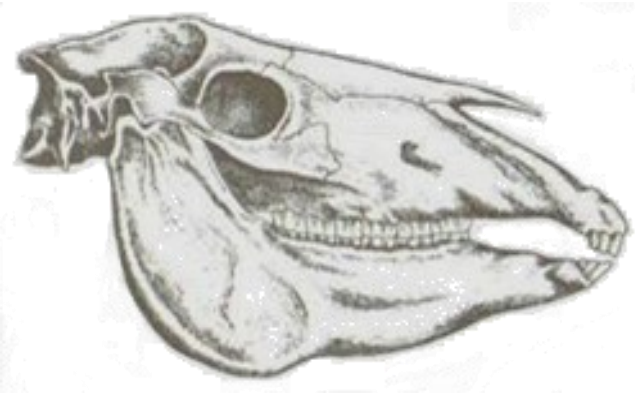


Fossil Club of Lee County

February 2017

Letter from the President

IT'S FOSSIL SEASON!! The water levels are down in the rivers and creeks! Fossil clubs are holding annual auctions! Four (4) fossil Festivals are arriving quickly--so get your fossil fix on!

Our own annual Fossil Festival is very close--FEBRUARY 18! SO soon! We need your help, so please volunteer! It's a fun day! Mike Cox, who graciously and fearlessly took on the chairmanship this year, is finishing up the final set-up plans and organizing the club activities and needs your help! Put your name on the signup sheet at the meeting. That is way better than just showing up at the festival and saying--where do you want me? Signing up in advance really will help Mike with the planning. This will be a fun day--I can promise you that!

The Shell Factory is a great organization to partner with! They are experienced in putting on events and do all they can to ensure success. We owe them a big thank you and one of the best ways is to have a successful festival and bring lots of people there! Last year we had well over a thousand folks stopping by to see what were all about. This year weather permitting!, we expect more! So, you'll be busy, but it's fun! The kids have a blast and make memories that last a long time.
This month is definitely a shout-out to MIKE COX!! Thank you for taking on the Fossil Festival organizing! Many members don't realize the effort it takes to put this together, not to mention time spent at meetings, etc. Thank you for volunteering your time and talents to the FCOLC!!

ANNUAL dues are due! Please pay Al Govin at the meeting. Only $20 a year, per household! If you add up all you get for that you'll realize it's the best bargain in town!

The club has a Face Book page. Check it out! Many members post pictures, etc., which you don't see in the newsletter. Participate as well! If you're not a member , just ask.

A very good seasonal member and also newly installed board member, Dr. John Taraska, recently suffered a major medical set back while up north. He actually diagnosed himself, telling his wife to call 911 and to take him to a certain hospital specializing in brain trauma! By doing so, they got him to the right facility, quickly, and were able to operate and stop the bleeding and save his life! John has been in the hospital since Dec 21, but is being released within a couple of days. I spoke with John and he sounds good, but wants to go home. Traveling plans are not in the works as of this time, but we ALL wish him a speedy recovery and hope to see him soon!

The FCOLC annual elections are coming soon--MARCH! We will hold elections just before the annual auction that night. No one has stepped up --yet--to run for vice president. This is the only position needing to be filled this year. Please consider being a larger part of the club and volunteer. See me with any questions you have.

We could still use donations for the auction. This is the last meeting to bring them, because immediately after that I start putting it all together and assigning lot numbers. We usually have about

100 lots to auction, as well as a number of silent auction items that end at the break. I have collected a lot of lots, but could use a few more. Thank you in advance for your help!

Al Govin organized a great canoe trip last month, and everyone who went had a good time. Sure, some fossils were found, but it's also about being part of the group, and also enjoying the beauty of the Peace River! Thank you Al!

Michael Gessel is organizing a walk-in trip to Horse Creek, on the 11th. Info about it is inside. After the trip to horse creek, plan on going to the Southwest Florida Fossil Society annual fossil auction! learn more inside!

Walter Stein gave a great presentation last month! Anyone who came--and we had a large turnout--learned a lot! And Marc Cantos put on a terrific 'refreshment" spread! Wow, Marc! Great meal!

Dr. Gary Schmelz will be the speaker this month. Please come and listen. Info and bio is inside.

LOTS of fossil stuff happening! Be a part of it! And, come to the meeting!!

Louis Stieffel
President

CLUB CANOE TRIP!!

On January 21 st the fossil club went on a canoe trip on the Peace river. We had a good number of members take advantage of this trip. Canoe Safari loaded up the bus and we were on our way to the river. When we got to the river the canoes were in the water and we paired up and were on our way. Sadly for Al he got me as his canoe partner as I have been in a canoe 3 times in the last 30 years. We went to a few spots and dug. The river didn't give up many of its prime fossils but we all had a good time. Some of our group had a few problems on the trip staying on their feet including me. We went to stop and dig in the one area and as a rookie I tried to beach the canoe with Al still in it. Wrong move as I tipped the canoe over and dumped Al out into the water. The river had a lot of shallow spots and we had to get out a few times to get out of the sand. One spot I got out of the canoe and held it while Al got out unfortunately when Al got out he was on a ridge and one foot was in 6 inches of water the other went into a hole that was a lot deeper. Of course Al went down again. Not my fault this time . We got up to the ramp and loaded back up on the bus and headed back. We got back to Canoe Safari and looked at some of the stuff that we had collected. I had a good time with all that were on the trip but it seemed like time flew by. I wish to thank AL for all his work to put this trip together, Canoe Safari for all they did for us , and all that went on the trip and made it a fun time.

Dean Hart

FCOLC MINUTES 1/19/17 MEETING

Louis Stieffel called the meeting to order

84 members were present.

Door prize tickets were handed out.

Mike Cox, and Louis, discussed February Fossil Club show at Shell Factory

Al Govin discussed the upcoming Peace River canoe trip.

Louis discussed other clubs upcoming shows, and events.

Elections are in March and also asked for a volunteer to become vice-president.

February meeting refreshments are by Jack Boyce.

February 11th there will be a walk-in trip to Horse creek with a $10.00 fee. Details to be sent via email.

A break taken for Marc Cantos evening Italian feed. Done by Marc at no charge to the membership.

This was quite spectacular in form and taste, as well as presentation.

Door prizes were awarded.

Speaker for the evening, Walter Stein, discussing discovery, and proper preparation of fossils.

Question and answers after speaker finished.

Show and tell was held.

Dollar raffle was held.

Meeting adjourned.

Minutes by Secretary/Treasurer

Al Govin

OFFICERS

Louis Stieffel, President
239-851-7499, cape187@earthlink.net
Michael Siciliano, Vice President
239-980-1406
Al Govin, Secretary, Treasurer
239-910-2339

DIRECTORS

Dean Hart……941-979-8217
Dave Seehaver
Jeanne Seehaver
Jim Manderfield
Dr. John Taraska
Leslie Stieffel

COMMITTEES

Al Govin, Club Trips Director
Curt Klug, Web Master
Cherie Jacobs, Newsletter Developer
Al Govin, Badges, Membership, Trips
Cindy Bateman, Librarian
Dave and Jeanne Seehaver, Merchandise
Dean Hart, Refreshment
Michael Siciliano, Raffle and Dive Trips
Mike Cox, Festival Chairman
Louis Stieffel, Auctioneer, FOSSIL project representative, Newsletter editor, Speakers, Vertebrate Education

Meetings are on the third Thursday of the month, 7:00 pm, at Zion Lutheran Church Fellowship Hall.

