it probably means close to nothing in the daily life of the host; it might even have proven beneficial (camouflage, thickened shell, etc.). The majority of hitchhiking cases seem to happen after the mollusk is dead, but that is certainly not always the case. Presented here are several cases of hitchhiking among mollusk shells. The terms hitchhiker and hitchhiking herein are used in a loose and very broad sense: from an organism that attaches to a shell to an organism that uses a shell as a structural building block. This is not intended as a scientific review of what can be a very complex relationship; rather it is meant to remind us all of the wonders found in the molluscan world.

Fig. 1 ***Stellaria gigantea*** **(giant carrier shell, 126mm across the base) from deep water in the East China Sea with hitchhiking barnacles, including the odd-looking gooseneck barnacle,** ***Scalpellum stearnsii*****.**

Perhaps the best place to start this discussion is with the carrier shells, the family Xenophoridae Troschel, 1852 (1840).[1] This small family (three genera, just over two dozen species) is renowned amongst shell collectors for the many species in the family that attach other shells, rocks, or bottle caps (!) to their shell. This aspect of carrier shells does not exactly fit anyone's definition of hitchhiking – it is more like abducting. There are, however, hitchhikers in the carrier shell world. The back cover of this issue depicts *Xenophora pallidula* (Reeve, 1842) with many shells the animal has added to its shell as well as two large silicate sponges that are certainly hitchhikers. Similarly, in Fig. 1 is a deepwater carrier shell, *Stellaria gigantea* (Schepman, 1909), from 350+ meters depth in the East China Sea. The large alien looking attachment is *Scalpellum stearnsii* Pilsbry, 1890, a deepwater gooseneck barnacle. There are two additional barnacle species (family Balanidae) also attached. These are all certainly hitchhikers.

Barnacles are, in fact, one of the most often encountered shell hitchhikers. Fig. 2 has three *Chlamys rubida* (Hinds, 1845) and one *Chlamys hastata hericius* (Gould, 1850) (bottom left), all with one to almost a dozen barnacles. All were live taken. The attached barnacles certainly mar the shell for the collector, but as to positive or negative effects for the living animal, it is probably negligible. A heavier barnacle infestation is seen in Fig. 3 with a buccinid almost completely covered. When taken it was inhabited by a hermit crab. Fig. 4 shows a live taken *Bathybembix bairdii*

[1] "Family names cited with two dates (the second one in parentheses) are those ruled by Article 40(2) of ICZN. "If, however, a family-group name was replaced before 1961 because of the synonymy of the type genus, the replacement name is to be maintained if it is in prevailing usage." (ICZN 40-2) "A name maintained by virtue of this Article retains its own author [and date, the first date cited] but takes the priority of the replaced name [the date cited in parentheses, here alluding to Phoridae Gray, 1840]. Placed on the Official List by Opinion 715 (1964: 417), but credited in error to Philippi (1853: 185)." (WoRMS accessed Aug 2019)

Fig. 2 Three live taken *Chlamys rubida* and one *Chlamys hastata hericius* (bottom left), all with one to almost a dozen barnacles.

Fig. 3 A buccinid almost completely covered with barnacles. When taken it was inhabited by a hermit crab.

Fig. 4 Live taken *Bathybembix bairdii* from 400 fathoms off Astoria Canyon, Oregon. The numerous gooseneck barnacle hitchhikers (*Scapellum* sp.) have certainly taken advantage of the free ride offered by a fellow deepwater denizen. Image courtesy of William Ritter of Astoria, OR.

Fig. 5 *Strombus alatus* with a shallow water barnacle (probably the bay barnacle, *Amphibalanus improvisus* (Darwin, 1854). The fighting conch has begun to cover the hitchhiking barnacle with parietal shell material. Image courtesy of William Ritter of Astoria, OR.

(Dall, 1889) from 400 fathoms off Astoria Canyon, Oregon, with quite a few gooseneck barnacles (*Scapellum* sp.). With Fig. 5 we have our final barnacle story. This time it is *Strombus alatus* Gmelin, 1791, with a single barnacle on the spire side of the aperture. This case is interesting because the *S. alatus* was actually in the process of covering the barnacle with shell material.

Next are shells with coral hitchhikers. Fig. 6 is *Conus quercinus* [Lightfoot], 1786 (the oak or yellow cone) covered with coral. This specimen was taken live and represents a condition in this widespread species I have encountered quite a few times. Other than a bit of added weight and extra drag, the coral infestation probably did not really hamper the cone in any meaningful manner.

Fig. 6 *Conus quercinus* (the oak or yellow cone) covered with coral. This specimen was taken live and represents a not uncommon condition in this wide-spread species.

Fig. 7 Two specimens of *Vasum muricatum* with coral encrusting the spires of each. Both were live taken off of Venezuela.

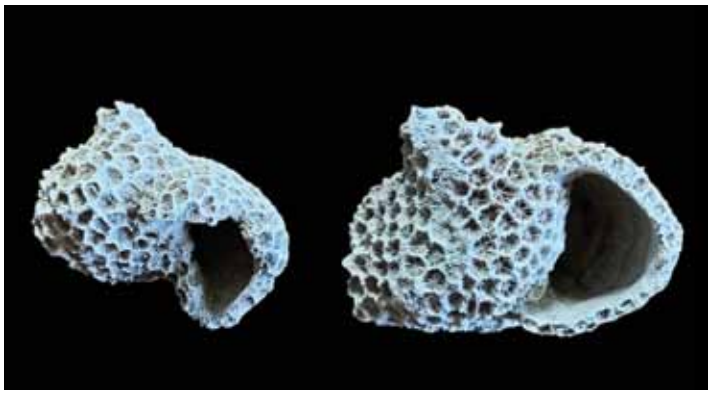

Fig. 8 Two coral encrusted gastropods from the Pliocene. Both shells are completely covered by coral – except for the aperture.

Fig. 9 *Coralliophila violacea* (violet coral shell) is a coral predator that in this case has a coralline hitchhiker that appears to be a hydrozoan, *Millepora* sp., or fire coral.

Fig. 7 shows two coral encrusted *Vasum muricatum* (Born, 1778) (Caribbean vase shell). This mollusk has a robust heavy shell and the added weight of the coral is probably not a factor in the its daily activities.

Fig. 8 shows two fossil gastropods encrusted by coral. These are Pliocene in age and were taken from the Newburn Pit, Pinecrest Formation, Sarasota, Florida. This and other fossil pits are now closed to the public. Because the coral covers the entire shell, it is probable that the gastropod was alive or the shell was inhabited by a hermit crab while carrying this extra burden. If the shell had been empty and lying on the substrate, the coral would not have covered the area in contact with the ground. It needed an inhabited shell that was lifted from the substrate.

Fig. 9 is C*oralliophila violacea* (Kiener, 1836) (violet coral shell) which typically feeds on *Porites* species of coral, but in this case is serving as host to what looks like a species of coral or a coralline organism. This may hamper the snail's feeding actions as it glides across corals stripping the living tissue.

Fig. 10 *Heteropsammia cochlea* (Spengler, 1781) is a 'walking coral' that settles on and engulfs a small mollusk shell that has become inhabited by a peanut worm or sipunculid worm (in this case, *Aspidosiphon muelleri* Diesing, 1851. Image from Wikipedia Commons.

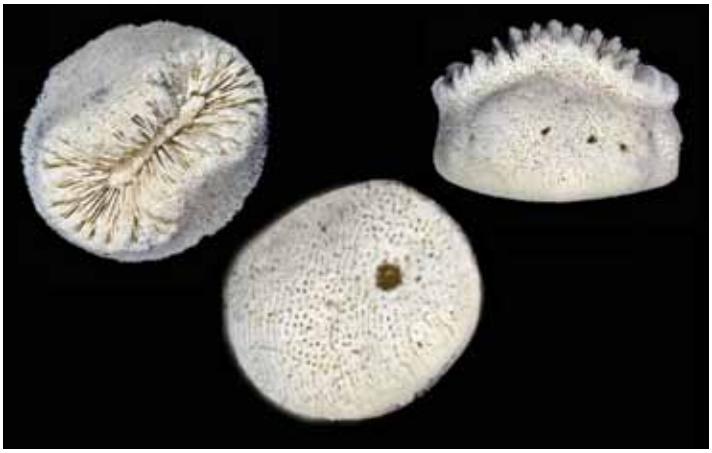

Fig. 11 The walking coral, *H. cochlea*, after cleaning and bleaching. The dorsal hourglass shape (also visible in Fig. 10) is a distinctive feature, as is the small hole left for the peanut worm. Image of dorsal and side views modified from Cairns & Kitahara, 2012, pl. 1. Ventral view is a construct.

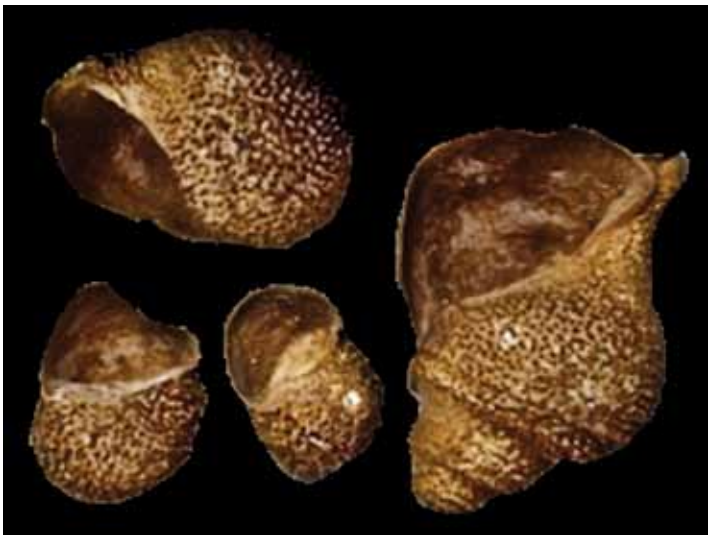

Fig. 12 (left) Three naticids and possibly a *Neptunea*, all covered with the hydroid *Hydractinia* sp. often called 'shell fur.' The genus *Hydractinia* has almost 80 species, usually found covering a shell that has become home for a hermit crab. Image courtesy of Paul Stevens.

The free-living *Heterocyathus* and *Heteropsammia* corals include two species that are commonly called walking corals (Fig. 10). As planktonic larva, the coral settles on an 'empty' gastropod shell (at least empty of the original molluscan inhabitant) that has been taken over by a sipunculid or peanut worm (one of 300 species in the phylum Sipuncula). The coral soon covers the gastropod shell, except for a small hole on the base, leaving space for the worm. The worm transports the shell to new feeding areas and the coral provides protection for the worm. This commensal relationship (a symbiotic relationship in which one species is benefited while the other is unaffected or in this case actually benefits) is further complicated by the addition of a parasitic date mussel, *Leiosolenus lessepsianus* (Vaillant, 1865), embedded above the sipunculid worm (see www.coralsoftheWorld.org). A mussel hitchhiker, on a coral, hitchhiking on a small mollusk shell, inhabited by a worm. A cleaned specimen is shown in Fig. 11.

