The Sanibel-Captiva Shell Club, Inc.

The Junonia

July - September Special Edition

President's Message

Hi Shell Club Members!

It is hard to believe that we are already in August. Where did the summer go? By the time you receive the next issue of *The Junonia*, the Shell Club will be in full swing.

The 2022-2023 season is going to be impressive! **Linda Arnold**, our new Shell Show chair, has been working non-stop all summer. The 2023 show is going to be amazing**! Tyler Schoenherr** and **Linda Arnold** will be the Artistic Division Co-Chairs and **Kathy Kenley** will lead the Scientific Division of the show.

The line-up of presentations for the club meetings is really impressive thanks to **Debi McBroom**. **Susi Butler** continues her magic in scheduling wonderful field trips.

Stay cool and safe – we'll see you in October.

Karen Silverstein

Message from Our New Membership Chair

By Stephanie Howard

HELLO MEMBERS!

While we are on hiatus from our monthly meetings, I'd like you to think about how you can volunteer or help the Shell Club in the upcoming year. This is repeat information from the last newsletter, but oh so important! There are a number of positions which need to be filled each year, with various levels of commitment.

Tasks for which we need volunteers include assisting at the monthly club meetings with name tags, membership processing, merchandise sales, and the silent auction. The annual Shell Show, a three-day event the first of March, requires many volunteers to sell tickets, work as greeters and monitors, assistance for t-shirt sales, and other tasks.

Are you available to volunteer during the year? Your support and involvement would be greatly appreciated and is needed!

Also, please keep in mind that the cut-off date for membership renewals is January 10th. You can conveniently pay with PayPal via our Club's website by following this link: Become a Member or Renew - Sanibel-Captiva Shell Club (sanibelshellclub.com) or send a check made payable to: Sanibel-Captiva Shell Club at Sanibel-Captiva Shell Club, P.O. Box 355, Sanibel, Florida 33957.

If you have any questions or concerns, please email me at stephseaart@gmail.com. Have a wonderful, safe Summer, and great shelling wherever you are!

Welcome New Club Members

The Sanibel-Captiva Shell Club gives a warm SW Florida welcome to all our new members. These seashell enthusiasts and collectors have recently joined:

- Donna & David Alexander – Sanibel, FL
- Jackie & Todd Anderson – Heber, UT
- Judy Barela & Family – Salem, OR
- Jill Farley & Barbara Lewis – Lehigh Acres, FL
- Ardes Marbey – Fort Myers, FL
- Helen-Anne McHarris – Sanibel, FL
- Clara Tenerilli & Frank Murabito – Brentwood, TN

***Your editor humbly apologizes for misspelling the last name of Debbie & Steve Wesseler.

Treasurer's Report

by Linda Edinburg

There is a balance of $10,948.05 in our checking account as of August 1, 2022.

The 2022 Shell Show made a profit of $28,500 which is available to give away in grants this coming fall.

The Club Sincerely Thanks:

Scott & Penny Chrysler for their donation of exotic shells; **Cindy Quadro-Ott** and **Libby Countryman** for gate thank you bag shells; **Amy Lincoln** in memory of her

husband, donated his wonderful personal collection; and **Dennis & Brenda Flint** for an amazing collection of cataloged scientific shells.

We thank **Tom Annesley** for the donation of his $150.00 speaker's honorarium back to the club.

Message from Your Field Trip Chair

by Susi Butler

Hello fellow shell lovers!

Led by **Kathy Kenley**, several people have met at different beaches around Sanibel to search for awesome shells this summer.

We also had a boat trip to Keewaydin Island on June 17 and found some great shells. Photos were taken by **Linda Hines**.

From L to R: Blake Mashburn, Sarah Fairchild, Deanna Spencer, Mike Spencer, Diane Salvato, Sue Childs, Donna Alexander, Linda Himes, and David Barnes.

Below: Keewaydin Island shoreline early morning of the Shell Club field trip. It was great shelling on the beach, and all enjoyed club members' company!

To the left: Some of the field trip finds (shells, sand dollars, and coral) on the Keewaydin Trip on June 17,2022.

Kathy Kenley and **Linda Hines** hosted a "Meet and Greet" at Lighthouse Beach, Tuesday, June 21, 2022. Topics of discussion included tides and shell hunting kayak trips.

Shown above are Linda Hines, Barbara and Bruce Wernikoff,

Donna Alexander, and Kathy Kenley. Also present was Ken Burgener, who graciously took the photo.

August 22, 2022, at 9am: Club Meet and Greet

The Sanibel Captiva Shell Club is going to have a "Meet and Greet" event on Monday, 22 August at 9.00 am at the SCCF Marine Lab. We will be given a one-hour tour. This venue is part of the Sanibel Captiva Conservation Foundation, which is a non-profit organization whose mission is to protect and care for SW Florida's coastal ecosystems (learn more at sccf.org).

The address is 900A Tarpon Bay Rd. 33957 (near the intersection with the Sanibel-Captiva Rd.) on Sanibel Island. The group maximum will be 20 people and a RSVP is requested by Wednesday, 17 August.

Please contact **Angie Marsland** at angela.m.marsland@gmail.com.

Sanibel-Captiva Shell Show T-Shirts

Your Club T-Shirt Chairs Dotty Dion & Diane Wideman

The Sanibel-Captiva Shell Show T-shirt Chairs want to put out a notice about the t-shirt design contest that will be coming up in mid-October. The contest will be open to shell club members, as well as the general public. So, if you've got an amazing idea for a Shell Show t-shirt design that has become an intrinsic part of the festival, please start thinking about it NOW! Details to follow in October.

COA 2022 Convention

Reported by Angela Marsland

The Conchologists of America (COA) held their 50th Anniversary convention in Galveston, Texas from 31 May to 4 June. About 140 shell enthusiasts attended the event

at the Moody Gardens resort, which also has a number of nature-oriented attractions to visit.

A program of daily presentations covered a number of subjects, including coral and oyster reef restoration projects in the Gulf of Mexico; a review of the COA's history over the past 50 years; valuable shell data tips for labelling specimens in collections; the renovation of the Malacology Hall in the Houston Museum of Natural Science; **Dr. José H. Leal**'s talk about the research and scientific activities in Sanibel's National Shell Museum; and recollections of various shelling trips by several members.

COA Convention Mini Shell Show

Between the presentations, there were silent auctions of shell specimens and shell-related items, used book and magazine sales, the annual entertaining Snail Parade contest, and the COA's first Mini Shell Show (small exhibits, not small shells).

There were two dinners at the convention, hosted by the Houston Conchology Society. The first was the Welcome Party, with a Western attire theme and games, followed by the %0th Anniversary Celebration Banquet on the final night, with attendees requested to dress in "shell finery."

On the last day, the Bourse opened, which is a shell collector's paradise. Eighteen dealers from the USA and overseas displayed their wares for the convention attendees and the general public. Everyone said their farewells and hope to meet again when the next COA convention, in 2023, will be hosted by the North Carolina Shell Club in Wilmington, North Carolina.