ANNOUNCEMENT!!

Central Florida Mineral and Gem Society, a non-profit educational organization, is hosting a Rock, Mineral, Gem, Jewelry & Fossil Show on April 28th, 29th and 30th, 2017 at Florida National Guard Armory, 2809 South Fern Creek Ave., Orlando, FL 32806. Show time: Fri. 1 pm to 6 pm, Sat. 10am to 6pm and Sun. 10am to 5pm. Vendors offering beads, minerals, gemstones, custom jewelry, fossils, artifacts, metaphysical stones, etc. Silent Auction and Door Prizes. Demonstrations: beading, cabochons and wire wrapping. Family Activities.
Contact: phayes3@cfl.rr.com. Admission: Adults $5, Students $2, Uniformed Scouts Free. Website: www.cfmgs.org.

If you have any questions, please e-mail or call me at 407-816-1229. Thank you.

Betty Sumner, Secretary
Central Florida Mineral & Gem Society, Inc.

NOTICE: ANNUAL DUES ARE DUE $20/year, per household

Happenings!!!

Horse Creek walk in trip on Sat Feb 11
SWFFS auction Feb 11
FCOLC February meeting Feb 16
FCOLC Fossil Fest Feb. 18
Tampa Bay fossil fest March 11 and 12
FCOLC elections and annual fossil auction March 16
Cape Coral Burrowing Owl fest Feb 25
CC fossil show April 1
Venice Shark tooth Festival April 7-8-9

PEACE RIVER STATE FOREST

A RECENT ACQUISITION BY THE STATE AND DESIGNATION AS STATE FOREST HAS PUT ABOUT 8 MILES OF THE PEACE RIVER AND HORSE CREEK OFF LIMITS TO FOSSIL COLLECTING. YOU SHOULD CHECK OUT THESE LINKS AND READ AND FAMILARIZE YOURSELF WITH THESE BOUNDRIES SO YOU KNOW WHARE IT IS.

Peace River State Forest--Links:

http://www.heraldtribune.com/news/20141227/preservation-potential-on-the-peace-river

http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Our-Forests/State-Forests/Peace-River-State-Forest

Websites & Locations of Interest

Fossil Club of Lee County: www.fcolc.com

FCOLC Fossil Club of Lee County, Inc. c/o AL GOVIN
TREASURER
3584 MIDDLETOWN ST. PORT CHARLOTTE, FLORIDA 33952

The FCOLC website is a source for links to Fossil websites of interest, archived monthly club newsletters, details on club meetings and officers.

Museum of Natural History @ Gainesville www.flmnh.ufl.edu/

The Fossil Project www.myFOSSIL.org

Randell Research Center PO Box 608, Pineland, FL www.flmnh.ufl.edu/RRC/

Smithsonian Natural History Museum www.mnh.si.edu

Southwest Florida Museum of History 2031 Jackson St., Fort Myers www.MUSEUMofHISTORY.org

The Bailey-Matthews Shell Museum, 3075 Sanibel-Captiva Rd, Sanibel, FL www.shellmuseum.org

Cracker Museum at Pioneer Park in Zolfo Springs, FL Tel 863.735.0119
www.hardeecounty.net/crackertrailmuseum/about.html

Cape Coral Friends of Wildlife Burrowing Owls
www.ccfriendsofwildlife.org

Calusa Nature Center and Planetarium 3450 Ortiz Av, Fort Myers Tel 239-275-3435
www.calusanature.org

Imaginarium 2000 Cranford Ave, Fort Myers
www.i-sci.org

Florida Fossil Clubs
Southwest Florida Fossil Club
www.southwestfloridafossilclub.com
Tampa Bay Fossil Club
www.tampabayfossilclub.com
Orlando Fossil Club
www.floridafossilhunters.com
The Fossil Forum
www.thefossilforum.com/index.php
Fossil Treasures of Florida
www.fossil-treasures-of-florida.com
Florida Paleontological Society
http://floridapaleosociety.com/

Collecting Vertebrate Fossils on Florida state lands ***requires*** a permit. A fossil hunting permit is also part of being an ethical Florida fossil hunter.
Florida Vertebrate **Fossil Permit** http://flmnh.ufl.edu/natsci/vertpaleo/vppermit.htm

Peace River Water Levels
http://waterdata.usgs.gov/fl/nwis/rt

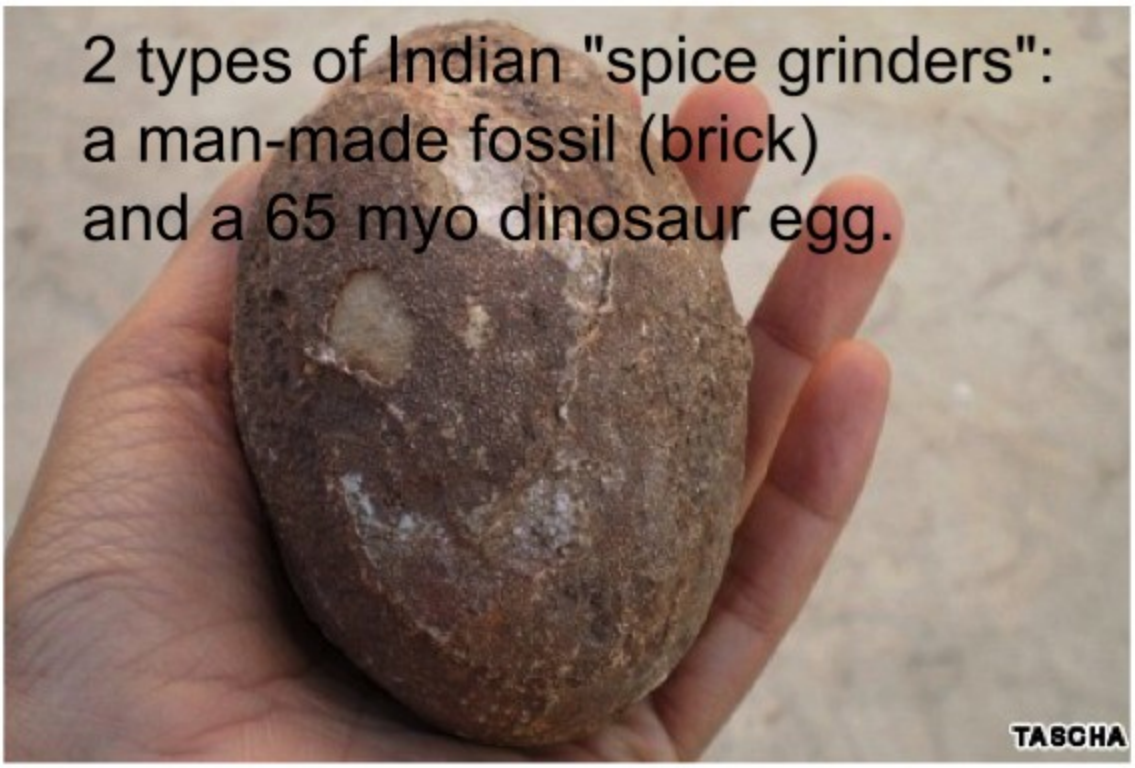
Picking Up Isolated Native American Artifacts www.flheritage.com/news/faq.cfm

Aimeee's Corner!!