Fig. 12 is an image of what actually started this investigation into molluscan hitchhikers. A fellow collector, Paul Stevens, received these shells from a mutual friend and collector, William Ritter. Paul wondered what the brown fuzzy coating was on his shells. After the three of us floundered around with various guesses, we were set straight by Linda Schroeder of the Pacific Northwest Shell Club who referenced an article in the club newsletter, *The Dredgings*, about the hydroid called snail fur, one of 30+ *Hydractinia* species. This is another member of the phylum Cnidaria and again, settles on a shell and through a process of budding proceeds to develop a colony that covers the shell. Two interesting facts: 1) the shell is colonized by more than one individual polyp in a situation

Fig. 13 ***Hippoporidra edax*** **(Texas longhorn) from the Gulf of Mexico. The longest is 126mm. This bryozoan colony starts as a single polyp attached to a small shell. The shell is quickly covered and the bryozoan colony then adds the 'arms' growing out to each side. The shell is inhabited by a hermit crab (note the claw perfectly closing the aperture on the upper left specimen), which then carries this ever-growing structure. A commensal relationship that is a bit one-sided. The crab already had protection and probably doesn't need the added weight.**

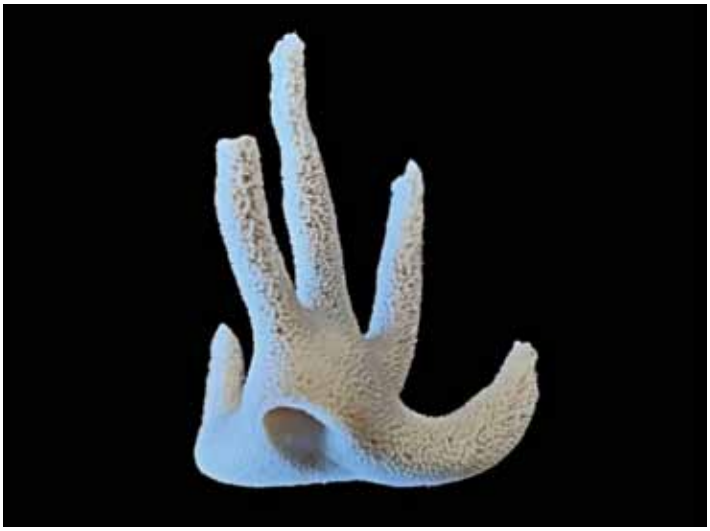

Fig. 14 The hydroid ***Janaria mirabilis*** **(commonly called staghorn hydrocoral) is about 26mm high. Like the** ***Hippoporidra*****, it forms a hard coral-like structure around a small hermit crab inhabited shell.**

Fig. 15 Another example of a hydroid, ***Schuchterinia epiconcha*****. This 40mm specimen has completely disolved the original mollusk shell and serves as growing home for a hermit crab.**

called a chimeric colony, but 2) once complete the entire colony is either male or female. The 'fur' is made up of three types of specialized stolons (feeding, reproductive, and stinging) that, "... are extensions of the guts of each of the polyps and form a gastrovascular system that links the members of a colony. When a colony encounters itself as it grows around a shell, its stolons invariably fuse, preserving the integrity of self and functionally unifying the colony. When the stolons of genetically distinct colonies grow into contact, one of three outcomes ensues: (1) fusion, forming a functionally and behaviorally integrated, but genetically chimeric individual...; (2) aggressive rejection, accompanied by the induction of specialized organs of aggression, the hyperplastic stolons...; or (3) transitory fusion, in which initial fusion is followed by varying degrees of rejection" (Grosberg & Plachetzzki, 2017).

Fig. 16 A 'shell' produced by the anemone *Stylobates aeneus.* The original mollusk shell is what looks like the small squarish protoconch. Again, a commensal relationship where the anemone provides shelter and the hermit crab mobility – all built on a small mollusk shell.

Fig. 17 The pteriid *Crenatula picta* covered by an unknown hydroid or bryozoan growth. This shell was one of several that were collected off Darwin, Australia, in this condition.

Fig. 13 looks and feels like coral, but is actually a bryozoan colony, *Hippoporidra edax* (Busk, 1859) from the Gulf of Mexico, where it is called a Texas longhorn. The colony starts out as a single polyp attached to a small shell and quickly coats the shell completely and then adds the 'arms' growing out to each side. The shell is inhabited by a hermit crab and the poor crab ends up hauling around a shell that weighs up to fifty times what its original home weighed.

A similar situation is depicted in Fig. 14 where a commensal athecate hydroid[2] has formed around a shell. The hydroid is *Janaria mirabilis* Stechow, 1921 (commonly called staghorn hydrocoral), and like the *Hippoporidra* it forms a hard coral-like structure around a small hermit crab-inhabited shell. The juvenile *Janaria* first attaches to the shell as a single polyp that buds into other polyps and grows to cover the shell and then extends outward. Eventually the shell is dissolved and the hydrocoral attaches to the crab's carapace. The hydrocoral provides a protective shell covered with stinging polyps and the crab transports the hydroid to different areas looking for food. Pretty much a commensal relationship, with benefit to both species.

Fig. 15 is another example of a hydroid, *Schuchterinia epiconcha* (Stechow, 1908). This specimen was recovered in the waters off Japan and in this case the hydroid has completely dissolved the original shell and gone on with a shell-like structure of its own. Again, this structure was inhabited by a hermit crab and was pinkish-brown (when alive), it is now plain brown (when dead).

Fig. 16 is a 'shell' produced by an anemone. *Stylobates aeneus* Dall, 1903, is one of four species of small anemones in the genus *Stylobates* (*S. aeneus*; *S. birtlesi* Crowther, Fautin & Wallace, 2011; *S. cancrisocia* (Carlgren, 1928); *S. loisetteae* Fautin, 1987) that attach (again as a polyp) to a small gastropod shell and then proceed to build a shell-like structure that may or may not resemble the original shell. The original shell in this case is what looks like the small squarish protoconch. *S. aeneus* was first described as a deepwater mollusk. Again, as the hitchhiker, the anemone completely takes over the shell from its original owner and then provides living quarters for a hermit crab, living quarters that continue to grow with the crab, eliminating the need to find a new shell.

Fig. 17 is *Crenatula picta* (Gmelin, 1791) taken from off Darwin, Northern Territory, Australia, in 1985. It is 48mm and covered with a hydroid or bryozoan growth, completely hiding the colors and pattern of the shell. If not obscured, the shell pattern is marble-like with white or dark veins on a brown background. Some look like richly patterned wood, others like marble – this specimen looks like it is carpeted with a coursely-textured webbing.

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[2]Athecate hydroid (the order Anthoathecata of hydrozoans belonging to the phylum Cnidaria, which are exclusively aquatic, predominately marine, and include over 11,000 species like jellies, sea fans, corals, etc.) all of which (presently known) have a polyp stage and grow either as a single individual or as a colony, depending upon the species.

Fig. 18 *Fusitriton oregonensis*, the Oregon hairy triton, with three different species of brachiopods attached (two shown). Like the gooseneck barnacles on *Stellaria gigantea* (Fig. 1) and *Bathybembix bairdii* (Fig. 4), cold deep waters seem more prone to such hitchhiking behaviors. Recent brachiopods are extremely light weight and would thus cause little problem for the molluscan owner of this shell.

Fig. 19 *Haliotis rufescens* with hitchhiking calcareous tube worms. Also called bristle worms, these polychaete , segmented worms protrude from the tube with a feather-like structure of cilia surrounding two eyes and the mouth. These could also be molluscan vermetids.

Fig. 20 A mollusk attached to another mollusk. In this case, *Spondylus violaceus* (violet spiny oyster), hitching a ride on *Malleus malleus* (black hammer oyster).

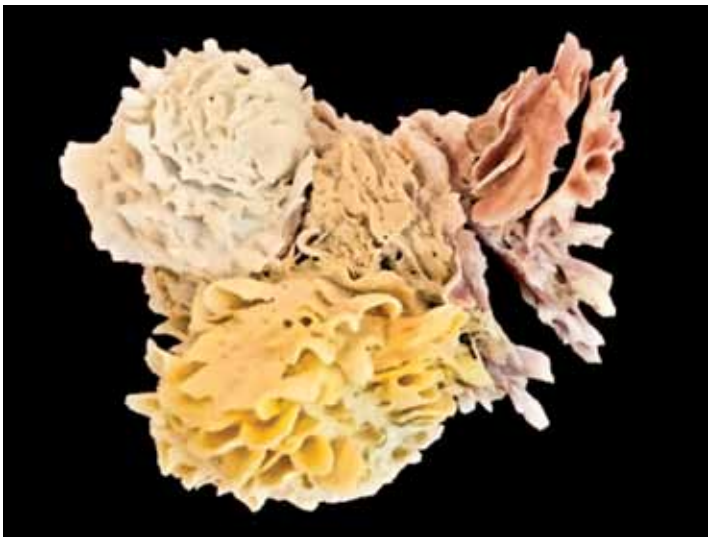

Fig. 21 *Chama macerophylla* (the leafy jewel box) in a cluster of attached shells.

From the cold waters around Alaska we have Fig. 18, *Fusitriton oregonensis* (Redfield, 1846), the Oregon hairy triton, with three different species of brachiopods attached (only two can be seen in this image). Brachiopods first appeared in the early Cambrian Period (541–485.4 million years ago) and their numbers suffered greatly during extinction events so that there are far fewer extant brachiopod species today. Most live in cold ocean waters and, here, at least three species found a free ride.

Fig. 19 shows the bane of shell collectors the world over, a shell with calcareous tube worm casings. In this case, *Haliotis rufescens* Swainson, 1822 (the red abalone, 180mm) from off Dana Point, California, in 1939, with a heavy covering of polychaete tube worms (*Serpula* sp?). While these can be removed from the shell, they almost always leave a scar where they were attached.

Rounding out our quick and admittedly limited review of shell hitchhikers are Figs. 20-23, mollusks attached to other mollusks. In Fig. 20 we have *Spondylus violaceus* Reeve, 1856, hitching a ride on *Maleus maleus* (Linnaeus, 1758) – a violet spiny oyster attached to a black hammer oyster. Many oyster species attach to other shells or each other, it is a common occurrence within this family.

Fig. 22 Two *Crepidula fornicata* hitchhiking on an olive shell. *C. fornicata* is more commonly seen piled on top of each other, but will, in fact, hitch a ride on other shells.

Fig. 23 *Spondylus americanus* Hermann, 1781 (the Atlantic thorny oyster) with two molluscan hitchhiking species: *Vermicularia knorri* and *Chama macerophylla*.

Fig. 21 shows a crowd (more than three) of *Chama macerophylla* Gmelin, 1791 (the leafy jewel box) all hitchhiking on each other. Of course, as none of them are mobile, the term hitchhiking must be taking quite broadly.

Fig. 22 is an unidentified olive shell with two *Crepidula fornicata* (Linnaeus, 1858) (common slipper shell) hitching a ride. *C. fornicata* is more commonly encountered in mating piles of multiple shells with numerous smaller males on top of a larger female. They are sequential hermaphordites and when the female dies or is otherwise removed from the stack, the largest male will change into a fertile female.

Finally, Fig. 23 is *Spondylus americanus* Hermann, 1781 (the Atlantic thorny oyster) with two molluscan hitchhiking species. The brown, coiled tube worm-looking shells are actually mollusks, *Vermicularia knorri* (Deshayes, 1843) (differentiated from the similar appearing *Vermicularia spirata* Philippi, (1836) by the white coiled portion of the shell rather than a dark brown as in *V. spirata*. The yellow bivalve is *Chama macerophylla*, the leafy jewel box, again hitchhiking on a non-mobile shell.