Please consider joining this wonderful organization, which not only has annual conventions in various locations throughout the USA, but also awards a number of academic grants and issues quarterly journals full of interesting articles. The members are a congenial group of individuals and every convention I've been to has been an enjoyable experience for me!

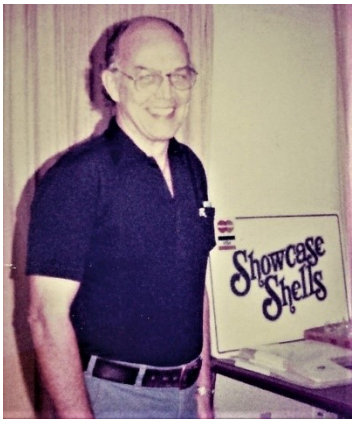
Snail Parade Contest at COA Convention

COA Neptunia Award Winner – Carole Marshall

The 2022 Conchologist of America Neptunia Award was given to Carole Marshall at the convention in Houston, Texas. Carole is a member of Broward Shell club and has been involved with other shell clubs, being President of three different clubs. She has authored articles for COA magazine and for Of Sea and Shore Magazine. She loves teaching others about shells. Congratulations!

In Memory of Albert E. Deynzer (1936-2022)

It is with great sadness we announce the passing of Al Deynzer, a friend and mentor to many of us. Many of you probably already have heard of Al's passing on July 27, 2022, as you see the numerous heartfelt condolences sent to his wife, Beverly A. (Swade) Deynzer and his family on social media. Al and Bev were so well-known as wonderful, caring folks who were also avid shell collectors.



Al Deynzer circa 1980.

Al was born June of 1936. Al and Bev became interested in shells while Al was in the Air Force and stationed in the

Philippines between 1961 and 1965. After service, he and Bev settled in Florida and started the legendary Showcase Shells business in 1979 on Sanibel Island. They would go on to own Island Shells on Fort Myers Beach and The Shell Company/Showcase Shells on Bonita Beach Road, Bonita

Al, Bev, and Neal Deynzer circa 2001 at the Bonita Beach Road, Showcase Shells location just after opening.

Springs. The Deynzers recently moved to Loveland, Colorado near their daughter's family after retiring from their business located on Bonita Beach Road, now run by their son, Neal and Neal's wife, Mimi. Al was so proud of and dearly loved his daughter and two sons, grandkids, and all the extended Deynzer family.

Bev and Al Deynzer at a Shell Show 1993-94.

No less than 18 shells have been named after the Deynzers and Al had four named specially after him – like *Cycloscala alderynzeri* and *Volvarina aldeynzeri.* Al loved the Mitridae family (mitre) of shells in particular. Al was often dearly described by friends and customers as having a wonderful and cheerful smile, being helpful, extremely generous, engagingly friendly, encouraging, an adventurous spirit, humorous, and having more than a huge passion for shells and family.

Bev and Al were well-known world-wide for their "shell show quality shells" and attending Shell Shows and COA Conventions around the U.S. The Deynzers often loaned gem shells to researchers who needed specimens for describing a species or to authors needing examples for their book illustrations.

A friend of Al's, Harry Lee, (a well-known conchologist in his own right) remembered him with his condolences saying, "Beginning in the 1960s, Al played an indispensable role in the lives of two generations of American conchologists. His distinctive scientific curiosity and auto-didactic skills placed him in the vanguard of our finest twentieth century shell dealers."

Our sincere, heartfelt condolences to the Deynzer family. Al will be fondly remembered and greatly missed.

New Shell Club Magnetic Name Tags

The club has decided to adopt magnetic name tags going forward to promote a more professional feel to our club and meetings.

These tags (example below) can be purchased for a one-time expense of $15 and the name tag will be your property, available to go home with you. Please send your check to the club at P.O. Box 355, Sanibel, FL 33957 and clearly print the name(s) as you wish them to appear. New name tags will be available for pick-up at our meetings and will represent a modest fundraising donation for the club.

Simple write-on "Hello" tags will be available to those attendees who have forgotten their new tag or who have not purchased one. The previous paper-in-plastic name tags we held for your use at meetings will be retired/recycled at the end of 2022.

Shell Museum Online Lecture Series

The Bailey-Matthews National Shell Museum (BMNSM) is offering virtually via Zoom and free of charge a series of lectures in 2022! The lineup of the lectures and highlights are found below. You may register on the museum's website and get more information on each lecture. https://www.shellmuseum.org/lecture-series?fbclid=IwAR1_6EQ7Hqbno6FCIXuCp8PaTVvsHcrMIjwzoXWBdT6mBe71c-uLDg7OMs0

August 11, 2022, at 5:30pm – "Mobilizing Millions of Mollusks of the Eastern Seaboard" by Rüdiger Bieler, Ph.D., Field Museum of Natural History and **José H. Leal, Ph.D.**, Science Director and Curator of the Bailey-Matthews National Shell Museum.

This is an Eastern Seaboard project involving seventeen of the largest mollusk collections in the U.S. and combines data of over 4.5 million individual specimens from the Atlantic and Gulf States, which will be made available through public online data portals! This expansive project will add map coordinates to indicate where live-collected mollusks were found.

September 14, 2022, at 5:30pm – Saving the Queen of the Sea: Queen Conch Conservation Aquaculture by Megan Davis, Ph.D., Research Professor, Aquaculture and Stock Enhancement Program, Florida Atlantic University Branch Oceanographic Institute.

Dr. Davis and her past 40 years work was highlighted in the last edition of *The Junonia*. Here is your chance to hear her love and passion for the conservation of the queen conch and many other species, the ecosystem, and the people who depend on the fishery.

October 13, 2022, 5:30pm – Land Snails in Los Angeles: An Experiment in Urban Citizen Science by Dr. Jann Elizabeth Vendetti, Associate Curator and **Twila Bratcher**, Chair in Malacology, Natural History Museum of Los Angeles County.

This project is to survey and study the land snail and slug fauna of Los Angeles County. Students and school groups, museum members, and community groups are engaged to build a successful citizen science movement and learn more about the land snail and slug species of the county.

If you missed any of the 2021 lectures, you could watch recorded versions through the museum link shown above.

Two unique shell museum exhibits just opened:

1) **June 25 to November 28, 2022**, is the "Adorned by the Sea: Shells in Fashion" exhibit. This display captures how shells have played a significant role in adorning cultures from ancient times throughout the world. This display provides a beautiful look at the uses of shells to enhance our appearance and dress. Display made possible by a grant from the Cornelia T. Bailey Foundation and a gift from our club members, **Mark** and **Kathy Helge**.