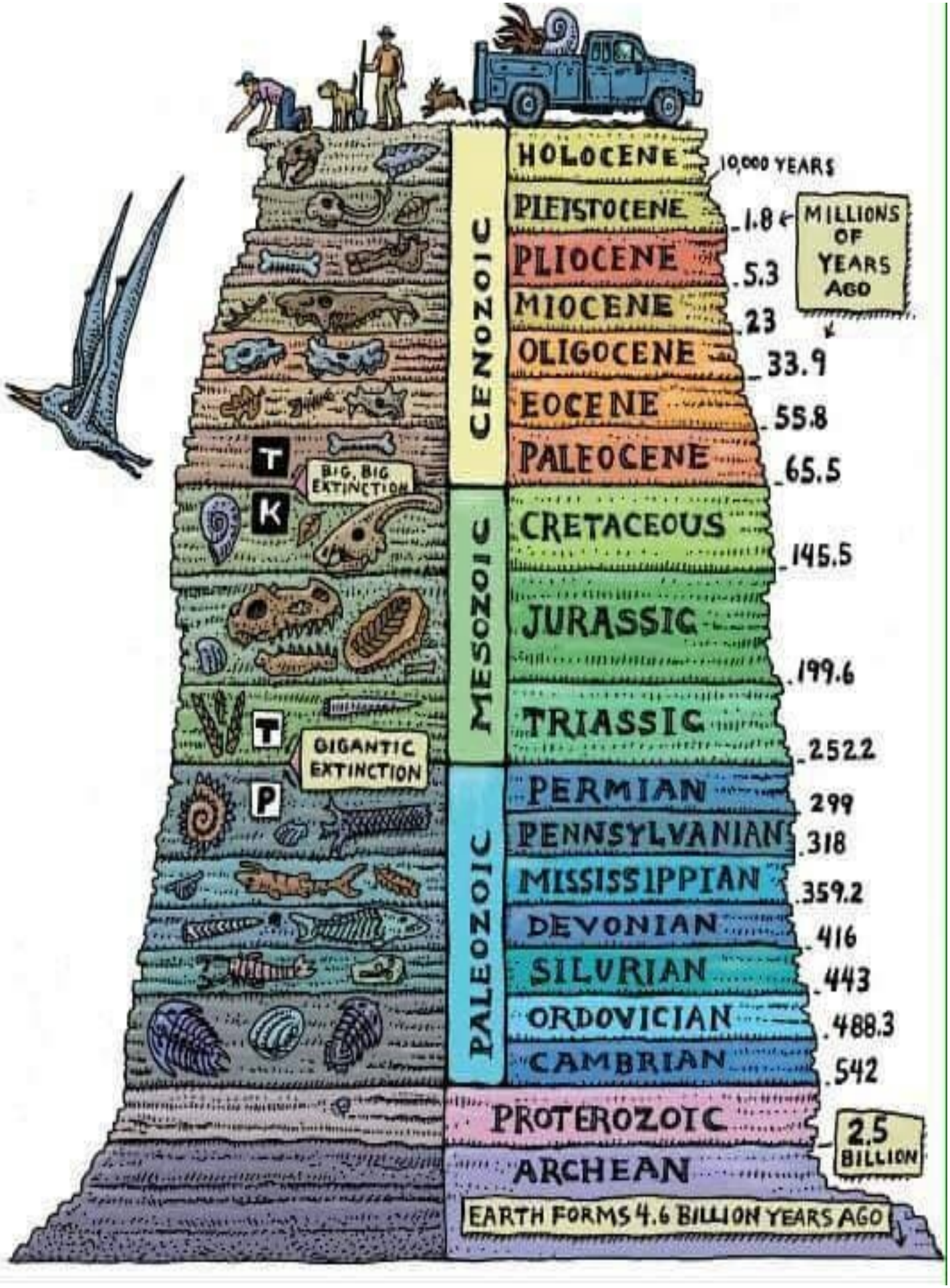
Fossils in India

I recently took a trip to India and before I went, I was asked the same questions several times: Are there any fossils in India? Are you going fossil hunting in India? Fossils can be found all over the world, even in Antarctica. The best hunting grounds for dinosaur fossils in particular are the high deserts and badlands of North America, China, and Argentina but that's mainly because the current desert environments in those areas make it easy to access the bones. There's plenty of fossils in India, including dinosaurs. Balasinor, India has the distinct honor of being home to Rajasaurus narmadensis, the first species of dinosaur unique to that country. Rajasaurus was a therapod living at the same time as T. Rex but in different ranges and is notable for its nasal frontal horn, unique among that genera. This area also produced a very rare fossil of a snake eating a dinosaur egg, one of the few examples of non-dinosaur predation on dinosaurs. But there's more! Researchers in Balasinor have uncovered fossils of about 1000 eggs belonging to at least 13 species of dinosaurs making it the third largest dinosaur hatchery in the world. I read that a researcher working in the area came across a village woman using a 65 million year old dinosaur egg to grind spices. Which leads me back to the second question I was asked before my trip: Are you going fossil hunting in India. The short answer was, "No." I'm as much of a fossil freak as the next fossil freak but there's so much to see and do in India and so little time to see and do it that roaming around foreign hinterlands hoping to stumble across a fossil didn't make my list. Even if I had found a fossil in India, the legalities of getting it home would be daunting if not impossible, unless I happened to find one of those antique spice grinders...No! Better to keep my fossil hunting close to home where I understand the language and most of the customs. Here's to 2017 in the good old U. S. of A.

Aimeee's Corner!!



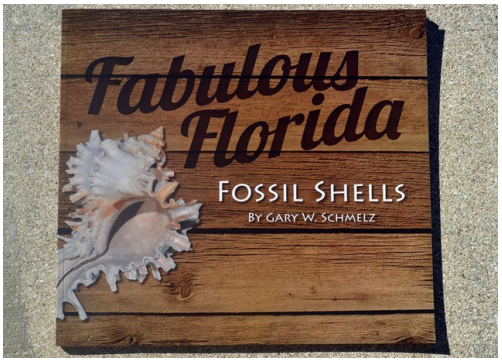
Aimeee's Corner!!

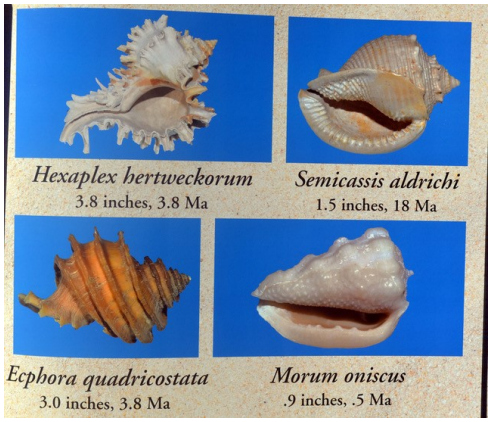

HOLOCENE
10,000 YEARS
PLEISTOCENE
1.8
PLIOCENE
5.3
MIOCENE
23
OLIGOCENE
33.9
EOCENE
55.8
PALEOCENE
65.5
CENOZOIC
MILLIONS OF YEARS AGO
T
K
BIG, BIG EXTINCTION
CRETACEOUS
145.5
JURASSIC
199.6
TRIASSIC
252.2
MESOZOIC
T
P
GIGANTIC EXTINCTION
PERMIAN
299
PENNSYLVANIAN
318
MISSISSIPPIAN
359.2
DEVONIAN
416
SILURIAN
443
ORDOVICIAN
488.3
CAMBRIAN
542
PALEOZOIC
PROTEROZOIC
2.5 BILLION
ARCHEAN
EARTH FORMS 4.6 BILLION YEARS AGO