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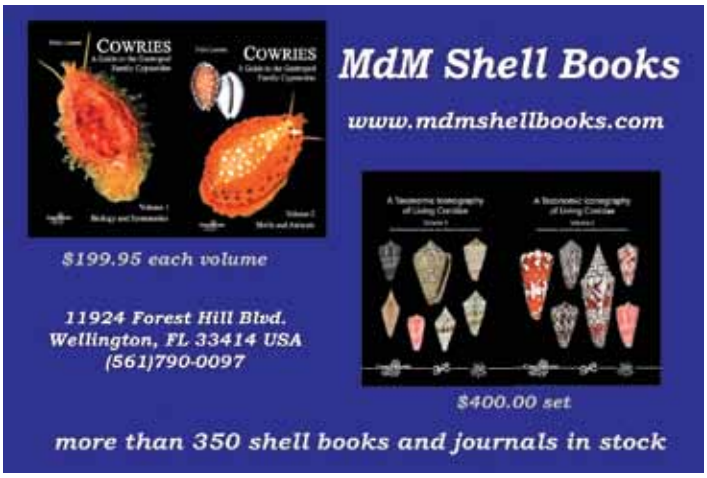

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George G. Gundaker (1931-2020)

Oldtimers may remember Boardwalk Rock and Shell on the Atlantic City, New Jersey Boardwalk, owned by Marvin Hume. The specimen shell specialist he employed was George G. Gundaker, who worked there for many years, until incoming casino gambling closed the interesting store. This is where I met George in the mid 1970s and we have been friends ever since. I visited the store a number of times and will never forget when George finally knew me well enough to give me his well-worn showcase keys, so I could shop to my heart's content. At that time, George was working with Jerry Walls on his book, Cone Shells: A Synopsis of the Living Cones, and many of George's shells were photographed for that volume.

George and his first wife, Joan, moved to Wanchese, North Carolina, to work for Stetson Shells, under Woodrow Stetson, and then his son, Rusty, and wife, Caroline, who now run the business. After Joan passed, George traveled to the Philippines, with the Stetsons, to purchase items for their business. He was introduced to Elena Mahusay in Cebu, and they were married in 1993. Elena is employed by the Stetsons, as George was. On June 10th, George turned 89 years old. He passed away at night after a long illness, which was mostly spent at home, under the excellent care of Elena.

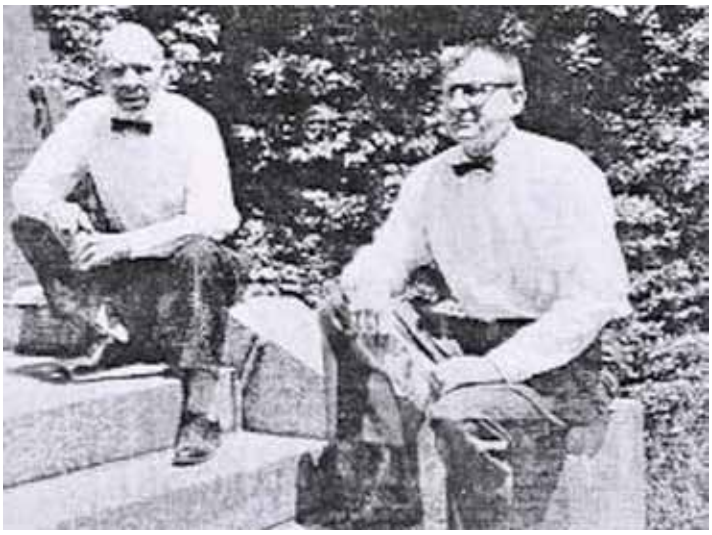
I will always miss him, his good advice and valued friendship over the years.
Sue Hobbs

Cape May, New Jersey
online obit:
George Gerard Gundaker, 89, of Wanchese, NC, died Friday, July 3, 2020, at his home. Born in Philadelphia, PA, on June 10, 1931, he was the son of the late Mary Hogan and Clarence Gundaker. An expert in seashells, George worked at W.S. Stetson Seashells in Wanchese. He loved to fish and was an avid racecar fan. He is survived by his wife, Elena Mahusay Gundaker; a niece, Vicci Fisher; and a nephew, Richard Fisher. In addition to his parents, George was preceded in death by a sister, Margaret Fisher.

Richard Irwin Johnson (1925-2020)

I regret to inform you that Richard Irwin Johnson passed away on July 1st, at the age of 95. He died peacefully at home.

Richard was a long time Research Associate at Harvard's Museum of Comparative Zoology, having started as a volunteer while still in high school. His first scientific article was published in 1941, at the age of 16. After service in the U.S. Army in World War II, he returned to Massachusetts, graduated from Harvard College (1951), and developed an extensive publication record with an emphasis on mollusks, particularly the freshwater bivalves of the family Unionidae.



William J. Clench (left) and Richard I. Johnson (right) in 1963.

He also authored a number of biographies and catalogues of numerous other scholars who collected and studied mollusks. Those publications remain invaluable references for current and future generations of malacologists. These included articles on Unionidae specialists (Call, Frierson, Heude, Lea, Marshall, Simpson, Utterback, and the Wrights), as well as those whose molluscan studies included other taxa (*e.g.*, Bequaert, Brooks, Bush, Clench, Couthouy, Fuller, Gould, Mighels, Ortmann, Pease, Prime, Storer, Turner, Verrill, and Wetherby).

Richard also prepared invaluable collations of a number of nineteenth-century publications that appeared in multiple parts over many years. He authored type catalogues of the Unionidae holdings of several museums, including the Museum of Comparative Zoology, Harvard, and Natural History Museum, London. He also wrote histories of several now defunct museums, including the Boston Society of Natural History, the Portland (Maine) Society of Natural History, and the Lyceum of Natural History of New York.

Richard built, over a period of nearly six decades, what is perhaps the largest private library of books and journals on mollusks, including antiquarian titles seldom found in research libraries.

Richard was probably the oldest and longest-serving member of the American Malacological Society, having joined the predecessor entity, the American Malacological Union, in 1941.

Having known Richard for over 35 years, I have long appreciated both his extensive knowledge of the literature on molluscs and his great interest in a wide range of other topics, which resulted in many stimulating late-night conversations!

Alan R. Kabat

Left to right: Professor Ernst Mayr, Richard I. Johnson, and Professor Kenneth J. Boss (1991).

I worked with Richard — R. I. Johnson — and Ken Boss, and Ruth Turner, at the Harvard MCZ from 1980 to 1982. I have very fond memories of Richard: he was very likable, very funny, very lively, a well-rounded human being. His extremely ancient mollusk books were fantastic, and I would look on with amazement as he smoked a cigar over their valuable and venerable pages.

I am sad to hear he passed away, but glad his passing was peaceful and at home, and that he lived to 95. It was a full life.

Susan J. Hewitt

The images of Richard Irwin Johnson are from an article by Kenneth J. Boss in 1998, in *Occasional Papers on Mollusks*. It is a tribute to Richard Johnson and the opening paragraph reads,

"It is a great pleasure to be able to dedicate this volume of Occasional Papers on Mollusks to Mr. Richard Irwin Johnson who has, during almost six decades of association with the Department of Mollusks, made numerous contributions to both malacology and its history, a number of which have appeared in this series and the Bulletin of the Museum of Comparative Zoology, as well as Breviora and Miscellaneous Occasional Papers. He has generously supported the Department and added considerably to its library; such works as Kiener, the Küster edition of Martini and Chemnitz; and the original pattern set to Reeve's, *Conchologia Iconica*, all duplicates from his library, which is the most extensive malacological collection in private hands."

Boss, Kenneth J. 1998. Richard Irwin Johnson. *Occasional Papers on Mollusks* vol. 5, no. 67-76, Department of Mollusks, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, 30 Aug. 1989-1998 [vol. 5, no. 76: I-IX]. Online at: https://www.biodiversitylibrary.org/page/4307681#page/477/mode/1up

Peter (Pete) Steelman (1940-2020)

Peter (Pete) Steelman passed away on May 31, 2020, at the age of 80. Pete and his wife, Sue, lived in North Port, Florida; originally they were from Mystic, CT. Pete's occupation was that of a veterinarian.

Pete has been a member of the Sarasota Shell Club since 2013 and is well known to its members for his life-like models of the animals contained within the shells that we are all fond of. These displays have always been a hit at our yearly "Shoe Box" exhibits. He also entered shell shows in the past. Besides the models Pete was keenly interested in cowries, cones and carrier shells. He was interested in the club itself and served on the Board of Directors.

Pete—we will miss you.

Ron Bopp (adapted from the summer 2020 edition of *The Beauii*, official newsletter of the Sarasota Shell Club).

Hao Yang (1980-2020) and Zhangqin

A member of COA, Hao Yang was known for his fascination with the terrestrial snails of China. He was on just such a family collecting trip with his wife and son in August of this year in Sichuan Province, China, when he fell suddenly ill and passed away in the hospital. He is survived by his wife, Zhangqin (who would typically accompany him on his various collecting trips) and their son.

Email comments included:

What a shame for this young man and those he left. He was a true student of Chinese terrestrial malacology. There are some patronymic land snail taxa, but they're only a fraction of the dozens of new species he brought to light. It was clear to most anyone who crossed his path that he was bright, sensitive, educated, competent, and honest. I always enjoyed our correspondence, most of which was devoted to Chinese endemics.
Harry G. Lee

Hao was not only an expert on Chinese terrestrial snails (especially Clausiliidae), but he was famous for some of the rarest freshwater shells in all of China. There were a number of shells named after him. He and his father were EXCELLENT collectors. He was one of the kindest and most humble persons we knew. We were planning to be with him in Sichuan this summer!! Unfortunately Covid19 prevented it.

We especially enjoyed our trips to HaiNan Island with Hao and Qing. We could tell lots of stories about our adventures, including the time that we had to go to the police department in a small town in central China because the local people told them "there were foreigners in town." No problem. They served us tea and chatted, while we told them that the proper thing to do was copy our passports (they did not know what to do).
Lee & Jan Kremer

SAVE THE DATE FOR COA CONVENTION 2021

RETURN TO THE FUTURE COA 20/20

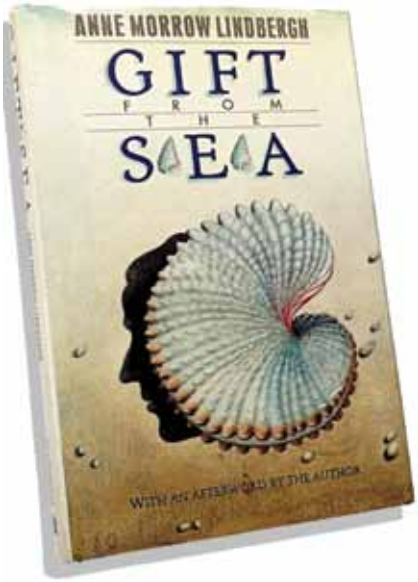
Due to continued COVID 19 coronavirus concerns, the registration package for the 2021 COA Convention, Melbourne, Florida, will not be sent out until the December issue. All of the planning and work continues apace. Planning includes coping with any possible restrictions. Please set aside in June 2021: 14-15 for the field trips, 16-18 for the convention, and 19-20 for the bourse. Changes will be posted in *American Conchologist* and online at: www.conchologistsofamerica.org.