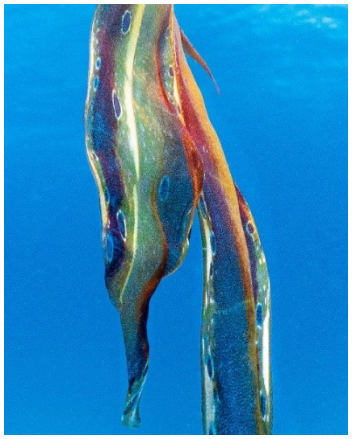
2) At this same time, our club member **Anne Joffe**'s "Mollusk Hospital: A Shell Folk Art Journey in 20 Rooms" will be on display. This display debuted at the 2016 Sanibel Shell Show as the "Mollusk Hospital" and has been modified to allow visitors to learn about mollusks through their ability to protect and heal themselves. This display is sponsored by **Mark** and **Kathy Helge**.

The Blanket Octopus – Rare Encounter!

Recently I have been communicating with Jacinta Shackelton, who is an exceptionally talented photographer and videographer, as well as a marine biologist! Put all that together and what do you get? You get beautiful, detailed videos and photographs from a knowledgeable and enthusiastic lover of the oceans. Jacinta had several organizations pick up her rare observation and detailed story of a female blanket octopus in the wild. The photos and videos certainly piqued my interest of this species of cephalopod, and I hope you find it interesting too. She has given her permission to use her photos and video.

Jacinta Shackelton snorkeling near a sea turtle.

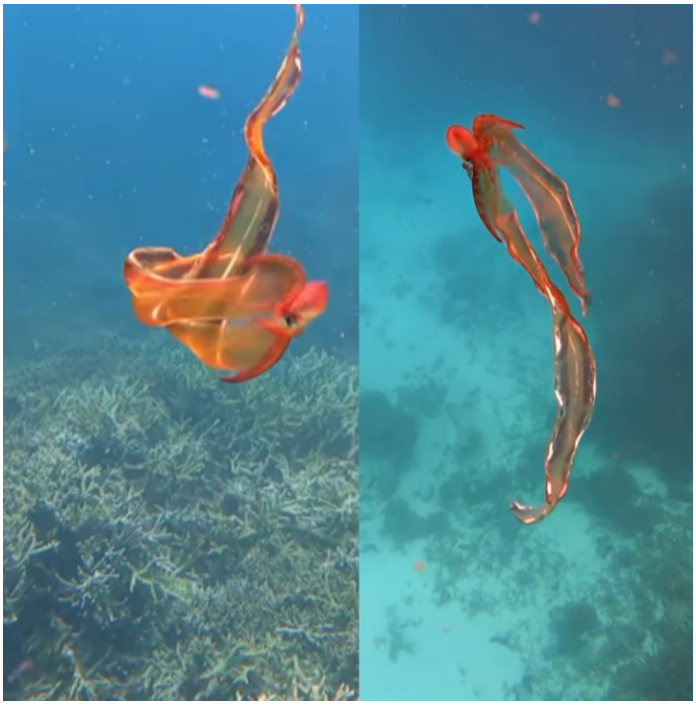
This octopus belongs to the family Tremoctopodidae (Tryson, 1879) and the species name is *Tremoctopus violaceus* (Chase, 1830). This pelagic cephalopod lives around coral reefs of both subtropical and tropical oceans. The Commonwealth Scientific and Industrial Research Organization states, "They get their name from the female's long, fleshy 'cape' enclosing its tentacles." They are known to move from one reef location to another every few days and appear to adapt to a variety of temperatures.



One might ask, are they poisonous like the blue-ringed octopus highlighted in the May-June 2022 *The Junonia* newsletter? Well, in fact the blanket octopus is poisonous, but not as potent as the blue-ringed octopus. The blanket octopus has a stinging weapon. WIRED Science News

expands on how the blanket octopus uses the Portuguese Man o'War (*Physalia physalis)* in its arsenal of weaponry. For more information on its weapons and other unique characteristics, use this link: www.wired.com/2015/03/absurd-creature-week-blanket-octopus/

Here are a few images from Ms. Shackleton's encounter with a young female blanket octopus near Lady Elliot Island, off the coast of Queensland, Australia. She said,



"Today I had such an incredible snorkel and came across a BLANKET OCTOPUS! (*Her video went viral and news venues picked up the story). These animals are a rarely encountered pelagic octopus species that spend their whole lifecycle in the open ocean. The first live male was only sighted in 2002!" There are four species of blanket octopus, but only the females have the cape that gives them their name.

If you are on Facebook, here is a link to Ms. Shackelton's video: www.facebook.com/watch/?v=451148920002898&_rdr

If not on Facebook, you can google search YouTube for her 2 ½ minute video. The video is like an underwater ballet.

Jacinta is an expert reef guide, too. I have a feeling her family DNA has a lot to do with her adventurous spirit. She is a sixth-generation descendant of the famous Antarctic explorer – Sir Ernest Henry Shackleton – a role model for leadership in extreme circumstances (Barczewski, p. 295).

If you are on Facebook, you can find her and her passion at Jacinta Shackleton Videography and Photography.

More on Cephalopods

For more on Octopuses – try this link on The Mysterious Inner Life of the Octopus written by Martha Henriques and presented by British Broadcasting Corporation on July 24, 2022: https://bbc.com/future/article/20220720-do-octopuses-feel-pain Article discusses how octopuses are problem-solvers, mischief-makers, notorious escape artists, have a hydrostatic skeleton, and how they appear to have a rich inner life with detailed, beautiful photographs. Find out what it is like to be an octopus!

Or try this link to learn about the Pfeffer's flamboyant cuttlefish (*Metasepia pfefferi),* which is a species of cuttlefish found in tropical water off Norther Australia, New Guinea, Malaysia, and Philippines: https://octolab.tv/flamboyant-cuttlefish/ The Pfeffer's flamboyant cuttlefish is renowned for its over-the-top display of colors and its "walking" style of locomotion.

Or check out the link to the Monterey Bay Aquarium, Monterey Bay, California: www.Montereybayaquarium.org/animals/animals-a-to-z/flamboyant-cuttlefish Not only will you learn more about the Pfeffer's flamboyant cuttlefish, but you will learn more through the wonderful video at the bottom of the article on other cephalopods being cared for and studied at the Bay Aquarium.

Here is a link to a Phys.org newsletter story from July 29, 2022, by the University of Guam titled "Octopus lures from the Mariana Islands found to be the oldest in the World." www.phys.org/news/2022-07-octopus-lures-mariana-islands-oldest.html

A University of Guam archaeological study has determined cowrie shells found in the Mariana Islands were used as "lures" to hunt octopuses. These lure devices are the oldest artifacts of their kind in the world – dating back to 1500 B.C., or about 3,500 years ago. Follow link for more on the lures: https://www.uog.edu/_search/?ousearchq=octopus+lures+in+Mariana+Islands

And finally, a link from the Australian Geographic on Tuesday, August 2, 2022, showing an octopus couple dancing in the waters of Lizard Island on the Great Barrier Reef!?!? Credit goes to Dr. Andy Lewis, Executive Director, Coral Sea Foundation. The couple are known as reef octopus (*Octopus cyanea).* https://www.australiangeographic.com.au/?s+Octopus+couple+dancing+a+shocking+video Scroll down to August 2, 2022, news and title.