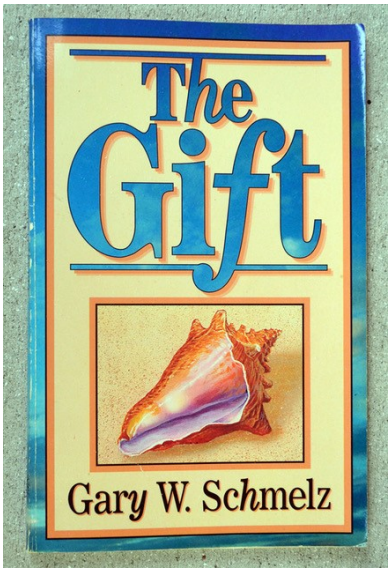
February Speaker

Professor Schmelz received his Ph.D. in biology from the University of Delaware. He is the former Director of the Big Cypress Nature Center and Director of Education for the Conservancy of Southwest Florida. While working at the Nature Center and Conservancy, he developed, among other things, environmental science classes for Collier County 3^{d} , 4th, and 7th grade children, a national environmental education training program for teachers, established a wild animal rehabilitation center, and supervised the Conservancy's sea turtle nesting program. For his accomplishments in the field of environmental education, he received the Elsie M. B. Naumburg Award as the leading environmental educator in the United States in 1985. In 2007 Dr. Schmelz received the Howard Converse Award for his outstanding contributions to Florida Paleontology.

Dr. Schmelz has written dozens of natural history articles for Gulfshore Life Magazine. Currently, Dr. Schmelz is a Field Research Associate with the University of Florida where his main investigative interests are in the area of paleomalocology. To date, he has described 35 new species of fossil marine mollusks. His most recent scientific writings have appeared in *The Nautilus*. Other accomplishments include the publication of *The Gift,* a young adult novel, assisted with the establishment of the Marjory Stoneman Douglas Nature Center on Key Biscayne, and published two books on Native Wildflowers of Southwest Florida. More recently he has co-authored a booklet on Mollusca of the Florida Shoal River Formation and has just finished his latest book Fabulous Florida Fossil Shells which will be on sale at the end of the meeting Dr. Schmelz is the past President of the Bailey-Matthews Shell Museum on Sanibel Island, Florida and was a former professor at Florida Southwestern State College where he taught marine biology, oceanography, ecology, and biology.





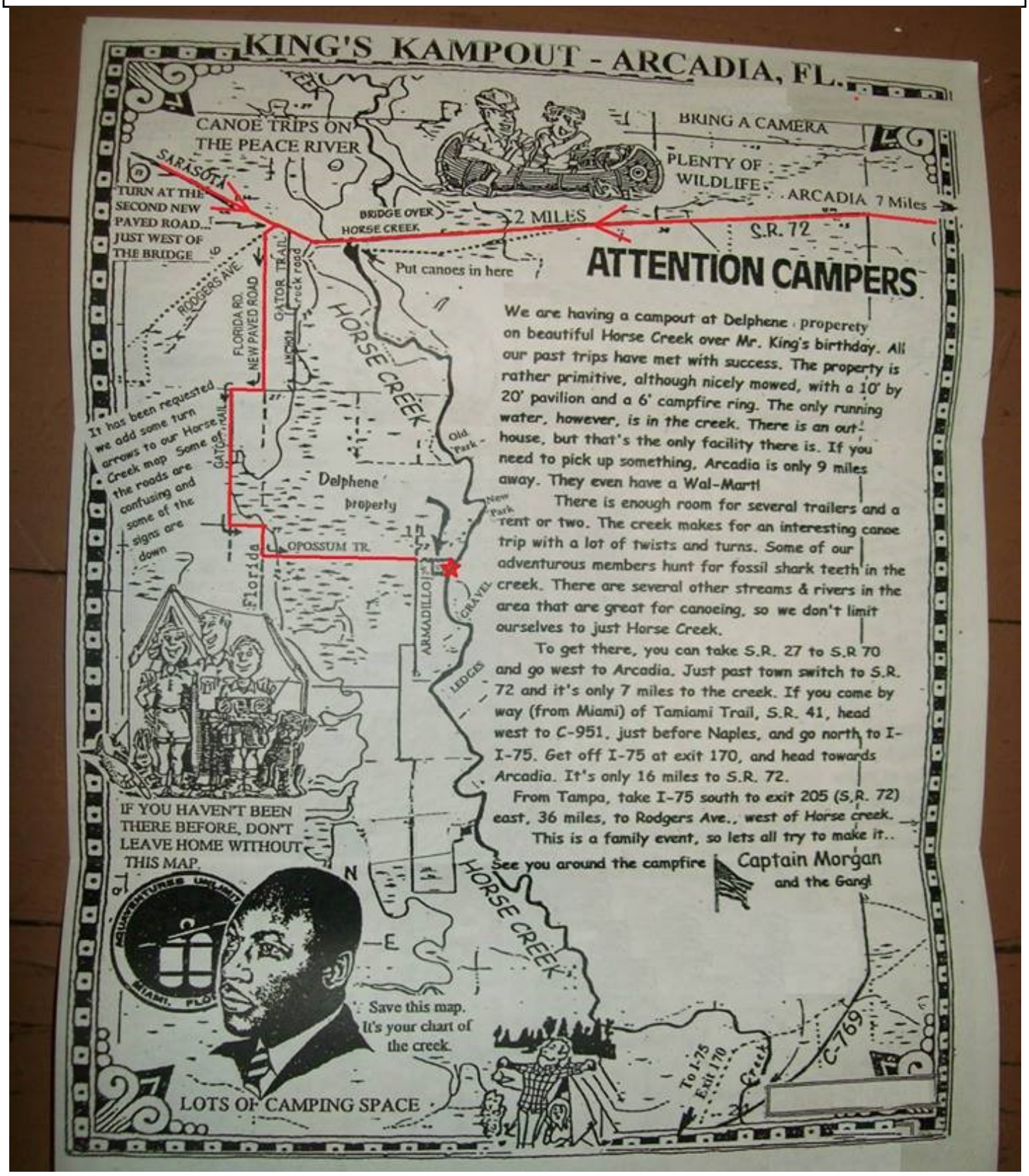


Marc Cantos picture of the recent club canoe trip.

Marc Cantos picture of AMY on the recent FCOLC canoe trip! LOTS of digging!!

FCOLC Fossil Hunt on Horse Creek!

Saturday. Feb. 11th, 9am to 4pm, followed by the SWFFC Auction/viewing at 430 118 Sullivan St. in Punta Gorda. $10.00 pp for those not members of the AquaVentures scuba club. This helps with maintenance expenses.



Giant Megalodon Shark Teeth May Have Inspired Mayan Monster Myths

By Tom Metcalfe, Live Science Contributor | December 14, 2016 07:15am ET

The fossilized giant teeth of extinct megalodon sharks have also been found in sacred caches buried at several ancient Maya sites.

Credit: Sarah Newman

Giant fossilized teeth from extinct megalodon sharks may have inspired portrayals of a primordial sea monster in Mesoamerican creation myths, according to a new study of the concepts of sharks in ancient Mayan society.

The study looked at how the Maya combined a practical, prescientific knowledge of sharks with their traditional understanding of the world around them as the creation of gods and monsters.