HILTON RIALTO PLACE HOTEL
200 Rialto Place, Melbourne, FL 32901
www.HiltonMelbourne.com

Contacts: Alan Gettleman: Lychee@cfl.rr.com
Phyllis Gray: 407-422-0253

"Gift From the Sea"
by Anne Morrow Lindbergh

ISBN-10: 0394557433, ISBN-13: 978-0394557434
Pantheon Books, New York, 2nd edition, 1977, pp. 142
(first pub. 1955)



This is not a 'shell book.' In fact, it was really intended by the author for only half of our readers -- women, but would probably be of benefit to the other half of the population. Anne Morrow Lindbergh (1906-2001) was the wife of Charles Lindbergh (he of the first solo flight crossing of the Atlantic, accomplished in 1927 – also the year (after the flight) he and Anne first met, they married in 1929). Lindbergh's book is a collection of introspective essays on being a woman and coping as a woman in today's age (written in 1955). Part of understanding this small volume is placing its author in history. Married to the famous Charles Lindbergh, first child (aged 20 months) kidnapped in 1932 and later found dead, left the the country for Europe because of the non-ending and invasive publicity, came back to the US in 1939 and in support of her husband's isolationist and pro-fascist views, wrote "The Wave of the Future" in 1940, subsequently attacked as pro-Nazi by President Roosevelt. After the bombing of Pearl Harbor on 7 Dec 1941 and the subsequent declaration of war by Germany – she and her husband abandoned their support of Germany and US isolationism. He, although never back in favor with Roosevelt or the military leadership, worked on several fighter aircraft testing programs and flew numerous combat sorties (as a civilian) in the Pacific while improving US operations with the P-38 Lightening. Ann had five more children and wrote over a dozen books after the war helping to repair the Lindbergh reputation. Like her husband, she was a pioneering aviator and was inducted into the National Aviation Hall of Fame (1979), the National Women's Hall of Fame (1996), the Aviation Hall of Fame of New Jersey, and the International Women in Aviation Pioneer Hall of Fame (1999). The "Gift From the Sea" was a national bestseller and has been called an early step into the 'environmental movement'. Maybe.

Now to the book itself. Each chapter begins with a shell she either finds or is given while alone (mostly) on a short 'vacation' on an isolated island. The shell is then used as a launching pad for her introspective ruminations. The first chapter begins with a channeled whelk (she does not list scientific names). A simple beautiful shell, to contrast with her not simple and not beautiful life. "For life today in America is based on the premise of ever-widening circles of contact and communication. It involves not only family demands, but community demands, national demands, international demands on the good citizen, through social and cultural pressures, through newspapers, magazines, radio programs, political drives, charitable appeals, and so on. My mind reels with it...This is not the life of simplicity, but the life of multiplicity..." Her week or two on the island is her retreat to a simple life.

Next is a moon snail, the classic spiral from aperture to apex: an island surrounded by waves. Here she talks about the "art of solitude." The absolute need to have some alone time, no matter your life circumstances. "Solitude says the moon snail. Every person, especially every woman, should be alone sometime during the year, some part of each week, and each day."

The next shell is the sunrise tellin. Here the two matching valves brought about thoughts of relationships, like those between husband and wife, friends, or family. After that chapter came the oyster, and so on for a total of seven chapters and an afterward written in 1975, where she comments on the amazing happenings between the years 1955 and 1975, but notes the relevance of her notes to the women of 1975. She comments on the feminism movement beginning with US women's right to vote in 1920, but notes they are still mired in issues that were present in 1955. She remarks that the most positive aspect of the Women's Liberation Movement is that many women are now talking over their issues with men instead of with just each other.

Her last chapter applies quite well to shell collectors. Commenting on the personal trip from a collector of every bit of calcium seen to one who only brings home the best example of a species. This quantity to quality transformation can take an enormous amount of time.

So that is Ann Lindbergh's shell book. As an early step into the 'environmental movement', I believe the reports may have been reaching a bit. As an examination of women's roles, expectations, and trials in society - yes, it certainly delivers. As a shell book, only the most esoteric and wildly accepting person would view this as a shell book. It is, however, a quick two-hour read and interesting both because of the author and because the issues she discusses are maybe even more relevant today than they were in 1955.

Tom Eichhorst
thomas@nerite.com

CONCHOLOGISTS OF AMERICA (COA) BOARD OF DIRECTORS MEETING

SOUTH SEAS ISLAND RESORT, CAPTIVA ISLAND, FLORIDA

JUNE 19, 2019

Present: President: Harry G. Lee, Vice-President & Website Coordinator: Karlynn Morgan, Treasurer: Steven Coker, Secretary Emerita: Phyllis Gray, Secretary: Amy Dick, Membership Director: Linda Powers, Trustee: Everett Long (*Neptunea* Award), *American Conchologist* Editor: Tom Eichhorst, Awards Director: Vicky Wall, Endowments Director: Donald Dan, Convention Coordinator: Anne Joffe, Member-at-Large: Doug Wolfe, Member-at-Large: Ed Shuller, Immediate Past President: José Leal, and guest, COA Historian: Alan Gettleman.

Absent: Academic Grants Chairwoman, Jann Vendetti and *American Conchologist* Indexing Project Chair, Bruce Neville.

President Harry G. Lee called the breakfast meeting to order at 8:03 AM and welcomed the 13 other members and one guest.

2018 COA Minutes, Phyllis Gray – Secretary Emerita

The 2018 minutes of the Board of Directors meeting, held in San Diego, California, were read**.** Doug Wolfe motioned to accept last year's minutes; Anne Joffe seconded the motion. Motion carried.

COA Historian's Report – Alan Gettleman

Alan thanked Dr. José Leal of the Bailey-Matthews National Shell Museum, (BMNSM) for storing COA files at the museum. He also commented that Dorrie Hipschman, BMNSM Executive Director, has been very supportive. Alan began the process of establishing electronic file folders for each year of COA's early history. He has completed indexing and scanning the first six years (three volumes) from 1972-1978, using a Microsoft Access database. As the on-going project moves forward, his intent is to provide a current thumb drive history at the 2020 COA board meeting in Melbourne, Florida. He also thanked Bruce Neville for his successful indexing project. President Lee stated the value of having an alphabetized appendix of historical figures from the 1970's. Alan was thanked by President Lee and excused from the meeting.

Financial Reports – Steven Coker

Steven distributed hard copies of the financial reports to all present. The Statement of Accounts showed total cash assets on January 1, 2018, as $356,501.83; total receipts were $54,590.45; total disbursements were $43,141.72. At the end of the year, December 31, 2018, total cash assets were $367,950.56.

The 2018 Operating Budget was reviewed. The 2019 Proposed Operating Budget was presented. President Lee called for a motion to accept the 2019 proposed operating budget. Ed Shuller moved, and Doug Wolfe seconded the motion. Motion carried.

Indexing *American Conchologist* – Bruce Neville, Chair (Presented by President Lee in Bruce's absence.)

In January 2018, the COA Board of Directors proposed indexing the back issues of *American Conchologist* and its predecessor, the *COA Bulletin.* Today, Bruce has all three installments consisting of vol. 1-19, vol. 20-24 and vol. 25-46 on the COA website. The indexing categories are: Molluscan Taxa – indexed by Harry Lee and Ed Shuller; People & Clubs – indexed by Amy Dick and Tom Grace; Geography and Other Topics – indexed by Bruce Neville. Tina Neville, Bruce's sister, devoted her time to assist Bruce in providing accuracy to the index. Bruce is currently working on re-indexing the earlier volumes with the intent of having one single, comprehensive, searchable index of all issues by early 2020 with frequent updates thereafter.

***American Conchologist* – Tom Eichhorst**

President Lee asked all members to italicize the name *American Conchologist* whenever it is written. Tom said the price is now lower for *AC* to be shipped as it is mailed directly from the printers, JPA. He stated the lower price is due to our not-for-profit status along with the use of bulk mailing. President Lee stated that *AC* is a "shining light."

Tom stated that shell show results and pictures of trophy winners MUST be sent to him by the shell clubs in order to get printed in *AC*. Vicky Wall stated that she had informed the shell clubs they were responsible for sending that information to Tom. Karlynn inquired whether or not the indexing of back issues of *AC* had begun on the *Biodiversity Heritage Library* website. Tom stated that it is "in the queue." She also brought up the question of what to do with all those back issues of *AC* that she and Tom Grace have in storage. Karlynn stated they could be brought to conventions to be sold for a small fee or given out freely. Donald Dan said he distributes the journals at international shell shows to advertise COA along with an application form to become a member. He stated that putting the journals on dealer's tables is a good idea. Anne Joffe said Astronaut Trail Shell Club leaves *AC* issues on tables for people to take a look at.

Vice-President & COA Website Coordinator – Karlynn Morgan

Bill Frank and President Lee met with Mark Carillon of Web904 in Jacksonville, Florida, to discuss the acquisition of an outside website professional. President Lee established an *ad hoc* committee consisting of himself, Tom Eichhorst, José Leal, Bill Frank and Karlynn Morgan to oversee the details of this transfer and fully develop a new website. On December 1, 2018, the Board of Directors accepted the contract proposed by Web904. The cost for setting up the website was much lower due to COA having a non-profit status. On February, 2018, the first update to the new site was made. Vicky, Karlynn and Linda made changes to the website, however, anyone can send a pdf, jpg, etc. to Karlynn for posting. President Lee stated Bill Frank and Karlynn Morgan provided invaluable assistance toward the implementation of the new website.

Phyllis Gray mentioned that hard to identify pictures of some past COA participants could be posted for identification on the COA website. Anne Joffe said that John Jacobs and Bev Dolezal take pictures at COA conventions and have made CD's of them.

COA Awards Director – Vicky Wall

Vicky began by saying that in 2018, there were 10 domestic shell shows and 4 international shell shows receiving a COA award. The COA Trophy Guidelines and Sound Judging Practices have been posted to the COA website. In 2018, the *Neptunea* Award recipient was Bruce Neville. Vicky gathers shell show information from various sources including Facebook and posts it to the COA website. She also submits two lists yearly containing shell show dates and locations to Tom Eichhorst for publication in *AC*. Also, Guidelines for the *Conchologists of America* Award were amended. President Lee requested a motion to accept the new "slightly amended" guidelines submitted. Several so moved and Anne Joffe seconded. The motion carried.

COA Academic Grants Program – Jann Vendetti (Presented by President Lee in Jann's absence)

The COA Grants Committee consists of Jann Vendetti, Fabio Moretzsohn and John Slapcinsky. In 2018, there were 15 academic grants awarded for a total amount of $25,900.00. President Lee made the statement that COA should consider raising the amount of money given to the same number of academic grant recipients in the future.

Endowments Committee Director – Donald Dan

Donald stated that by the end of 2018, COA gained $144,778.30 over the past 2 ½ years from the Frederic Weiss Shell Collection. Also, donations were received from the Sanibel-Captiva Shell Club and the New York Shell Club. The New York Shell Club will create two named awards to be given annually over two years. President Lee asked for a motion to accept those conditions; several so moved and Donald Dan seconded. Motion carried. A cash donation of $10,000.00 from Anne Joffe and a pledge of $10,000.00 from Donald Dan were also received.

Donald produces an annual edition of the "COA Grant Donation Program" brochure for general distribution and to targeted donors. He coordinates the physical production of the *Neptunea* Award for plaques and has coordinated and donated the cost of producing the tri-fold flyers to publicize our annual convention.

COA Convention Coordinator – Anne Joffe

Anne announced that Melbourne, Florida, was chosen for the 2020 COA Convention due to, among other considerations, NASA launches and the great price of $125.00/night rooms at the Melbourne Hilton. The month of June was selected to try to avoid hurricane season. Dave Green will chair the 2021 Galveston COA. The venue for the convention will be Moody Gardens Hotel in Galveston, Texas. The room price will be $175.00/night. The 2022 COA Convention will be in Wilmington, North Carolina. She was happy to say that the 2023 convention will be back in Florida but doesn't have details at this time. Anne said that almost 300 people attended the 2019 Captiva Island COA convention and that there is a problem that needs to be addressed. She stated that the current registration price of $175.00 only covers the food for the Welcome Party and the Banquet and stated that a higher price needs to be established. Numerous ways were discussed by the Board of Directors. Doug Wolfe asked the Board to make a resolution to discuss this situation in Melbourne. President Lee agreed and asked for a resolution to focus on this subject to take place next year. Several members thus moved. The resolution was

seconded by Doug Wolfe. Motion carried.