Paper Nautilus – Who are you?

An interesting article in the Australian Geographic (June 29, 2022) by Candice Marshall highlighted unique facts about the paper nautilus. As you may or may not know, the paper nautilus is not a nautilus! The nautilus shell we all associate with belongs to the Nautildae family and has the chambered shell.

The paper nautilus belongs to the Argonautidae family and are a group of pelagic octopuses. They receive their name from the paper-thin egg case the females secrete. The secretion is a form of calcium.

Fact 1: "The paper nautilus is an octopus."

Fact 2: "The shell is an egg incubator." Is the shell like a typical mollusk shell?

Fact 3: "Paper nautiluses live in a water column, just like real nautilus do, but unlike other octopuses who live on the ocean floor." What allows them to navigate up and down in the ocean?

Fact 4: "Epic Size disproportion, Males are less than 2.5cm long, while females grow to more than 37cm. Females are also 600 times heavier than the males."

Fact 5: "Losing limbs. When the male and female mate, the male leaves behind an arm!" Wonder why they leave a tentacle? Check out the article.

For more on Ms. Marshall's article, follow the link: https://www.australiangeographic.com.au/?s=Paper+nautilus+by+Candice+Marshall

For more on the paper nautilus, Dr. Julian Finn, Senior Curator of Marine Invertebrates at the Museums Victoria, Australia, has produced a video explaining Argonauts through his PHD research. Follow this link: https://youtu.be/EgISnrhSAmQ

In the October newsletter I will highlight the Mollusk Class – Scaphopoda.

Florida Fossil Shells

Southern Florida fossil beds have been known, researched, and written about for 100+ years. These fossil beds were laid down during the Miocene and Pliocene times 10,000,000 years ago. This area was covered by the sea for the last time during the Ice Age 100,000 years ago. The age of our Florida fossil shells, sand dollars, and cake urchins ranges from one million (Belle Glade area) to twenty million (LaBelle, Sarasota, and Caloosahatchee areas). These are true fossils, but they are wonderfully preserved, and many are hard to tell from recent shells cast up along our beaches.

To find a fossil is to discover a world of imagination!

We, as a club, are fortunate to have **Ron Bopp** and **Gary Schmelz** as members. Over the years they have shared with us their amazing knowledge of fossil shells.

I recently met Steve Ritter of Naples, Florida and was thrilled to see his wonderful personal collection of fossils, including many that have been named by him or after him. He, too, is like **Ron Bopp** and **Gary Schmelz** – they are walking/talking encyclopedias (showing my age or should I have said Wikipedia) of Florida molluscan fossil knowledge. Steve also collects rocks, minerals, crystals, shells, antiques, and raises and sells bromeliads. His collection is like a small Natural History Museum in D.C.!

Shown on the right, fossil Vasum lockini (vase shell of the Turbinellidae family). Photo credit courtesy of Showcase Shells, Bonita Springs.

This fossil is about 4" and is from the Buckingham formation, Warren Pit, Sarasota, Florida.

Amazing Brazilian Fossil Discovery – Again!

Paleontologists from three universities in Brazil located a fossiliferous site which has been "lost" for almost seven decades. The significance of this site is it dates back approximately 250+ million years – before the first dinosaurs. Evidently, there were ideal environmental conditions for the preservation of plants, animals (including mollusks).

The site was originally discovered in 1951, but poor technological resources did not record the exact location and subsequently wasn't discovered again until 2019. Researchers from the Federal University of Rio Grande do Sul, along with the other two universities, including Joseline Manfroi (a paleobotanist) have declared, "The fossiliferous site represents a real treasure for the world of paleontology, especially the studies on the floristic evolution of a unique geological period in Earth's history, the Permian." Mollusks and fish fossils have been found among the fossils so far.

The site being explored is huge. Although the majority of the specimens collected so far are plant fossils, it will be interesting to see what additional animal fossils are discovered, too. The fossils are of significant importance, as it is hopeful they will provide information about the distribution of plants and animals around the world and

what the climate was like to support the animals in this discovery.

The Permian period ended with what many believe was caused by global warming and the result was the largest extinction in Earth's history. Sea animals were unable to breathe and died. This Permian "extinction" at the end of the Paleozoic Era, killed off major invertebrate groups of echinoderms (which are related to our modern-day starfish and sea lilies), trilobites, and mollusks.

Information on this site has appeared in Phys.org – www.phys.org/news/2022-06-fossils-brazilian-paleontological-site-lost.html and in National Geographic - online, July 26 and 27, 2022. It will be interesting to see what mollusks are discovered and what they looked like at the end of this Permian period.

*Note: The Paleozoic Era started approximately 541 million years ago with the Cambrian period and ended about 250 million years ago with the Permian period, known as the largest extinction in Earth's history – estimated at killing some 90 percent of the planet's species. Hillel J. Hoffman in a National Geographic reference article published December 2, 2009, stated, "Less than 5 percent of the animal species in the sea survived".

Shell of the Month for July – Lion's Paw

Happy Belated Wishes to all you July birthday shellers! Your birth shell according to Abbott Tucker is the Lion's Paw (*Nodipecten nodosus)*. These highly desirable thick, flattened shells are found on Florida beaches and down into the Keys. Their range includes the Caribbean, Virgin Islands, central America, Brazil, up to North Carolina. Their habitat is in offshore waters up to 50m deep and in rough sediment and rubble, often attached to hard surfaces of caves of shaded areas. It is known as the largest scallop of the Western-Atlantic and is a sought after for human consumption.

Photo credit to Showcase Shells, Bonita Springs, FL – larger Lion's Paw almost 6"showing both valves.

The lion's paw scallop, a bivalve, belongs to the Pectinidae family and was first identified by Linnaeus, 1758. The shell is distinctly ridged and rough, with bumps along the ridges. Coloration has been found from vivid orange to red and deep purple. Its common name appears to have been given because of its similar appearance to the paw of a lion. They are known to grow rapidly, and this is probably advantageous to the species, as they are facing extinction in locations like Brazil due to their popularity – both as a food and beautiful, collecting prize. Unfortunately, as you may know, it is rare to find a large intact lion's paw!

The scallop is hermaphroditic (both male and female). The animal will release both eggs and sperm into the water, spawning twice a year. They are filter feeders – eating microalgae. A little-known fact, the lion's paw will produce a calcite pearl, although rarely.

Shell of the Month for August – Nutmeg

Nutmegs belonged to the Cancellariidae family. Let us take a quick look at the common nutmeg (*Cancellaria reticulata – Linnaeus, 1767*) and say Happy August Birthday and hope you have found many nutmegs in your shell hunting!

Photo Credit: Bailey-Matthews National Shell Museum.