In the research paper, titled "Sharks in the Jungle: real and imagined sea monsters of the Maya," published online Nov. 21 in the journal Antiquity, Sarah Newman, an archaeologist at James Madison University in Harrisonburg, Virginia, wrote that fossilized teeth from the extinct shark species *Carcharodon megalodon* were used in sacred offerings at several ancient Mayan sites, such as Palenque in southern Mexico, where archaeologists have found 13 megalodon teeth. [See Photos of Megalodon Sharks and How They Inspired Mayan Myths]

Giant megalodon sharks were apex predators of the world's oceans from around 23 million years ago until 2.6 million years ago. Their teeth, jaws and vertebrae have been found at many sites in Central America.

Newman said ancient Mayan depictions of a sea monster named "Sipak" — also known as Cipactli(which translates to "Spiny One")to the Aztecs of central Mexico — have a single giant tooth that bears a strong resemblance to the fossilized megalodon teeth from sacred offerings found at Mayan sites.

"Mayan iconography is notoriously difficult to piece out, but you can see [the monster] is a fairly realistic representation of a shark with a bifurcated tail, and it has jagged jaws — but it does have that one central tooth," Newman told Live Science. "And the tooth has the same mark on it that the Maya used to indicate materials like jade — so it's telling you that it's hard and shiny, the way that a fossil would be also."

Sea monster myths

In some Mayan creation myths, the shark-like sea monster Sipak is killed by a god or mythical hero who forms the land from its carcass, Newman said. The motif of a single giant tooth also appears in portrayals of other Mayan gods, including a depiction of the sun god at El Zotz, in the Mayan heartlands of the Petén Basin, now in northern Guatemala.

The Mayan word for sharks and other fearsome sea monsters, "xook," was also adopted by several Mayan kings and queens — for example, Yax Ehb Xook ("First Step Shark"), the first-century founder of the city of Tikal in Petén, and Ix K'abal Xook ("Lady Shark Fin"), an eighth-century queen of Yaxchilan, now in Mexico's Chiapas state, Newman said.

Newman started her study of the Mayan concepts of sharks after analyzing a cache of sacred objects, including 47 teeth from a requiem shark (a family that includes spinner and blacktip sharks) that were buried inside two "lip-to-lip" ceramic bowls used as an offering at a Mayan pyramid at El Zotz between A.D. 725 and 800.

Marine items such as shark teeth, seashells, stingray spines and coral were often used to represent the oceans of the world in a ceremonial model of the Mayan cosmos within the offering bowls, Newman said.

"There's an understanding that a kind of microcosm is recreated in those enclosed spaces, so they're often put in along the center lines of temples and houses, to imbue those spaces with vitality," she said.

After noticing that the cache contained only the serrated upper teeth of what was probably a single requiem shark, Newman started to wonder how and why the shark remains had been transported or traded from the coast into inland Mayan cities such as El Zotz. "And then I started thinking about how those people in the interior would have made sense of these things that are coming in from the coast, which they might not have seen themselves," she said. [Image Gallery: Ancient Monsters of the Sea]

Ancient shark science

For the ancient Maya of the Yucatan Peninsula, with oceans on three sides, "the sea marked the limits of the land in all directions, a fabled home to supernatural deities and energies," Newman wrote in the study. "Sharks were associated with blood, pain and danger worthy of consideration and depiction, but from a safe distance."

The Mayan concept of the "xook" sea monster was the result of prescientific efforts to explain their practical knowledge about sharks in terms of their established cultural understandings of the world around them, Newman said.

"The argument in the paper is that the Maya are doing a version of our own ideas about natural history, where they are combining physical evidence that they find with myths that they also [regard as] true, and making sense of the world that way," she said.

Newman's research also examines the extent to which shark remains and cultural concepts about sharks were shared over a large area of ancient Mesoamerica for many centuries.

"One of the things that this study and other recent studies show is that they're trading things back and forth, and that there's a lot of interaction going on across long distances," she said. "So now we're getting a really good picture of just how connected people were — much more mobile and connected than I think we tend to assume."

Original article on Live Science

FOSSIL COLLECTING!!

Don't toss your fossils back in the river!! Flip it!!

When filling your screen, try not to put too much gravel in it. That makes it hard to see and pick out the fossils. And--when wet, many flat surfaces look alike. These are some examples of how easy it can be if not careful, see a flat sided piece of bone or turtle shell and discard it. **DO THE FLIP!! ALWAYS!!** Before tossing the screen contents, work it all to one side and flip it over. SEVERAL times!! YES, I know, you're real good and never miss anything. Sure. **NOT**!! Do the flip! Go ahead-prove me wrong that you never miss anything!!
Giant armadillo skutes look like turtle, as does some Glyptodont, gator skutes, flat Tortoise spurs, Thorny skate skutes, ray dermal spines, as well as some other choice fossils! Even a horse hoof core can look like nothing, wet and mixed in with too much gravel. TAKE your time! You traveled to the river, traveled to your spot, dug the gravel, washed it--so take your time looking through the screen! And--DO THE FLIP!
Also--you can ALWAYS throw it away! If in doubt-keep it. Bring it in to a meeting and we will ID it for you.
Good luck!
Louis

2 1/2" Mako tooth-recent find. Horse Creek.

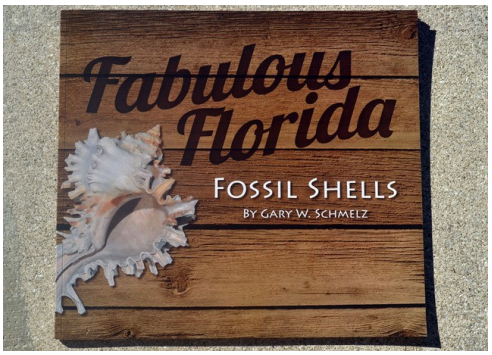
Recent finds from a hunt at Horse Creek. This is some of the material collected, along with some mangrove wood, Giant Tortoise, Ghost shrimp burrows, etc.. My best find this day was the perfect rooted bear tooth! And the 2 1/2" Mako tooth was also a thrill to see in the screen!

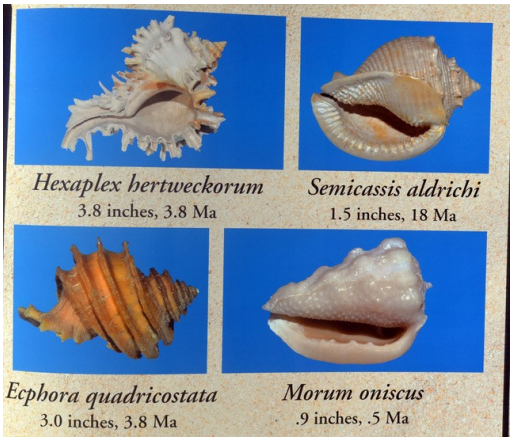
Close-ups of my recent bear tooth find

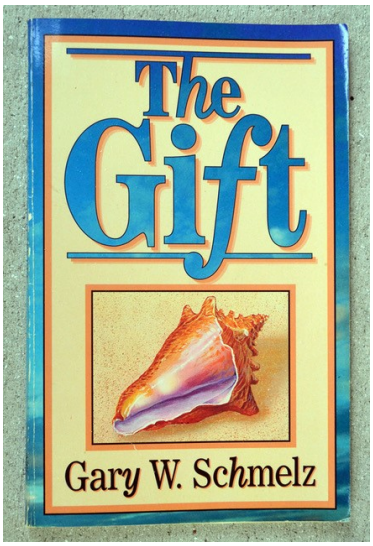
February Speaker

Professor Schmelz received his Ph.D. in biology from the University of Delaware. He is the former Director of the Big Cypress Nature Center and Director of Education for the Conservancy of Southwest Florida. While working at the Nature Center and Conservancy, he developed, among other things, environmental science classes for Collier County 3^{d} , 4th, and 7th grade children, a national environmental education training program for teachers, established a wild animal rehabilitation center, and supervised the Conservancy's sea turtle nesting program. For his accomplishments in the field of environmental education, he received the Elsie M. B. Naumburg Award as the leading environmental educator in the United States in 1985. In 2007 Dr. Schmelz received the Howard Converse Award for his outstanding contributions to Florida Paleontology.