Membership Chair – Linda Powers

Linda said she will notify members by email when dues are due. In 2019, we have a count of 504 domestic members and 69 international members for a total of 573. We gained 26 new members. Linda suggested posting pictures of COA events on social media to try to bump up membership. Several ideas were presented by the Board on how to handle this. Donald Dan exclaimed that people nowadays are socializing on-line instead of in person. President Lee stated that sadly, due to the overwhelming amount of social media occurring, there isn't as great a need for clubs. Linda ended by stating that working directly with Johnson Press of America, Inc. (JPA) is much easier than using a COA volunteer intermediary. Previously, all labels had to be printed, envelopes stuffed and mailed out. Now JPA accepts a quarterly updated database from her and takes care of the entire mailing process.

***Neptunea* Award & Walter Paine Shells – Everett Long, Trustee**

Everett began by stating that John Timmerman and Gary Schmelz are the 2019 *Neptunea* Award winners. President Lee expressed the importance of italicizing *Neptunea* whenever written. Everett would like the *Neptunea* Award advertisement in *AC* be clear and concise in stating that this award must be given to a longtime "abiding" individual(s). No sitting board member is eligible. He also stated the family of Walter Paine found additional slit and spondylus shells for the 2020 oral auction.

NEW BUSINESS

COA Lifetime Achievement Award – Donald Dan submitted the Proposed Guidelines for the COA Lifetime Achievement Award on May 22, 2019. Donald and Everett Long are on the ad hoc committee. The recipient of this award will be Board nominated and Board chosen. Everett Long motioned that the newly amended guidelines be accepted. There were several seconds. Motion carried. Everett made a second motion saying that he, Doug, Vicky, Karlynn and Ed will be the committee members overseeing and choosing the design. Steven Coker seconded. Motion carried. Everett made a third motion to nominate Doris Underwood as the first recipient of the new Lifetime Achievement Award in 2020. Steven Coker seconded. Motion carried. President Lee then asked for motions to (1) close the nominations and (2) declare Doris Underwood the winner by acclamation. Both were made by several present and carried unanimously.

Parliamentarian – Karlynn Morgan brought up the issue of having a COA parliamentarian. Donald Dan and Phyllis Gray said a parliamentarian is necessary. President Lee said that the COA Constitution and Bylaws were consistent with *Robert's Rules*. He also stated that if a Parliamentarian was eventually deemed necessary, one should be chosen from the COA membership.

Board and Committee Changes – President Lee announced that Ed Shuller and Doug Wolfe, both Members-at-Large, would be retiring from the Board of Directors and he thanked them for their service. He also stated that a 2019-2020 nominating committee consisting of Hank Chaney as chair along with Rick Edwards and Linda Brunner will oversee that process and be formally impaneled on June 21, 2019 at the General Business Meeting. He thanked them for their voluntary and valued service.

COA's List of Major Vendors:

Web Host: Mark Carillon, CEO of Web904, 1832 Park Avenue, Orange Park, FL. 32073; (904) 375-0194; email <mark@web904.com> – website <www.web904.com>

Printer & distributor of *American Conchologist* and occasional notices to membership: Johnson Press of America, Inc., 800 N. Court St., Pontiac, IL. 61764; (815) 844-5161 <jpapontiac.com>

COA convention brochure & trifold printer: Royal Crest Printing, 3353 Fowler St., Ft. Myers, FL., 33901; (239) 332-7345; Fax: (239) 332-1842; <www.royalcrestprinting.com>

Trophies & plaques: Fred's Trophy World, Inc., 3512 Palm Beach Blvd., Ft. Myers, FL., 33916; (239) 332-0363; <theresa.freds@coconet.com>

Announcements – Anne Joffe showed everybody a Proclamation plaque from the mayor of Sanibel recognizing COA.

A motion was made by Tom Eichhorst to adjourn the board meeting. Doug Wolfe seconded. Motion carried. The meeting concluded at 10:57 a.m.

Respectfully submitted by Amelia Ann Dick, COA Secretary, July 1, 2019, amended June 30, 2020. President Lee called for the Board to accept the minutes as written. Karlynn Morgan moved and Tom Eichhorst seconded the motion. Motion carried. Minutes were approved on July 30, 2020 at 1:37 p.m.

COA *Neptunea* Award

Dear Members,

Many of us are beginning to plan for the 2021 COA Convention in Melbourne, FL. One of the many events on the agenda will be the annual COA *Neptunea* Award(s), and it is my privilege at this time to call for nominations. The consensus of the COA Board is to reopen nominations with a "clean slate" annually. **Nominees not selected in previous years are certainly welcome for consideration if re-nominated - in fact their re-nomination is encouraged.** For the present cycle, nominations will close on April,15,2021, to allow ample time for deliberation before the convention. Please note that members of the Board of Directors are not eligible to receive the *Neptunea* Award while actively serving on the board.

By way of background, the *Neptunea* Award (Brunner, 2000; Lipe, 2000) was established at the midyear (1999-2000) meeting of the COA Board in order to recognize outstanding and distinguished service to conchologists and malacologists in recognition of:

1. Service to the Conchologists of America.

AND/OR
2. Service to the scientific interests of Conchologists of America.

AND/OR
3. Service to the science of Malacology as it applies to conchologists anywhere.

Although notable exceptions have been made, the COA Board, which serves as the jury for the *Neptunea* Award, has traditionally weighed its consideration for award recipients toward (1) amateurs: those not currently pursuing a principal career involving collection, study, or commerce of mollusks, (2) individuals "working behind the scenes" and relatively unrecognized in the COA world, for their contributions, and (3) active members of the COA. Up to three awards have been made at our annual conventions beginning with the Houston event in 2000 (see below). Nomination(s) for the *Neptunea* Award may be made by any COA member, and the format is simple:

Name of nominee:
This person deserves this award because (here a somewhat detailed paragraph will suffice)
..... Signed .....
and either snailmail or email that nomination to me, the COA *Neptunea* Award Coordinator:

Everett Long
422 Shoreline Drive
Swansboro, NC 28584-7204
<nlong3@earthlink.net>

Previous *Neptunea* Award recipients:

2000 (Houston, TX): Ross Gunderson, Ben and Josy Wiener, Debbie Wills
2001 (Port Canaveral, FL): Emilio Garcia, Harry Lee, Lynn Scheu
2002 (Sarasota, FL): Richard Petit, Bernard and Phyllis Pipher
2003 (Tacoma, WA) Jim and Linda Brunner, Kevin Lamprell, Doris Underwood
2004 (Tampa, FL): Bobbi Houchin
2005 (Punta Rassa, FL): Richard Forbush, Anne Joffe, William Lyons
2006 (Mobile, AL): Jack Lightbourn, Betty Lipe
2007 (Portland, OR): none given
2008 (San Antonio, TX): Bill Frank, Archie Jones
2009 (Clearwater, FL) none given
2010 (Boston, MA): none given
2011 (Port Canaveral, FL): Alan Gettleman
2012 (Cherry Hill, NJ): Gary Rosenberg, Martin Avery Snyder
2013 (Sarasota, FL): David and Lucille Green, Marlo Krisberg, and Charles Rawlings
2014 (Wilmington, NC): Colin Redfern, Tom Rice
2015 (Weston, FL) John and Cheryl Jacobs; Kevan and Linda Sunderland
2016 (Chicago, IL) Rich Goldberg, Homer Rhode, Charlotte Thorpe
2017 (Key West, Fl) Robert (Bob) Janowsky
2018 (San Diego, CA) Bruce Neville
2019 (Captiva Isl, Fl) Gary Schmelz and John Timmerman
2020 (no convention) Paul Callomon, Ed Shuller & Jeannette Tysor

Brunner, L., 2000. The *Neptunea* Award. *American Conchologist* 28(3): 3. Sept.
Lipe, B[etty], 2000. Presidents Message. *American Conchologist* 28(4): 2. Dec.

In Advance, I thank you for taking time to submit your nominee for consideration.

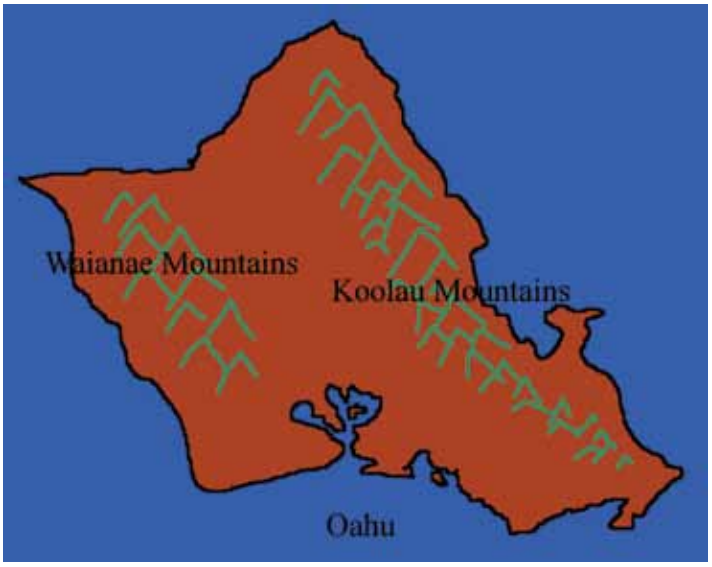
Everett Long
Award Coordinator

First extant species of Hawaiian land snail described in 60 years

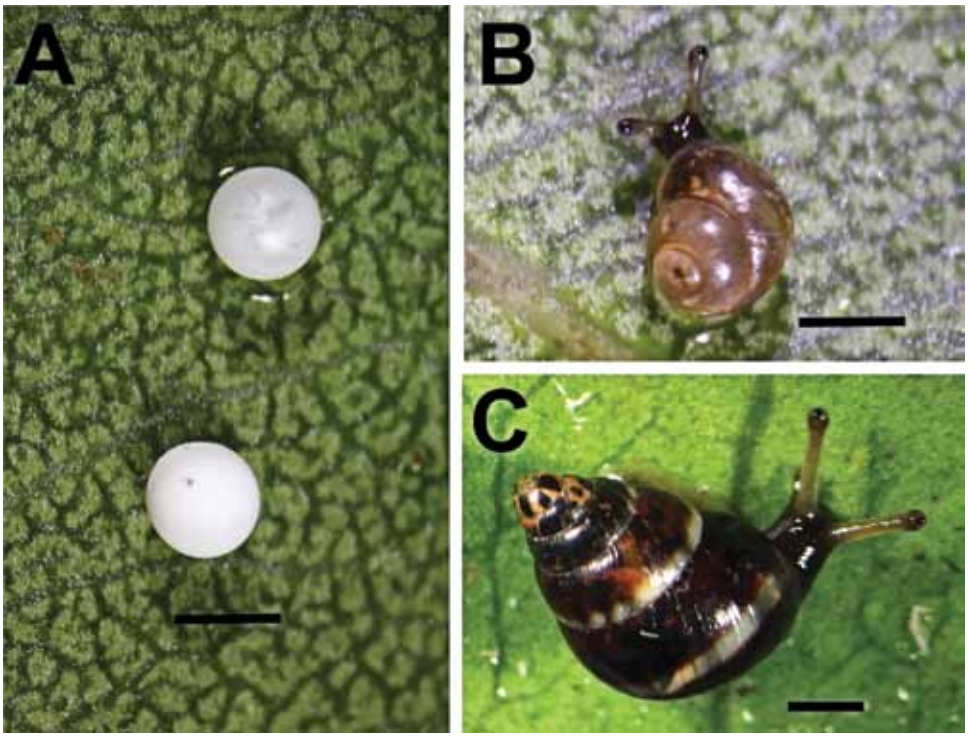
Thomas Eichhorst

Auriculella gagneorum **Yeung, Slapcinsky, Strong, Kim & Hayes, 2020, first new Hawaiian land snail described in 60 years. Specimens include: a. the holotype (BPBM 285843) and b. the paratypes (left to right: BPBM 285797, 285794, 285795, 285798). Image by Norine Yeung, adapted from Yeung et al., 2020, IAW "open access article distributed under the terms of the CC0 Public Domain Dedication."**