The common nutmegs can be found in offshore waters from western Atlantic from North Carolina to Brazil, Caribbean, and the Gulf of Mexico. The very sturdy shell grows up to about 2 ½" and is characterized by a rough surface, with many spiraled, axial (vertical line) ribs – giving a lattice pattern. The inner margin (inner lip of the aperture) has two thin white folds on the columella (axis of shell) and can be seen on the shell on the right of the photo. The shell ranges in color from cream white to orange and tan, with non-distinct stripes of brown.

The species has a radula used to feed on soft-bodied animals. There is no operculum to close and protect the mantle. The nutmeg is said to be named after its

resemblance to holiday spice. “Reticulata” is a derivative of the Latin word “retineo” meaning network or net-like. Albino nutmegs are common in SW Florida.

Dr. José H. Leal, Bailey-Matthews National Shell Museum, described the young common nutmeg in a December 21, 2018, posted article where you can find a photo and description, follow the link below: www.shellmuseum.org/post/2018/12/21/a-young-common-nutmeg

Shell of the Month for September – Limpet

The limpet was Abbott’s selection for the September shell of the month. After birthday wishes to all our September members – here is a short review of the “true” limpets. NOTE: Many of our “local limpets” are not included as true limpets.

The keyhole limpets we find locally belong to the Fissurellidae family of gastropods and are distant-distant relatives of false limpets (Family Siphonariidae). These keyhole limpets are oval-based shells with a number of species in our Florida waters and a wide-variety of species found in temperate waters world-wide.

The true limpets have oval-base, cap-shaped shells with concentric growth lines and many species have radial ribs formed from the apex to the shell margin. They range in size from five to over 150mm in length. True limpets can be found almost worldwide (except the Artic Ocean) and commonly occur on intertidal rock surfaces. They are grazers feeding on such things as diatoms, blue-green, algae, algal spores, and small bits of plant material.

Common Limpet (Patella vulgata) Photo credit: Filip Nuyttens.

An example of a true limpet is the common limpet (*Patella vulgata,* Linneaeus, 1758)) belonging to the Patellidae family and is found in the northeastern Atlantic.

All true limpets are marine. Most true limpets breathe through gills, whereas all the freshwater limpets and a few marine limpets have adapted their mantle cavity (palatal cavity) to serve as a lung!

A lot of taxonomic discussion and changes have occurred in the classification of limpets and limpet-like sea snails recently. The Pastellogastropoda, common name for true limpets and historically called the Docoglossa, are members of a major group of marine gastropods, treated by experts either as a clade* or as a taxonomic order**. A clade is described as a branch that includes a single common ancestor and all its descendants.

* Bouchet, Philippe; Rocroi, Jean-Pierre et al, (2005), “Classification and nomenclator of gastropod families’ in *Malacologia*, ConchBooks. 47 (1-2): 1-397.

** Nakano T., Ozawa (2007), “Worldwide phylogeography of limpets of the order Patellogastorpoda: Molecular, morphological and palaeontological evidence” in *Journal of Molluscan Studies*. 73 (1): 79-99.

Nakano and Ozawa made many changes using molecular phylogeny research. If wanting to dig deeper, I suggest you refer to this link by the authors: www.academic.oup.com/mollus/article/73/1/79/2939649

Traveling the World – Pink Sand Beaches

While everyone seems to have migrated from SW Florida, I am skipping the travel to U.S. beaches for shells and searching for the rare beauty of the “Pink Sand Beaches” in the world.

First, how are pink sand beaches formed? The sand is pinkish in color can be due to a variety of reasons, such as nearby red coral reefs, shell fragments, deposits derived from microscopic foraminifera (forams for short), and even by nearby mineral deposits. The color of the sand is indicative of its makeup and certainly offers hints about the history of the beach. Here are some of the most popular pink beaches – not all allow samples, shells, rocks, and a variety of other items to be removed.

1) Horseshoe Bay, Bermuda – derives its rosy color from crushed coral and calcium carbonate from the shells of microorganisms called red foram (red foraminifera). You are not allowed to remove sand, shells, coral, sea fans, or sea glass out of the beach or ocean here!
2) Harbour Island, Bahamas – color is from pink shells and pieces of the shells from tiny red shelled marine insect, forams. Shelling is allowed, but always check local laws before you travel.
3) Elafonisi Island, Greece – derives its color from the forams the tide deposits on the beach…the sand appears to be pink, but it is the pieces of the microorganisms mixed with broken shells.
4) Pantai Merah, Komodo Island, Indonesia – derives its color from the forams and red pigment of the coral reefs. This park is known for the protected home of the Komoda dragon. This is an un-inhabited island.

5) Crane Beach, Barbados – derives its color from forams. You are allowed to leave Barbados with up to 3 shells without a CITES permit.
6) Great Santa Cruz Island, Philippines – derives its color from the red organ pipe coral.
7) Elbow Beach, Bermuda – derives its color from the coral reefs off the shore.
8) Pink Beach, Caribbean Island of Bonaire – derives its color from crushed pink shells, foraminifera, and coral reefs.
9) Pachia Ammos, Crete – this area is known for both gold and pink beaches.
10) Budelli Island, Sardinia – derives its color from crushed coral reefs and from a pink microorganism that lives inside shells. This beach can only be observed from boats due to strict regulations to keep the beach beautiful. No pebbles, sand, or seashells can be collected.
11) Playa de Ses Illetes, Formentera, Ibiza, Spain – color derived from residues of coral dust.
12) Tikehau, Tahiti, French Polynesia – derives its color from the coral round atoll.
13) Tangsi Beach, Indonesia – Known for its "eye-popping" rosy, pink sand! Color deposited from red coral dust.
14) Pfeiffer Beach, Big Sur, California – actually known more as purple sand beach, as the purple hues come from manganese garnet that washes down from nearby mountains after rainfalls.
15) Kaihalulu Beach, Maui – derives its color from crushed lava, which is very coarse and heavy ladened with pebbles. Technically not pink…more like red "sand."
16) Les Sables Roses, French Polynesia – color comes from a mix of coral and crushed forams.
17) Pink Beach on Barbuda, Barbuda Caribbean – color from foram shells.

Giant African Land Snails Invasion

The Florida Department of Agriculture and Consumer Services (FDACS) last month posted a warning of the presence of giant African land snails (*Achatina fulica*) in the New Port Richey area of Pasco County, Florida. A quarantine order was enacted by FDACS the last week of June for those living in Pasco County north of Tampa along the gulf coast.

A recent article in Phys.org, describes the discovery of this ferocious plant eater – estimated to eat hundreds of different kinds of plants. Since June 23, employees from the Florida Department of Agriculture have been searching for this invasive species. In the first couple weeks after discovery, agriculture officials have captured more than 1,000 of them.

Phys.org describes that one giant African snail (up to 8" long, brown-shelled with white flesh) can lay 2,000-2,500 eggs a year. This does not bode well for Florida's agriculture industry should the snail continue to thrive and breed. The sad part, it is surmised that someone may have had the snail as a pet! Add to this, the snail possesses a health threat to those who come in contact with it. The snail carries rat lungworm, a parasitic nematode, which can cause meningitis in humans. The snail also has been observed causing structural damage to plaster and stucco structures.