Dr. Schmelz has written dozens of natural history articles for Gulfshore Life Magazine. Currently, Dr. Schmelz is a Field Research Associate with the University of Florida where his main investigative interests are in the area of paleomalocology. To date, he has described 35 new species of fossil marine mollusks. His most recent scientific writings have appeared in *The Nautilus*. Other accomplishments include the publication of *The Gift,* a young adult novel, assisted with the establishment of the Marjory Stoneman Douglas Nature Center on Key Biscayne, and published two books on Native Wildflowers of Southwest Florida. More recently he has co-authored a booklet on Mollusca of the Florida Shoal River Formation and has just finished his latest book Fabulous Florida Fossil Shells which will be on sale at the end of the meeting Dr. Schmelz is the past President of the Bailey-Matthews Shell Museum on Sanibel Island, Florida and was a former professor at Florida Southwestern State College where he taught marine biology, oceanography, ecology, and biology.







Cool invite from the Tampa bay club!!

TYRANASUARUS REX HUNTER & STAR OF

PETER LARSON

OF THE BLACK HILLS INSTITUTE OF GEOLOGY

WHEN
March 4th, 2017
7:30pm - 9:30pm

WHERE
Tampa Bay Fossil Club
University of South Florida
Cooper Hall, CPR103
4202 E. Fowler Ave.
Tampa, Florida 33620

WWW.TAMPABAYFOSSILCLUB.COM

ALL AGES EVENT

TICKETS
FREE TO THE PUBLIC
NO RESERVATIONS REQUIRED

SPONSORS
Tampa Bay Fossil Club
University of South Florida

Larson founded what eventually became the **Black Hills Institute** in 1974. In 1990 he led the excavation of the ***T. rex*** skeleton later named **"Sue"**. Larson has written and co-authored numerous publications on dinosaurs, has excavated more *T. rex* skeletons than any other paleontologist in history, and his organization's work on excavation and preparation of fossils has been recognized by paleontologists for its quality. He was one of the first to work with *T. rex* bone pathologies, has worked to uncover sexual dimorphism in the chevron length of *T. rex*, and argues that the controversial tyrannosaurid ***Nanotyrannus*** is not a juvenile *T. rex*, as some claim.

In 1992, Larson's team helped to discover the second largest ***T. rex*** **Stan**. Larson, with other paleontologists edited the scholarly text *Tyrannosaurus Rex, the Tyrant King*. He is coauthor of the book *Rex Appeal*, which relates the story of how the U.S. Government took possession of the "Sue" *T. rex* skeleton following its excavation, and *Bones Rock!*, a children's book about the history of paleontology and requirements on how to become a paleontologist.

In 2013 Larson and colleagues began excavating at a site located in **Wyoming**, US containing the remnants of three nearly complete skeletons of *Triceratops*.

From Randall research center:

Dear Members and Randell Research Center Supporters,

We are honored to announce the publishing of *A Tour of the Islands of Pine Island Sound, Florida: Their Geology, Archaeology and History* by Denege Patterson and to invite you to attend an Author Talk and book signing on February 18 or 25. The talks will be held in the Classroom at the Calusa Heritage Trail, 13810 Waterfront Drive at 9:30, 11:00 and 2 p.m. on both dates. We request an RSVP if possible by calling 239-283-2062 or emailinglheffner@ufl.edu . Below is the news release we are sending to local media outlets. Please feel free to invite guests and to spread the word to your friends and contacts. This is a remarkable book for anyone interested in our area's past and all proceeds from the book sale benefit the endowment of Randell Research Center.

Best Regards,
Cindy Bear

For Immediate Release
February 8, 2017

Contact: Cindy Bear, Coordinator Programs and Services
239-283-6168 or clbear@ufl.edu

Author Talks Featured as New Book Released

Chances are, you have heard about, visited, flown over, floated past, fished around, or walked on a beach of one of the islands of Pine Island Sound. The island names may conjure memories, Useppa, Patricio, Cayo Costa, Cabbage Key, Josslyn, or others but their stories may be mysteries shrouded by mangroves. Now, a new book, the first ever of its kind, takes the reader on a tour of the islands revealing the geology, archaeology and history of 24 islands of Pine Island Sound.

The release of *A Tour of the Islands of Pine Island Sound, Florida: Their Geology, Archaeology, and History,* by Denege Patterson was announced today by the Randell Research Center (RRC). The release will be marked by several author talks taking place on February 18 and 25 at the Calusa Heritage Trail of the RRC, 13810 Waterfront Drive. The Center requests RSVPs for the talks scheduled for 9:30, 11, and 2 p.m. RSVPs can be made by phoning 239-283-2062 or emailing lheffner@ufl.edu.

The 160 page, full-color book covers 24 islands of Pine Island Sound, which is part of the Greater Charlotte Harbor ecosystem. Photographer Ron Mayhew suspended himself from a helicopter to capture the spectacular aerial photographs of the islands featured prominently throughout the book. Pictorial sidebars describing animal life in the estuarine waters are highlighted and the geological maps of ancient beach ridges on the barrier islands show features still evident today. The historic fish houses of Pine Island Sound are depicted in photos and text.