A new species of land snail has just recently been described from the Waianae Mountain Range on the western side of Oahu, Hawaii. The team that found, studied, and described the small snail was part of a long-term research study of extant Hawaiian land snails (Bishop Museum Hawaii Biological Survey), surveying over 1000 sites across the six largest Hawaiian Islands (Kauai, Oahu, Maui, Molokai, Lanai, Hawaii) (Yeung et al., 2020). The newly-named snail, *Auriculella gagneorum* Yeung, Slapcinsky, Strong, Kim & Hayes, 2020, is less than 4mm in height, sinistral, and morphologically similar to three species in the *Auriculella perpusilla* Smith, 1873, complex, endemic to the Koolau Mountain Range on the eastern side of the island. These snails (and the new species) differ from other *Auriculella* by their small size (under 6mm), thin shells, and five strongly convex whorls; compared with others of the genus that are larger, higher spired, and have more whorls (Yeung et al., 2020). Although similar in appearance to the three snails in the eastern range (*A. perpusilla*, *A. minuta* Cooke & Pilsbry in Pilsbry & Cooke, 1915, and *A. perversa* Cooke in Pilsbry & Cooke, 1915), this new species is genetically much closer aligned with the high-spired *Auriculla tenella* Ancey, 1889, with which it shares the Waianae Mountains on the western side of Oahu (Yeung et al., 2020). *Auriculella gagneorum* is, however, both morphologically and genetically distinct. The genus *Auriculella* is part of the family Achatinellidae, as is the larger and better known genus, *Achatinella* (Oahu tree snail). Both genera are endemic to Hawaii and both



have suffered serious population depredation due to habitat loss and the introduction of invasive species (e.g. rats, *Rattus* sp. and the giant African land snail, *Lissachatina fulica* (Férussac, 1821). The larger (four to five times the size) and more colorful *Achatinella* has all known species protected under the under The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (39 species and two synonyms are listed under Appendix 1 - threatened with extinction, trade prohibited, but probably all but 9 are now extinct) (Wolfe & Lee, 2017). Similarly, the



***Auriculella gagneorum*, A. eggs, B. one day old juvenile, C. adult. Scale bars = 1 mm. Image by Norine Yeung, from Yeung et al., 2020, IAW "open access article distributed under the terms of the CC0 Public Domain Dedication."**

US Endangered Species Act (1981, 2013) lists 40 *Achatinella* as endangered; again, most are already extinct. The lesser known genus, *Auriculella* (31 species), in the same family, has been pretty much ignored.

The team that discovered *A. gagneorum* on Oahu also found evidence that it had been previously discovered prior to 1940, labeled as probably an unknown species, and reposited in the Bishop Museum in Hawaii (Yeung et al., 2020). The team's actions resulted in the first new Hawaiian land snail species named after 60 years from the last such action, old and all but forgotten museum specimens properly cataloged, and not only was a holotype (and paratypes) established for the new species, but several much needed neotypes were also named for other *Auriculella* species (Yeung et al., 2020). The importance of these actions is best stated by the authors:

> Like nearly all land snail species across Hawaii, *Auriculella* spp. numbers have declined dramatically with an estimated 45% of the species considered extinct, and many historical populations extirpated as a result of habitat destruction, invasive species, and possibly climate change. Despite the grim statistics, there remain a number of species that can yet be saved from extinction, but only with a clear understanding of their systematics, biogeography and ecology...These data combined with knowledge of reproduction and population growth rates can be used to better manage these imperiled species (Yeung et al., 2020).

A sense of the importance of this effort by the Hawaiian team is seen by the plethora of articles that immediately popped up to report the event. The fauna and flora of Hawaii are well-studied and well-documented, but here was a new species on an isolated, but well-researched island! Four of the reports are referenced here; there are many others.

Alberts, E.C. 2020. New land snail species discovered in Hawaii offers 'gem of hope.' *Mongabay*. Accessed online at: https://news.mongabay.com/2020/08/new-land-snail-species-discovered-in-hawaii-offers-gem-of-hope/?utm_source=Mongabay+Newsletter&utm_campaign=421b802927-Newsletter_2020_04_30_COPY_01&utm_medium=email&utm_term=0_940652e1f4-421b802927-77182305&mc_cid=421b802927&mc_eid=155ff85fb4

Chan, Athena. 2020. Scientists name new Hawaiian snail species for the first time in 60 years. *International Business Tomes*. Accessed online at: https://www.ibtimes.com/scientists-name-new-hawaiian-snail-species-first-time-60-years-3016440

Funnell, R. 2020. Big news for Pacific Island land snails as researchers In Hawaii discover a tiny new species. *IFL Science*. Accessed online at: https://www.iflscience.com/plants-and-animals/big-news-for-pacific-island-land-snails-as-researchers-in-hawaii-discover-a-tiny-new-species/

Hoose, N. van. 2020. New native Hawaiian land snail species discovered, first in 60 years. *Life on Earth, Research News*, Florida Museum of Natural History. Accessed online at: https://www.floridamuseum.ufl.edu/science/new-native-hawaiian-land-snail-species-discovered/

Wolfe, D.A. & H.G. Lee, 2017. A Review of National and International Regulations Concerned with Collection, Importation and Exportation of Shells (Mollusca). *American Conchologist*, *Supplement* 1. January.

Yeung, N.W., J. Slapcinsky, E.E. Strong, J.R. Kim & K.A. Hayes. 2020. Overlooked but not forgotten: the first new extant species of Hawaiian land snail described in 60 years, *Auriculella gagneorum* sp. nov. (Achatinellidae, Auriculellinae). *ZooKeys* 950: 1-31. Online at: https://doi.org/10.3897/zookeys.950.50669

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The Shell Desk Diary turns 60: reminiscing an iconic publication

Leslie A. Crnkovic

The Shell Desk Diaries, shown left to right (1960-2010, except 1962).

Introduction:

Gone now for a decade, 'The Shell Desk Diary/ Shell Desk Calendar' was an iconic and highly-collectable ephemera for The Shell Companies (Shell Oil) and seashell collectors. Produced in a 7-by-7-inch format, its issues spanned 1960-2010, with several publishers, name variations, and many notable editors, authors, artists, and photographers.

The covers were diverse and quite handsome, and are as much an art-piece as the content, changing every year, incorporating embossing, gilding, leather and marbled papers, buckram, canvas, etc. Each issue featured a ribbon bookmark that was matched to or enhanced the cover theme. The 1960, 1963-1966, editions were bonded leather covered with a different color each year. Starting in 1967, the covers became more ornate with antique styling.

Shell did not originate the 7-by-7-inch format and idea of this book. From the early 1950s to the 1970s, the "CBS Television Notebook Calendar" was published in the same format.[1] The original marketing company that developed it is unknown. Shell quickly edited this publication into their image, and dominantly into the context of seashells. Notably, 50 of 51 issues retained the approximate 7-by-7-inch size format, with the exception of 1962 being taller.

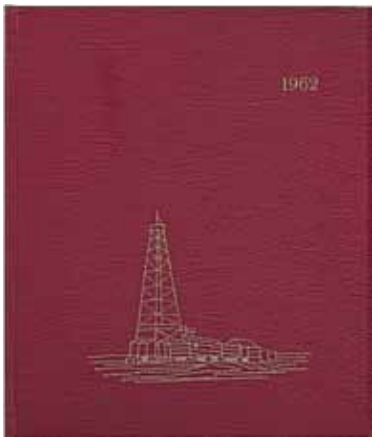
In its private publication years (1993-2010), viability of the publication was based upon pre-orders each year. When the oil and gas sector struggled in 2010, cost cutting meant many Shell divisions canceled pre-orders for the 2011 edition, and as such it never went to press, thus concluding the series.

History:

1959 – The Shell Desk Diary, originally 'The Shell Chemical Desk Calendar', began when Shell Chemical's Advertising Department developed a desk calendar to use as a corporate gift at a trade show. At the 1959 'National Paint, Varnish and Lacquer Exposition' in Washington, D.C. (a premier trade show), Shell Chemical gave away 5000 copies of the 1960, 1st edition. The enthusiasm among customers led to more editions.

1960

1960 – Evolution of Chemistry with Interpretation by David Stone Martin. The theme of the 1960 Shell Desk Calendar featured chemistry milestones depicted in 54 original pen-and-ink drawings by artist David Stone Martin.



1962

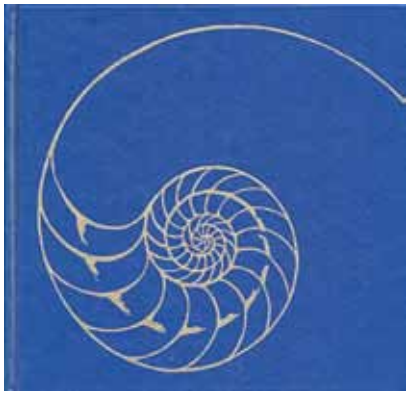
The product is not named, no references to publisher, editors, printer, copyright, etc. David Stone Martin provides a verse "A glimpse of greatness…" then line drawing illustrations with captions on every other page. Black bonded leather covers (6.69-inch sq.) embossed with the "Shell Oil" scallop logo and 1960. It had 148 light blue paper-stock pages.

1961 – The Scallop Shell in Art. The Shell Chemical Desk Calendar for 1961. Shell Chemical Company Copyright 1960. Dark red buckram covers with 10 gilt laurel leaf rings with a stylized scallop inside and 1961. Uncredited, the entire 1961 edition content, including endpapers, is derived from: "The Scallop: Studies of a Shell and its Influences on Humankind by Eight Authors." Edited by Ian Cox, C.B.E., M.A., published in London by The Shell Transport and Trading Co., Ltd. 1957. This design was used for the cover in 1969.

1969

1962 enigma – Extensive institutional and private library inquiries produced no 1962 edition. After searching for 30 years to find it, the author referred back to the archives of the last publisher, "Sea Promotions," and found it was a book titled "The Shell Companies 50th Anniversary Calendar, 1912-1962: Historical Highlights of Half a Century", size 6.62-by-7.75-inch. [2]

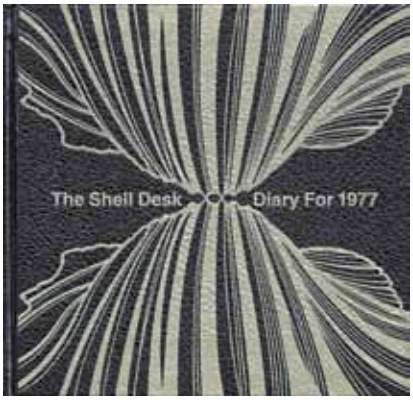
Starting with the 1963 edition, The Shell Companies' public relations department, under the direction of F.H. (Bud) Roberts, artist, began publishing the diary. Roberts, who won more than 30 awards for the diary, determined the annual theme, took the photographs, designed the book, wrote the copy, and supervised the printing in conjunction with a diverse team of designers, authors, consultants, artists, illustrators, and photographers. Roberts continued as the heart and soul of the Shell Desk Diary for 33 years (last credit is 2003) — elevating it to a worldwide public relations and artistic success, synonymous with The Shell Companies. In addition to the diaries, Roberts designed other books dealing with shells including: "Kingdom of the Seashell" (1972 - R.T. Abbott, Author), and "Shells: Treasures from the Sea" (1979 - James A. Cox, Author).