For more on the story: https://phys.org/news/2022-07-florida-fast-spreading-snail-invasion.html

In this article and others, you can learn: a yellow Labrador, named Mellon, and another "snail-sensing" dog are trained to hunt down the snail; the snail eats MORE than plants; the quarantine zone within New Port Richey; more on how the meningitis is transmitted by rats that eat the snail; and other ways being used to capture the snail!

Two Giant African Snails, not rabbits! 😊 Photo credit, Roberta Zimmerman, USDA APHIS,

Florida twice has eradicated the Giant African land snail from the Miami-Dade County area. The first occurrence of this invasive species was in 1966 and lasted until 1975 with the effort costing about $23 million.

The Armored Snail

I highlighted Dr. Chong Chen (Malacologist) in the November 2021, *The Junonia* and recently caught up with him after some remarkably interesting posts on Facebook. Chen's current expedition has him using towed trawl gear instead of his adventures in submersibles.

Lately, there has been a lot of discussions and posts on the Sea Pangolin *(Chrysomallon squamiferum)*. It is known by many common names, such as, scaly-foot gastropod, scaly-foot snail, volcano snail, or the armored snail.

Chong has graciously allowed me to post a few of his photos here for your interest. These come from exploring the species in the great depths of deep-sea hydrothermal vents in the Indian Ocean. This species belongs to the Peltospiridae family.

Chong describes the snail as "being well-known for having imbricating hard scales on its foot, but the composition of the scales has remained unclear, with the hypothesis being it is entirely proteinaceous. In a paper published in the Journal of The Royal Society Interface, Volume 19, Issue 191, various analytical methods to analyze the scale (armor) was combined, revealing that it uses β – chitin nanofibers as the building framework for the scales.

Photo credit: Dr. Chong Chen. Side & Ventral View showing plates or scales.

Below: Four views from all angles and showing visible scales!

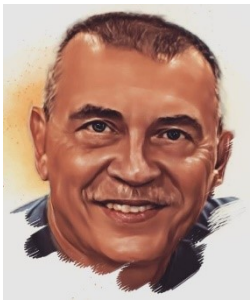
If you want to dive into the "deep waters" to learn more, the scientific research article can be found with this link: https://doi.org/10.1098/rsif.2022.0120

Dr. Chong Chen collaborated with Noriyuki Isobe, Kazuho Daicho, Tsuguyuki Saito, Dass Bissessur, Ken Takai, and Satoshi Okada on this article published June 1, 2022.

Last month (July 18, 2022), the snail became the **first deep-sea animal to be declared endangered** because of the threat of mining in its habitat. The snail was added to the Red List for endangered species by the international Union for Conservation of Nature (IUCN). An interesting news feature in The International weekly Journal of Science "Nature" provides a status report on all species that are disappearing from existence. I have provided a link to this report here: www.nature.com/news/biodiversity-life-a-status-report-1.16523

Thoughts from the Editor's Desk

by Rick Bowlus



Summer has been quiet – almost too quiet as I miss our monthly meetings and fellow shellers! Did you ever stop and wonder why seashells are getting harder to find? Are we getting to a point at the beaches of the world when we should only take pictures, leave our footprints in the sand, and take home only the captured beautiful experiences we see?

As you may know, Sanibel Island, Florida, has had a seashell ban for nearly thirty years and I hope this has resulted in more shells to see. A recent controversial article in Science – "How Stuff Works?" subtitled *Where Have all the Seashells Gone*? by Mark Mancini, describes making sense why someone would want to take home a piece of the experience at a beach. He notes, "As it makes sense that we want to take a piece of it home with us." Mr. Mancini's complete article can be viewed by this link: https://science.howstuffworks.com/environmental/earth/oceanography/where-have-all-seashells-gone.htm

He goes on to describe the desire to collect shells even knowing it is illegal to do so in many areas. Poaching is rampant in areas, where the desire to have and sell a shell overrides the fear – thus live shells are taken eliminating the potential of further breeding. As beautiful places produce beautiful shells, it also brings the collectors and the vacationers – each visit effecting the ecosystem in its infinite way.

Speaking of poaching – did you see where a 51-year-old Houston man learned the hard way about poaching? The Miami Herald reported on July 27, 2022, this man took 5 queen conchs from the Keys, placed them in a bucket and tried hiding them inside a shirt. He was charged by the Monroe County Sheriff's Office with a misdemeanor for "harvesting queen conch" and booked into the county jail.

Kathy Kenley also found a couple of associated stories, the first is "Why Seashells Are Getting Harder to Find on the Seashore" by Florida author, Cynthia Barnett. This story was published July 1, 2022, in National Geographic. A subtitle of this story is "At the beach, take only pictures,

leave only footprints and sandcastles. The mollusks have enough problems already." Sound familiar?

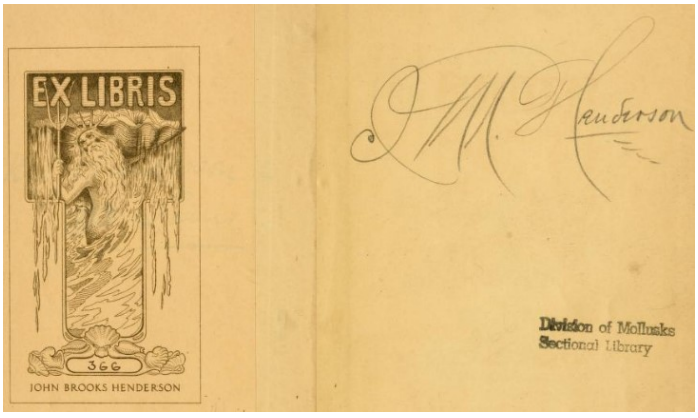
The story highlights fishers (and tourists) versus mollusks, lessons of the past, and for the love of shells (which acknowledges Dr. José Leal. Unfortunately, in order to see this story, you need to be a member of National Geographic and a link cannot be provided here. However, Kathy has captured the words in a file and if you wish to see a copy, please email your desire. rbowlus@comcast.net

The 2nd story was "Seashell Souvenirs Are Killing Protected Marine Live" by Tina Deines published July 16, 2018, also in National Geographic. The subtitle is "The seashell trade is little known, but the massive industry devastates marine life worldwide." Highlights in this story are the global scale of the shell trade, the enforcement challenge, and help for mollusks is hard to get. Again, Kathy has shared a copy with me, and I would be glad to email if you wish to see the short story. Tina Deines is a freelance journalist based in Albuquerque, New Mexico.