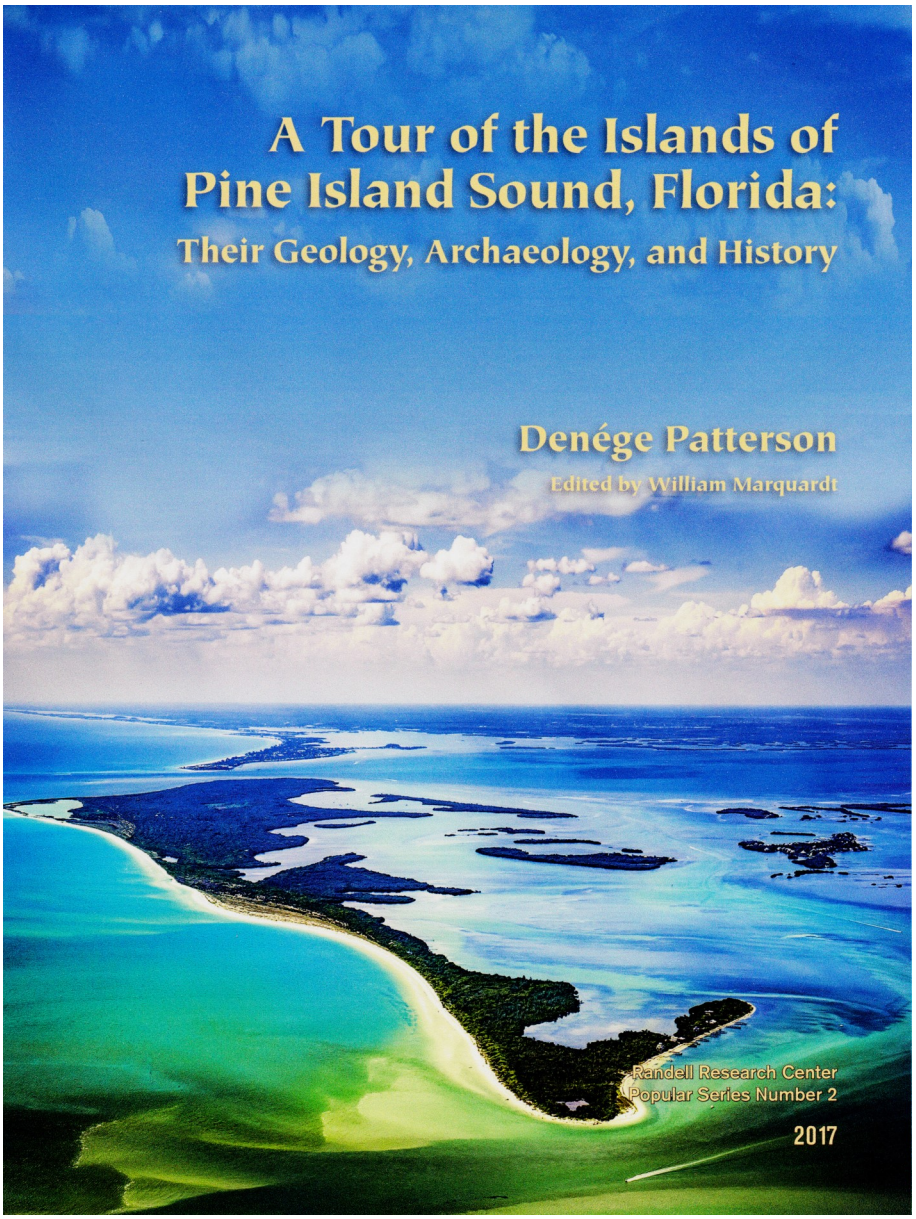
Archaeological sites exist on 21 of these islands, and a chapter describing the Calusa people has a story narrative with museum-quality, full-color illustrations depicting daily life. Color-coded maps help distinguish sanctuary islands from islands that can be visited.

Edited by Dr. William Marquardt, Curator of South Florida Archaeology and Ethnography, Director, Randell Research Center, Florida Museum of Natural History, and published by IAPS Press, University of Florida, the book is well researched and free of the half-truths often ascribed to the islands of the area. Instead, these

narratives of time and intrigue promise to be of interest to residents and visitors alike. Best-selling author Randy Wayne White noted: “I need this book!”

The book is available for sale at the bookstore of the Calusa Heritage Trail beginning on Monday, February 13 for $29.95. The book store is open 10 a.m. to 4 p.m. Monday through Saturday, closed on Sunday.

Attached: JPEG photograph of the Cover of *A Tour of the Islands of Pine Island Sound, Florida: Their Geology, Archaeology, and History,* by Denege Patterson.



From the book cover: ***Imagine a coastal paradise*** *— a vast body of blue-green water teeming with bountiful undersea plant life and rich with fish of many kinds. Pelicans glide silently overhead, dolphins leap from the sea, gentle manatees stir the waters. Now imagine that these almost-magical waters are dotted with dozens of islands,* some *miles long, some tiny, some with evidence of Indian people who lived here as long as 6,000 years ago. Some islands show evidence of more recent generations of fisherfolk and adventurers. Some islands hosted international intrigue, some were military outposts, others were sites of lucrative fishing operations, lush groves, and world-class tarpon fishing. But this place is not imaginary. It exists today, and it is called Pine Island Sound.*

Randell Research Center
http://www.flmnh.ufl.edu/rrc/

239-283-2062
The Randell Research Center (RRC) is a permanent facility dedicated to learning and teaching the archaeology, history, and ecology of Southwest Florida. Situated in the scenic community of Pineland on the western shore of historic Pine Island, the RRC encompasses more than 70 acres at the heart of the Pineland archaeological site, a massive shell mound site extending across more than 100 acres from the mangrove coastline. On the Calusa Heritage Trail, at 13810 Waterfront Drive, Pineland, visitors can tour this internationally significant site and learn about Calusa culture and their environment. The Trail meanders nearly a mile through the mounds, canals, and other features of the site. Signs along the footpath provide detailed information regarding the Calusa Indian people, the environment that sustained them, and the recent history of Southwest Florida.

FOSSIL SHARK TEETH IDENTIFICATION

This is a reprint of an email conversation I had with Dr. Gordon Hubbell, who is widely respected as one of the world's most knowledgeable experts on fossil sharks. I present this for information purposes, in case any of you have been curious.

-----Original Message-----
From: Stieffel <cape187@earthlink.net>
To: jawsint <jawsint@aol.com>
Sent: Wed, Sep 24, 2014 8:05 pm
Subject: Shark teeth evolution and ID
Gordon,

Louis Stieffel here, from the Fossil Club of Lee County. I have a tough fossil shark tooth issue and you are the only person I know that can answer it.

I have confusion over the different species names being bandied about over the transition from the mackerel sharks, Odotus, to the Megalodon. Especially the Auriculatis, Angustidens and Chubentensis.
I think the first two are basically the same shark and the Chubentensis and Meg are also the same. With some transition between the two groups from cusped to non-cusped. Yet I consistently see shark teeth on online fossil sites being called all sorts of names yet looking the same. There are lots of wild ideas out there, but most of it is pure guessing by folks who have done no real studying or research into these different species. I looked at all my fossil books containing shark teeth and am still perplexed

If you could, when you have a few moments, please help me sort this out? I try to help club members, but without knowing myself, I can't do it. Or, refer me to material I can delve into myself? Either way, I greatly thank you for your time. And your hard earned knowledge.

Respectfully,

Louis Stieffel
President
Fossil Club of Lee County

Louis,

That is a tough issue. There are many different opinions on this topic. There are several problems when dealing with the study of fossil shark evolution:

1. We only have teeth to evaluate and no soft body parts or skeletons.
2. Deformed teeth are not uncommon adding to the difficulty in identifying shark fossils.
3. A shark species exists for so much longer than a typical mammal species (Mammal species - 1 million years; shark species - 10 million years +) and the rate of change is so slow that it is difficult to say when one species ends and the next begins. A single shark species can therefore span several geological time periods.
4. We have different scientists in different countries giving the same species different names.
5. In some species the teeth change shape as the shark grows.
6. In some species (Lamnid sharks) the embryos are growing and shedding teeth in utero and these many times have a different shape than the adult tooth form.
7. Then you always have the added problem that commercial dealers would tend to use as many different identifications as possible because that presents more different species, and thus more sales.

So I haven't answered your question, but I don't know if there is a good answer. So we have:
Carcharocles aksuaticus - first speared 51 million years ago
" auriculatus - 50 million years ago
" poseidoni - 38 million years ago
" sokolovi - 34 million years ago
" angustidens - 30 million years ago
" chubutensis - 25 million years ago
" megalodon - 17 million years ago until about 2 million years ago.

This would take into account all of the known species. But I agree with you that C. auriculatus covers many of the listed species from C. aksuaticus through sokolovi and perhaps even C. angustidens. C. chubutensis is very similar to Meg except that meg got considerably larger. But, then some Megs have lateral cusplets too, and some Chubutensis don't have any cusplets.