1970

1963 – The Glory of the Seashore: The Shell Chemical Desk Calendar for 1963. Shell Chemical Company, a division of Shell Oil Company © 1962. Developed by M.H. Keel for Shell. Color painting illustrations throughout by many artists. Near the end is "Facts About Sea Shells," with a discussion and line drawings, not credited. Green bonded leather covers gilded and embossed with the "Shell" scallop, small waves, and 1963. Printed on linen paper, tabbed by month, endpapers and seashell insets on art by Birney Lettick. Its 7" x 7-3/8" cover size is now the standard.

The long list of Shell divisions on the title pages includes the Shell Companies: Shell Oil Company, Shell Chemical Company, Shell Pipeline Corporation, and Shell Development Company.

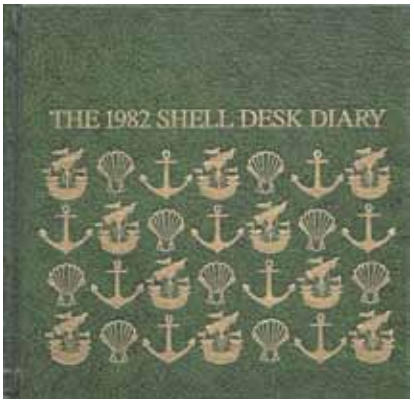


1977

1971 – The diary changed names from The Shell Desk Calendar to The Shell Desk Diary, and began a center photo piece that included 32 pages of color photographs featuring seashells and marine life set on a background of breathtaking seascapes and tropical locales. The later editions have featured the Philippines, the Galapagos, Palau, Hawaii, Australia, and Indonesia, featuring the underwater photography of Lynn Funkhouser.

Lynn Funkhouser, a Chicago Shell Club member since 1970, was inducted as an inaugural member of the Women Divers Hall of Fame in 2000 for her photography & environmental activism. Her first photos in the diary were 1988, then 1991, and from 1996 to 2009 her photos were featured exclusively. She took over captioning in 1997 and copy in 1998 through 2009. Also from 1999 to 2009 they published five wall calendars exclusively using her work.

1992 – This was the last edition published by the Shell Companies. Upon retiring in 1992 from Shell, Robert (Bob) Ashfield, started RobAllen Press Inc., with the backing

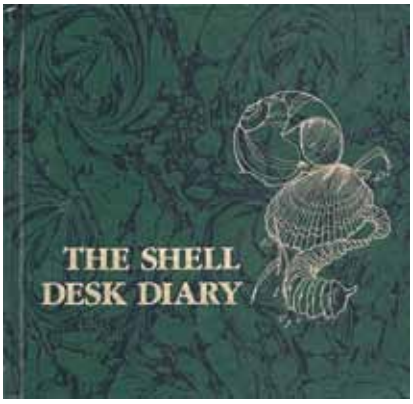


1982

of Shell, to continue publishing the diary in Houston. Although no longer affiliated with Shell, the diary retained the original style and format that is so popular with corporate customers and seashell collectors throughout the world. In 2000 the company changed its name to Shellmark Press, Inc.

In these latter years, covers were available in leather and custom embossed upon request, and also a spiral-bound edition, and the diary was packaged in a colorful gift box. The cover and title pages were sometimes published for other Shell divisions also, such as 'The Pecten Companies'. A soft-cover out-take of the diary's 32 center photo plates called "Collectables," was also produced as a promotional piece to advertise the diary from 1997-2000.

1999 – The notable 40th Anniversary edition celebrated the grand opening of the new "Strake Hall of Malacology" at the Houston Museum of Natural Science. The new Strake Hall was celebrated again at the 2000 Conchologist of America Convention in Houston.



1991

Sea Promotions Inc. (aka SeaPromo) in Tomball, Texas, was the SDD publisher from 2003-2010, under the direction of Brenda Gail Adams (Gail Bergan). SeaPromo also produced "My Journal," a version with blank pages, in both hard cover and spiral bindings.

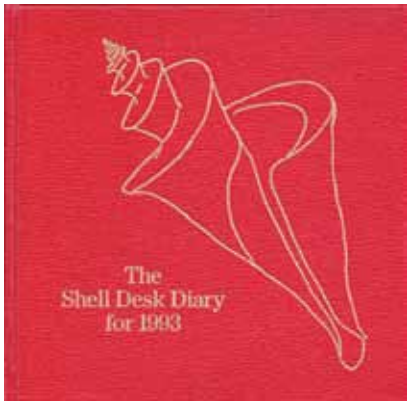
End of an era: After 50 years, the series concluded when the 2011 edition was halted after several Shell Divisions canceled their annual orders due to budget cuts.

Trivial Matters:

R.R. Donnelley & Sons, Chicago, was the printer for the years 1972-1975 (derived from imprint pages). R. Tucker Abbott is not mentioned after 1976. Production appears to have become based in Houston starting in 1979. The first edition with an ISBN number is 1994. The last issue referencing: Typografix Inc., Kingsport Press/Rose Printing, or Sun Graphics is 2000. Wetmore Printing Co. in Houston was the printer and binder for 2001-2010.

Back Issues:

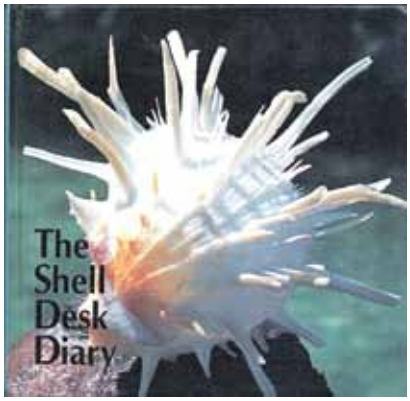
In the past few years, the author of this article has donated several hundred issues to institutions. There are still many institutions that would love to have a collection in their library, whole or partial. Some only need certain issues and your few might help. As such, you may contact the author for names of interested institutions. If you are looking for back issues, especially of the last 20 years, Contact Sea Promotions at (281) 546-7117 and they may be able to help. The author also has some remaining back issues for free (just cover postage).



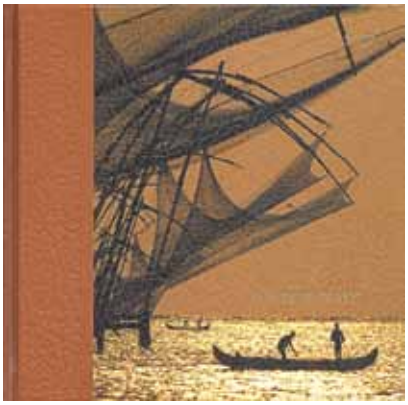
1993

Author's Notes:

Contents of this article were derived from interviews with Bob Ashfield, Lynn Funkhouser, and Brenda Gail Adams, all diary editors, and more specifically from the history in the 2009 edition. Bob Ashfield was a neighbor of the author in the 1990s, and we worked together closely with Sea Promotions through 2010 to promote the products. The author's next-door neighbor worked for Wetmore Printing, providing additional insights.[1] The author's 1960 edition was found in a lot of CBS books.[2] The 1962 copy as described herein was purchased on eBay in July of 2020. Special thanks to: P.B. 'Rusti' Stover for gleaning data, review and proofing.



1994



2001

Name Evolution:

1960 – Un-named
1961 – The Shell Chemical Desk Calendar
1964 – The Shell Desk Calendar
1971 – The Shell Desk Diary
1996 – The Desk Diary

Publishers:

1960-1992 – The Shell Companies (under various corporate name variations)
1993-1998 – RobAllen Press, Inc.
1999-2002 – Shellmark Press, Inc.
2003-2010 – Sea Promotions, Inc. (SeaPromo)

Reoccurring Contributors:

(*n*) *is number of issues a name appears.*
Names that reoccur frequently in credits for - Designer, Author, Consultant, Artist, Illustrator, Photographer, etc. F. H. 'Bud' Roberts (33), Russell H. Jensen (20), Lynn Funkhouser (16), James A. Cox (13), John R.H. 'Jack' Lightbourn (13), R. Tucker Abbott (9), Renate Luebge-Kraus (9), Alex Kerstitch (6); and starting in 2000 - Chris Adams (13) and Betty Wester (8).

Annual Themes:

1960 – Evolution of Chemistry with interpretation by David Stone Martin
1961 – The Scallop (Ian Cox 1957)
1962 – The Shell Companies 50th Anniversary History
1963 – The Glory of the Seashore
1964 – The Sign of the Shell
1965 – Something of the Sea
1966 – The Scallop (R.T. Abbott)
1967 – Sea shells in aspects: practical, scientific, and ornamental
1968 – Ships cultures and historic shell collecting
1969 – The Sea and the Shell
1970 – Shells Are Where You Find Them
1971 – An Intimate Glimpse of the Sea
1972 – The Scallop Shell in Art
1973 – All Creatures Great and Small
1974 – Glory be to God for Dappled Things
1975 – The Shell – Something of Value
1976 – The Birth of a Nation - America's Bicentennial
1977 – A Taste for Collecting Shells
1978 – What's in a Name?
1979 – Treasures Rare & Beautiful That Once Lay Hidden in the Depths of The Sea
1980 – Art in Many Forms Enriched by the Variety & Beauty of Seashells
1981 – Scientific Illustrations & Photographs Showing Treasures from the Sea
1982 – Illustrations Old & New of Shells, Ships & Maritime Views
1983 – Illustrations Old & New, Including Magnificently Hand-Colored Specimens from L.C. Kiener's Coquilles Vivantes. 25th Anniversary (wrong year)
1984 – The Incredible World of the Sea
1985 – Treasures from the Sea
1986 – Shells are Where You Find Them
1987 – Shells in Religion, Myth & Mythology
1988 – Photographic Record of Shells and Other Undersea Animals
1989 – Illuminated with Illustrations from Vintage Source Illustrations of Seashells from Kiener & Chenu's Manuel de Conchyliologie
1990 – The Glory of the Seashore
1991 – Sea, Sand and Scallops
1992 – History of Bermuda and the Joys of Shell Collecting
1993 – Jewelry Made From Shells That Once Lived in the Sea
1994 – Sea of Cortez Marine Invertebrates & Other World-wide Sea Shells
1995 – Partial History of England and Shells of the World
1996 – Galapagos Islands Archipelago
1997 – The Philippine Islands: Paradise for Shell Collectors
1998 – The Republic of Palau
1999 – The Strake Hall of Malacology, HMNS. 2000 – Discovering Hawaii 40th Anniversary
2001 – Discovering Australia
2002 – Discovering Indonesia
2003 – Coral Reefs of the World
2004 – Marine Life Masterpieces
2005 – Creatures of the Deep
2006 – The Deep Blue
2007 – Protecting Critters of the Deep
2008 – Ocean Environment and Human Health
2009 – Celebrating 50 Years!
2010 – Ocean Marvels

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Report of the COA Indexing Project

Bruce Neville

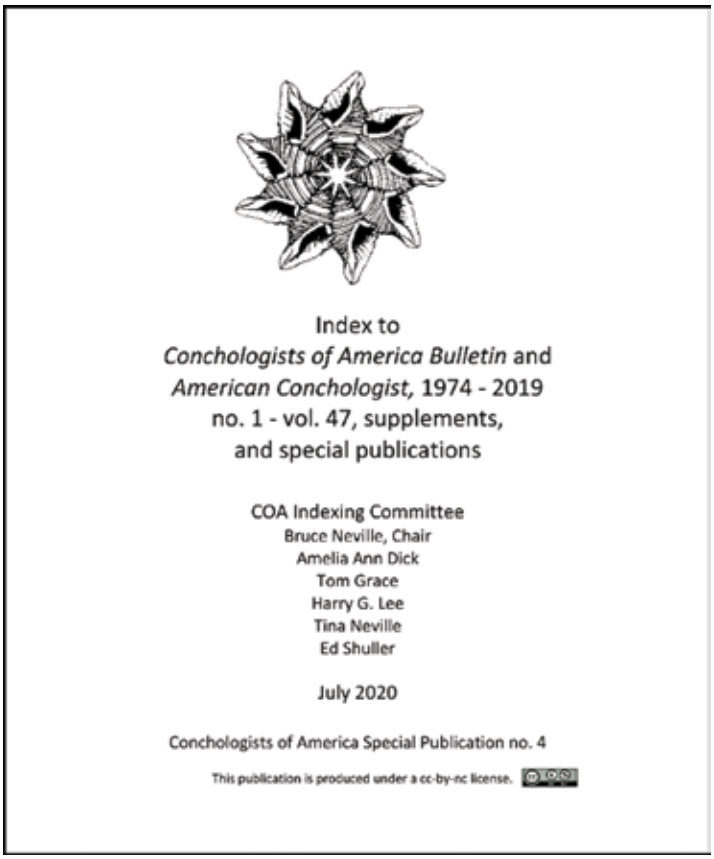
Forty-seven years. Just about half a meter of shelf space. For nearly half a century, the *Conchologists of America Bulletin* and then the *American Conchologist* ("the journal") have chronicled the activities of this organization and its member clubs. From the beginning, there have been book reviews, travelogues, collecting tips, member profiles, and species accounts. Now, we have a single, comprehensive index to all the content of 47 complete volumes of the journal posted to the COA website at https://conchologistsofamerica.org/wp-content/uploads/2020/07/COA-Index-1-47.pdf.