After a story in the last newsletter about Edgar Allan Poe's first publication "The Conchologist's First Book, **Kathy Kenley** pointed out this book was Poe's best-selling book and can be found for sale on Amazon. If interested, she provided the link to purchase: www.en.wikipedia.org/wiki/The_Conchologist%27s_First_Book

If you want to read Poe's book or other older books on conchology or malacology, have you ever tried "Internet Archive"? It's free, although it is suggested you donate to this wonderful archive of millions of books, movies, software, music, websites, art, and much more! https://www.archive.org

In Poe's book online at Archive Internet, it was interesting to find the book owner's stamp "Ex Libris, 366, John Brooks Henderson on the inside cover, and on the next page, the page had been autographed (not sure what Henderson did the autograph).



Mr. Henderson (1870-1923) collected shells as a youth and later focused on West Indies mollusks. He worked as a Regent of the Smithsonian Institute and was a researcher and author of numerous books and publications. Conchology.be's description of Mr. Henderson states, "he was a brilliant and wealthy diplomat. He was an amateur malacologist and had a yacht (Eolis) which he dredged many species of mollusks off Florida (as noted by Tucker Abbott, 1973). He donated his entire collection of Antillean land mollusks (approx.. 400,00 specimens) to the U.S. National Museum."

He also contributed 36 articles to the Nautilus, authored a Book, entitled "The Cruise of the Thomas Barrera" (book on shell hunting in Cuba), and set up dredging stations off the southeast coast of Florida using his yacht. He had 18 molluscan species named after him and he described 23 species.

I have to wonder who donated this book to be photographed for the Archive Internet on-line library.

Last thought, I am wondering after reading about the giant African land snail invasion, if anyone in the Shell Club has one of the shells in their collection? 😊

You make me come out of my shell! 😊

Fun Fact: "A conch is the emblem of the greatest fake revolution in American history. In 1982, the federal government put a border patrol roadblock on U.S. 1, which was the only road linking mainland Florida to the Keys. The islands claimed it hurt tourism, and as a tongue-in-check protest, they announced they were seceding from the Union. Kew West Mayor Dennis Wardlow was named prime minister of the newly minted fake country – which called itself *The Conch Republic*. At a public address on April 23, Wardlow declared war on the U.S., surrendered immediately, and requested $1 billion in foreign aid."
*** Information from How Stuff Works – Animals, May 4, 2020.

Here is an interesting article – "The Story Behind the Seashells By the Seashore" by Megan Kalomiris that appeared in the National Museum of Natural History's Smithsonian Voices. Learn what shells are made of and the various layers that are left behind after they parish!
Link: https://www.smithsonianmag.com/blogs/national-museum-of-natural-history/2022/06/22/the-story-behind-the-seashells-by-the-seashore/?utm_source=smithsoniandaily&utm_medium=email&utm_campaign=20220624-daily-responsive&spMailingID=47020987&spUserID=MTA5MDI1MDgzNTAzMQS2&spJobID=2262685711&spReportId=MjI2MjY4NTcxMQS2

And I end with a note from **Clair Beckmann** on a fun fact from Maryland's Ocean City. Clair enthusiastically proclaims, "A hermit crab named Martin Z. Mollusk takes up residence in the Atlantic Coast town of Ocean City. The crab checks for his shadow at the beginning of May (akin to Groundhog Day) to predict the arrival time of summer in Ocean City. Unsurprisingly, the crab **always** predicts that summer will come early – he's done so for over four decades now. The holiday is called Martin Z. Mollusk Day."

Our Shell Show's "Jewel Box Boutique"

By Kim Short

During the Dog Days of Summer, when it's too hot to go outdoors, why not have a look at what's languishing in your jewelry box?

The "Jewel Box Boutique" would be happy to accept your old boring pieces which will look new and exciting to someone else at the 2023 Shell Show.

We will also take broken vintage jewelry and watches to upcycle into interesting items. In addition, we thought we might try some accessories: a few good-quality handbags and clutches, maybe some silk scarves, too.

If you are not sure if your donation is suitable for our table, please reach out to me via my email: shortgage@comcast.net

We look forward to receiving your donations at the beginning of 2023! Thank you for keeping us in mind **- Kim Short** and **Heather & Bill O'Keefe,** the Jewel Box Boutique coordinators.

Social Media *Chair*

By Diane Thomas

Looking forward to seeing everyone this fall. Here are your links to the Club's social media:

Facebook: https://www.facebook.com/sanibelshellclub
Instagram: https://www.instagram.com/sanibelshellclub
Website: http://sanibelshellclub.com/
Email Address: info@sanibelshellclub.com

If you want information about upcoming events, you can find it on social media on our Facebook page and Instagram page. If you need more detailed information about your membership, our ***The Junonia*** newsletter, and activities - you will find that on our website. Diane mentioned from her "Out West Home" there are no shellers within 200 miles and she misses us! 😊 I will promise her "we" will leave a few shells for when she returns to SW FL.

If you have not already done so, stop by the Sanibel Library and check out part of the **Elsie Malone** Shell Collection along with **Jeff Oths**' antique mother-of-pearl collection, on display in the lobby. These are beautiful collections.

Upcoming Shell Shows

The following information certainly is subject to change. Please verify with the individual organizations.

- **August 26 – September 5, 2022** – Oregon Shell Show, Oregon State Fair & Exposition Center, 2330 17th St., NE, Salem, OR. Email: marci@earthlink.net or (408) 891-5643
- **October 12-16, 2022** – Seas Shell Searchers Shell Show, Lake Jackson Civic Center, 333 Hwy 332, Lake Jackson, TX. Houston Conchology Society: www.houstonshellclub.com

Sanibel-Captiva Shell Club Committee Chairs

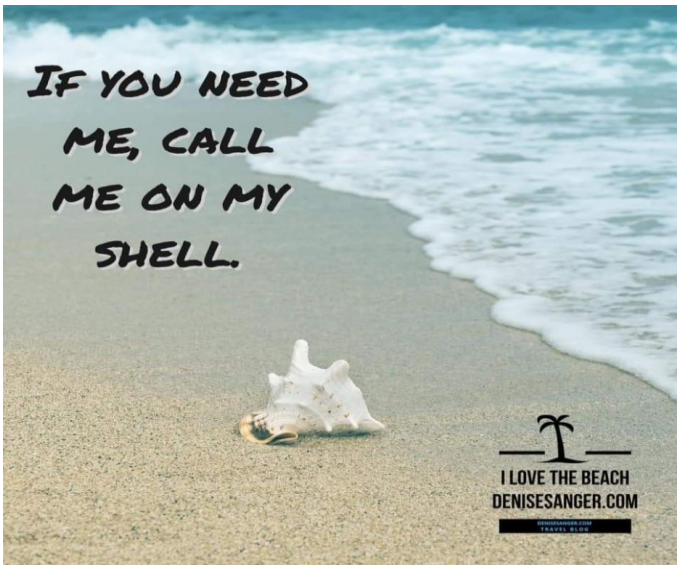
Archives Chair:	Linda Edinburg
Door Prizes:	Jackie McGonigle
Email Correspondent:	Stephanie Howard
Field Trip Coordinator:	Susi Butler
Grants Chair:	Karen Turner
Meeting Auctions:	Bruce Schulz
Membership Chair:	Stephanie Howard
Newsletter Editor:	Rick Bowlus
Program Coordinator:	Debi McBroom
Publicity:	Linda Friedrich
Shell Show Chair:	Linda Arnold
Social Media:	Diane Thomas
Website Master:	Dave Dotson

"The sea, once it casts its spell, holds one in its net of wonder forever."
- Jacques Yves Cousteau

Sanibel-Captiva Shell Club Elected Officers

President:	Karen Silverstein
Vice President:	Debi McBroom
Secretary:	Kim Short
Treasurer:	Linda Edinburg
Immediate Past President:	Retired
Members-at-Large:	Dotty Dion
	Elsie Miller
	Rabon Moore

Not all who wander are lost. Some are looking for the perfect seashell! - Author Unknown



Tides at Sanibel Area for August - September 2022

Kathy Kenley recently provided the following tide information for those in the Sanibel area. I hope this helps you find that perfect shell. Kathy says, Hi Shellers!