The index includes four separate indexes: Molluscan Taxa; People, Clubs, and Shell-related Organizations; Geography; and General Topics ("other"). Normally, I wouldn't recommend a 260-page index for "light reading," but there are some true gems among the index. There aren't a lot of surprises in the Molluscan Taxa index, but there are some fictitious species and some "fun with names." The Geography index is the shortest, but it also has some interesting entries, such as Gondwanaland, Pluto, and the River Styx.

The People, Clubs, and Shell-related Organizations index also includes some non-human companions, an Aldabra tortoise named George, a variety of deities, kings and queens, actors and actresses, some cartoon characters, composers and artists, presidents and prime ministers, a chef (and spy!), Biblical characters, and Nobel Prize winners. It was more than a bit nostalgic to go through and see all the photos of beloved members passed--Len Hill, Walter Sage, Ben and Josy Wiener, and, of course, Tucker Abbott.

The General Topics index is also full of surprises. The largest group of entries is "publications," including club newsletters, malacological journals, websites, book reviews, and even novels and poetry. The next largest group of entries is non-molluscan taxa. These are indexed by scientific name, wherever that could be determined. If you don't know or can't find the scientific name, try the "find" function in the searchable pdf. It's easy to see how barracudas and staghorn coral got into the journal, but how did common ringlet (an alpine butterfly) or hyacinth macaw get into a conchological publication? Surprisingly (or not), the next largest category of entries in this index is ships, both floating ones and diving wrecks. After that, things get a little harder to categorize. A quick scan produces animal cruelty, clam linguini, flying snails, headhunters, M&Ms, Mister Ed (television show), origami, pillow case technique, quicksand, Small World (Disney), tetanus, vampires, and yam stripes. What will you find? To start you off on your explorations, I've prepared a trivia quiz using the index.

The project began in 2018, when the COA Board asked for volunteers to produce the index. In a weak moment, I volunteered to chair that committee. Members of that first committee were (alphabetically) Amelia Ann Dick, Tom Grace, Harry Lee, Bruce Neville, and Ed Shuller. Since



Index to
Conchologists of America Bulletin and
American Conchologist, 1974 - 2019
no. 1 - vol. 47, supplements,
and special publications

COA Indexing Committee
Bruce Neville, Chair
Amelia Ann Dick
Tom Grace
Harry G. Lee
Tina Neville
Ed Shuller

July 2020

Conchologists of America Special Publication no. 4

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indexes existed to the first 24 volumes (Barney, 1992; COA Indexing Committee, 1997), we decided to concentrate on the remaining content. The committee divided the volumes and sub-indexes among themselves. Pieces were emailed to me. I merged and sorted them and was greatly aided in that process by my sister, Tina Neville. A preliminary index to volumes 25-46 was published online prior to the 2019 COA Convention in Captiva. Ed Shuller was able to digitize the earlier indexes and post searchable pdf versions, so electronic access to the existing content was available, even though the goal of a single, comprehensive index had not yet been realized.

Unfortunately, decisions made in the current indexing project meant that it would not be possible to simply merge the earlier indexes into the new one for one comprehensive index. It was therefore decided that the most effective way to prepare a single index would be to re-index the earlier volumes according to the decisions made for the current index. Not everyone on the committee had access to a complete set of the journal, but I did, so I set about the task, with assistance from my sister, Tina.

Issues from #1 to 24(4) have now been re-indexed and merged with the index produced last year. Additionally, volume 47 (for 2019) and COA special publications were included in the index.

I would like to thank the initial committee members, Amelia Ann Dick, Tom Grace, Harry Lee, and Ed Shuller, for their work on the first index. I never had to beg or threaten to get the work done, and it was done carefully and accurately. No Committee Chair could ask for a better committee. I want to thank my sister, Tina Neville, for assistance with indexing the earlier volumes and doing the "heavy lifting" of merging and alphabetizing the resulting files. I want to thank Anne Joffe for assisting with disentangling the Gordian knot of confusing names and multiple spellings. I want to thank Alan Gettleman for helping with historical information and providing me with a copy of Lucy Clampit's (1992) "Twenty-year History." Finally, I want to thank the covid virus for providing me with endless hours at home to work on the index.

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Barney, Winston. [1992]. Index. Conchologists of America Bulletin, *American Conchologist*, no. 1-vol. 19, no. 4, 1973-1991. Conchologists of America, Inc., Special Publication 1.

Clampit, Lucy. [1992]. A Twenty Year History of the Conchologists of America 1972 - 1991. Conchologists of America, Inc., Special Publication 2

COA Indexing Committee. 1997, July. COA Index: volumn [sic] 20, no. 1 - volumn [sic] 24, no. 4. Special Publication [3].

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COA Journal Trivia Quiz

Bruce Neville

1. Who received the only known sinistral COA Award?
2. Who was bitten by a cottonmouth and where (what part of the body and in what state)?
3. A photo of an individual gastropod with three eyes was published in the magazine. What species was it, and where was it photographed?
4. In "The Sign," what is the sign, and what does it signify?
5. What state's governor rejected its proposed state mollusk, what was the mollusk, who proposed the species, and who was the governor?
6. Where is the Getz Museum of Whiskey History and which convention had a field trip there?
7. What is "le Tebaski"?
8. How many named hurricanes have been mentioned in the journal?
9. What is the name of the giant pearl that Richard Burton bought for Elizabeth Taylor, when was it found, how much did he pay, and how much does it weigh?
10. What species has appeared the most times in the magazine?
11. What is the 3D method of land snail collecting?
12. What are conch pistols?
13. What is the fictitious scientific name given to the species in the COA logo?
14. Where do you go for Tia Maria pie?
15. What is the Japanese shell-matching game called?
16. What is the most sesquipedalian name in the molluscan taxon index? (All genus- and species-group names count, but not qualifiers, such as cf. or var.; do not count spaces.) What is the longest true binomen? The shortest? The longest genus-group and species-group name? The shortest?
17. How many US Presidents have graced the pages of our magazine?
18. What shell is said to come from Mars?
19. Where is the annual World Snail Racing Championship held? What is the record speed?
20. What do Albanians hang in the windows to drive away wicked ghosts?

Answers on page 38

Answers to COA Journal Trivia Quiz

Bruce Neville

1. Dave Green, at the Greater Miami Shell Show in1987 (15(2):14; the photo was printed in reverse)
2. Doug Shelton, above his ankle, while searching for freshwater mussels in the Conecuh National Forest in southern Alabama (24(1):19)
3. *Lobatus gigas*, found at Fajardo, Puerto Rico by Sylvia M. Vélez-Villamil; it was released (42(3):17*; one eye bifurcates just behind the tip)
4. The Greek letter phi, and it fulfilled a promise that the protagonist, Hochner, would signal his return from the dead (40(2):6).
5. California Governor George Deukmeijian rejected the banana slug for state mollusk after it was proposed by the Redwood Campfire Kids (16(4):18; and 17(2):13).
6. Bardstown, Kentucky. There was a field trip from the Louisville Convention in 1999 (27(1):3).
7. A very smelly Senegalese festival involving the sacrifice of a lamb (27(1):8).
8. Eighteen: Allen, Andrew, Charley, Elena, Florence, Floyd, Frances, Gloria, Harvey, Hugo, Irene, Irma, Katrina, Maria, Marty, Opal, Sandy, and Wilma. And one cyclone (Althea). (Do a "find" on "hurricane"),
9. La Peregrina. It was found by a slave in 1513 and weighs 55 carats. Burton paid US$37,000 in 1969, but it sold for US$10.5 million in 2011.
10. *Lobatus gigas*, with 68 references. Second is *Busycon contrarium/Sinistrofulgur sinistrum* with 52. *Callistocypraea aurantium* received 49 and *Conus gloriamaris* a measly 34. *Liguus fasciatus* is mentioned in only 29 separate articles, but has 87 varietal names in the index!
11. Drift, detritus, debris (44(1):16-19).
12. Crystalline styles, rods that project into the digestive tract to release enzymes, considered to enhance male potency (33(3):5).
13. Island Princess Hotel, Providenciales, Turks & Caicos (#24:12).
14. *Neptunea non-descriptus* (19(4):21; try a "find" on COA logo).
15. Kaiawase (34(3):12*-13*).
16. I can't be certain of this one, but I found the quintuple-barreled *Achatinella (Achatinellasatrum) stewartii productum* (var.) *dunkeri* at 51 non-space characters. I just said it had to be in the index; I didn't say it had to be a valid name under ICZN rules. Note: this is NOT a challenge to future taxonomists! I found *Callistochiton shuttleworthianus* at 31 letters and *Arca arca* at 4. The longest genus-group name seems to be *Compressidentalium* at 18 letters; the longest species-group names seem to be *C. shuttleworthianus, Circomphalus foliaceolamellosus,* and *Fusinus quandumpulchellus,* also at 18 letters. The shortest genus-group name I've found in the journal is *Io fluvialis*. (There's also *Ba humbugi*, which hasn't appeared in the journal.) (Till now.) The shortest species-group names seem to be *Fusconaias cor, Architeuthis dux*, *Prototyphis eos, Trivia eos*, *Suteria ide, Murex rex, Epitonium ulu, Luchuphaedusa una, Cerion uva,* and *Morula uva*. Did I miss a two-letter one?
17. Seven: George Washington (13(3):46 and 37(3):11); Theodore Roosevelt (4 times); Harry S. Truman (#4:6 and 45(1):36,39); John F. Kennedy (39(1):23 and 47(2):21); Lyndon B. Johnson (24(2):24 and 35(4):28); George H.W. Bush (19(2):17); and William Jefferson Clinton (28(3):8). The Presidents Adams were no relation.
18. *Chimaeria incomparabilis* (35(4)33-34).
19. It is held in Norfolk, England. The winner achieved a dizzying 6.5 inches/minute (= 0.006 miles/hr, = 0.1 km/hr, = 16 furlongs/fortnight) (24(4):13).
20. Vojtans are puppets hung in the windows of Albania to keep away wicked ghosts (43(3):28).

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