"All minus tides until late October are extremely late afternoon or evening. Although one low tide per day will get somewhat close to 0.0 feet, there will be no minus tides after September 7 until October 26. At that time, the lowest tides of the day will switch from the current late afternoon/early evening to early morning. In parentheses is the approximate time when the height is 0.0. All times are Eastern Daylight (Standard) Time.

Ybel Point (Lighthouse & Bunche) AUG	**time**	**height**		**Turner time**	**height**	
8/8	5:50 pm	-0.18	(~4:30)	4:34 pm	-0.17	(~3:00)
8/9	6:49 pm	-0.36	(~5:00)	5:33 pm	-0.34	(~4:00)
8/10	7:39 pm	-0.42	(~5:45)	6:23 pm	-0.39	(~4:30)
8/11	8:23 pm	-0.34	(~6:30)	7:07 pm	-0.32	(~3:00)

*Full Sturgeon Super Moon at 9:36pm EST

Ybel Point (Lighthouse & Bunche) SEPT	**time**	**height**	**Turner time**	**height**
9/6	5:41 pm	-0.02	4:25 pm	-0.01
9/7	6:33 pm	-0.05	5:17 pm	-0.04

Kathy also provides a great source of information for all shellers. She stated with beach water quality becoming an issue, you may want to check out this link which posts up-to-date beach quality reports: www./floridahealth.gov/environmental-health/beach-water-quality/index.html Directions are found on the next page.

Use the page option at the bottom of the page to Lee County, which posts the status of all beaches in Lee County. This link can be modified to go to any Florida County if you are shelling throughout Florida. https://floridahealth.gov/environmental-health/beach-water-quality/index.html In early July, unsafe levels of fecal bacteria were identified in the waters off Bonita Beach and 10 other southwest Florida beaches received poor marks after testing. A Florida Department of Health put out an advisory for beachgoers to stay out of the water completely until it cleared up. The health warning advisory was lifted July 21, 2022.

The Florida Fish and Wildlife Conservation Commission monitors red tide and algal bloom and here is a link to current conditions: https://www.myfwc.com/research/redtide/statewide/ There you will find the link to the Daily Sample Map.

Kathy said, “Mother Nature and the dredging off Hagerup Beach reconfigured Blind Pass (the inlet itself) and has made for some remarkably interesting shelling finds from Turner Beach, including the biggest gaudy I’ve found. Dig in – literally. Love it when an inlet gets rearranged. 😊 At the same time, Blind Pass Beach developed a cliff from the middle part of the park on the inlet side to back and under the bridge such that it’s almost impossible to shell there. Sally and I checked it out – terrible, although the Gulf-side sandbars are fabulous.”

Blind Pass Park/Beach was closed to the public since June 15, 2022, due to sudden and quite drastic erosion. The erosion caused the gentle sloped beaches to become a steep 5-6 feet drop-off. Find out what caused this and what is proposed to re-establish the beaches in the link provided below. Kathy reports with Linda Hines and Linda Arnold, “Between two days of shelling, water had cut out a channel into the long sandbar split that had grown out from Turners towards the Sanibel side. Now there are two large sandbars in the middle of the Pass. The last time the pass closed was in around the end of 2000, it took until 2009 to dredge it open – almost 9 years!”

https://www.news-press.com/story/tech/science/environment/2022/06/17/blind-pass-beach-park-sanibel-florida-closed-indefinitely-erosion-steep-cliffs-beach-renourishment/7645073001/ The article appeared in the Fort Myers News Press, June 17, 2022, written by Amy Bennett Williams. This was also reported on NBC2 News, Fort Myers. Follow this link to see YouTube video: www.youtube.com/watch?v=ZeAfc_sAsUE

Thanks, Kathy! She will be providing monthly updated tide information in our newsletter throughout the year.

FUN FACT: Thursday, August 11, 2022, at 9:36pm will be a Full Sturgeon Supermoon. At this time, it will be at its brightest and appear larger than normal! The moon will appear to be full for three days starting on Wednesday morning through Saturday morning. The August full moon derives its name from fishing the giant sturgeon on the Great Lakes and Lake Champlain, when the fishing was seemingly the most abundant – according to the Old Farmer’s Almanac. For the sturgeon – these fish are like living fossils, as they can live up to 150 years, although they are rare today because of overfishing.

Sad News on Sanibel Island

The Island Cow Restaurant

It is sad news to relay the iconic Island Cow Restaurant in Sanibel burned down Saturday on August 6, 2022, night around 11pm . The smoke and fire damage were significant, as it took multiple agencies to put out the fire. The fire started in the restaurant’s kitchen late after the business had closed and thankfully no one was hurt. After fighting the fire during the night, the building rekindled itself again around 7am Sunday.

It was a fun stop when visiting the island and the food was delicious. The Island Cow has been in business for more than 20 years. A message sent out on social media on Sunday morning by the owner stated, “On behalf of our Island Cow family, we want to thank everyone for their ongoing support while we close temporarily for repairs.”

The story was reported on many of the local media channels. Videos of the fire coverage can be searched on your favorite Florida news channel. Like me, anyone who has dined there enjoyed the experience and all the relics in and out of the restaurant - and I am sure sends their best wishes for the restaurant and its future.

Club Newsletter

The Junonia is published monthly September through April and is an official publication of the Sanibel-Captiva Shell Club. Articles and items of interest related to shells and shelling are encouraged and welcomed for publication consideration. Credit will be given to contributors when known unless anonymity is requested. Permission is granted for reprinting articles, provided credit is given to ***The Junonia***, the author, and the Sanibel-Captiva Shell Club. A copy of the reprint should be sent to the editor – Rick Bowlus (rbowlus@comcast.net). The opinions and views expressed in ***The Junonia*** are those of the author and not necessarily those of the Sanibel-Captiva Shell Club. Suggestions and comments are always welcome.

"How inappropriate to call this planet Earth when it is quite clearly Ocean." – Arthur C. Clarke