Then to further confuse the issue the European scientists have changed the scientific names on all of the megatoothed sharks. Thus Carcharocles has been changed to Otodus except for Meg, and it is now Megaselachus megalodon.

The identification of fossil sharks is not a perfect science. It makes for a lot of disagreement, a lot of speculation, a lot of scientific papers presenting new theories and identifications, and a lot of fun watching all of this unfold.

Sorry that I cannot give you a more definitive answer, but I think that basically you have the right approach to this problem.

Gordon

Is It Possible to Clone a Dinosaur?

By Laura Geggel, Senior Writer | April 28, 2016 10:02am ET

Are you sure you want to clone a *T. rex*?
Credit: releon8211 / Shutterstock.com

Apologies to people keen on reviving extinct dinosaurs, but researchers have never recovered dinosaur DNA, which is necessary for cloning. But, intriguingly, they have found fragments of mystery DNA in dinosaur bone, experts told Live Science.

It's unknown whether this DNA is dinosaurian, or whether it belongs to other life-forms, such as microbes; nondinosaurian animals, such as earthworms; or even paleontologists who have worked with these fossils.

"I've found DNA in dinosaur bone," said Mary Schweitzer, a molecular paleontologist at North Carolina State University. "But we did not sequence it — we couldn't recover it, [and] we couldn't characterize it. Whoever it belongs to is a mystery." [6 Extinct Animals That Could Be Resurrected]

It's no surprise that dinosaur remains contain DNA, she said. Bone is partly made up of a mineral called hydroxyapatite, which has a strong affinity for certain biomolecules, including DNA. In fact, researchers often use hydroxyapatite to purify and concentrate DNA in the lab, Schweitzer said.

"That's one of the reasons that I don't work with DNA myself," Schweitzer told Live Science. "It is too prone to contamination and really difficult to interpret."

Instead, Schweitzer analyzes dinosaur fossils for soft tissue, such as the blood vessels that she and her colleagues found in an 80-million-year-old duck-billed dinosaur. But she has still pondered the steps needed to clone an extinct dinosaur. Here is the science it would take to create an actual "Jurassic Park" dinosaur, according to molecular experts.

How long can DNA survive?

Scientists need DNA to clone dinosaurs, but an organism's DNA starts decaying the moment after that organism dies.

That's because enzymes (from soil microbes, body cells and gut cells) degrade DNA. So does UV radiation. What's more, oxygen and water can chemically alter DNA, causing the strands to break, said Beth Shapiro, an associate professor in the Department of Ecology and Evolutionary Biology at the University of California, Santa Cruz.

"All of these things will break down the DNA into smaller and more degraded pieces, until eventually, there is nothing left," Shapiro told Live Science.

If any DNA from the Mesozoic period has miraculously survived, then it would likely be fragmented and badly damaged, making it unsuitable for use in cloning dinosaurs.

Credit: Creations Shutterstock.com

The oldest recovered and authenticated DNA from bone belongs to a 700,000-year-old horse from the frozen Klondike gold fields in Yukon, Canada, said Shapiro, who co-wrote a 2013 study on it in the journal Nature.

Still, it's unclear just how long DNA can survive.

Scientists have proposed that DNA can survive as long as a million years, but definitely not more than 5 million or 6 million years, Schweitzer said. That's woefully short of 65 million years ago, when the asteroid slammed into Earth and killed the nonavian dinosaurs.

However, more experiments are needed to determine how long, and in what conditions, DNA can survive, Schweitzer said.

Moreover, don't expect a "Jurassic Park" twist to work. In the 1993 blockbuster, scientists find dinosaur DNA in an ancient mosquito caught in amber. But amber, it turns out, does not preserve DNA well. Researchers tried to extract DNA from two stingless bees preserved in copal, a precursor of amber, in a 2013 study published in the journal PLOS ONE.

The researchers couldn't find any "convincing evidence for the preservation of ancient DNA" in either of the two copal samples they studied, and they concluded that "DNA is not preserved in this type of material," they wrote in the study.

They added, "Our results raise further doubts about claims of DNA extraction from fossil insects in amber, many millions of years older than copal." [What If a Giant Asteroid Had Not Wiped Out the Dinosaurs?]

Dinosaur DNA?

If researchers choose to study the DNA lurking in dinosaur bone, it will be difficult to say whether it was dinosaurian in nature, the experts said.

"The DNA fragments that were recovered from that horse bone were short (on average 40-ish letters long) and showed characteristic signs of postmortem damage," Shapiro told Live Science in an email. "But they could be mapped to the genome of a modern horse, and so we know that they were of horse origin."

In contrast, the dinosaurs' living relatives are birds. But birds evolved out of the theropod line — a group of bipedal, largely carnivorous dinosaurs such as *Tyrannosaurus rex* and *Velociraptor*. Other dinosaur groups — including the hadrosaurs (the duck-billed dinosaurs), the ceratopsians (such as *Triceratops*), the stegosaurs and the ankylosaurs — do not have living relatives.

In addition, any surviving dinosaur DNA will be highly fragmented and badly damaged.

"Here is a key problem with dinosaur DNA," Shapiro said. "I would then have to ask, 'Is this dinosaur DNA, or microbial DNA that got into the dinosaur bone while it was buried in the soil?'"

Cloning adventures

For the sake of argument, let's say that researchers found fully sequenced dinosaur DNA. This means that researchers would have an entire genome, including the so-called junk DNA and the viral DNA that's incorporated itself into the dinosaur's genetic code. This viral DNA could be a problem, especially if it could infect modern plants and animals, Schweitzer said.

It would take about 5,000 *Velociraptors* (or any dinosaur species, for that matter) to make a sustainable population with genetic diversity.
Credit: Todd Marshall

Next, they'd have to find a host organism to help clone the beast. That would likely be a bird. But a mother bird is a far cry from a mother dinosaur, Schweitzer said.

"There's more to developing a vertebrate organism than just what its DNA says," she said. "A lot of the timing is dictated by genes and proteins that the mother produces during development. How is it going to get the developmental signals that it needs?"

Again, let's say that, somehow, the host mother was able to give birth to this creature. The resulting offspring would be a half-bird, half-dinosaur creation, Schweitzer said. But could this animal survive in today's climate?

"Its genes and proteins survived in a very different world," she said. "The carbon dioxide content in the atmosphere was different; the oxygen content was different; the temperatures were different — how is it going to function [in the modern environment]?" [How Do Dinosaurs Get Their Names?]

Moreover, the creature's digestive enzymes might not work on modern animals and plants, and it wouldn't have Mesozoic microbes, which it likely would need to digest and absorb nutrients, Schweitzer said.

"[Dinosaurs] were designed to break down dinosaur proteins," Schweitzer said. "Or [ancient] plants, if you want to bring a plant eater back, which I'd highly recommend."

It would be cruel to bring back just one dinosaur for our own amusement, she said. But it takes at least 5,000 animals to create a sustainable population with genetic diversity, Schweitzer said.

"How are you going to clone 5,000 *T. rexes*?" she asked. "And, if you could, where are you going to put them?"

There are so many problems researchers would have to overcome to clone a dinosaur, Schweitzer said. "Getting the DNA, which we have not done — that would be the easy part," she said.

Still, she plans to continue her studies on dinosaur bone. And though cloning might be a pie-in-the-sky idea, she still thinks about it from time to time.

"To be honest, I'd really like to see a *T. rex*," Schweitzer said. "It would be very cool."

Follow Laura Geggel on Twitter @LauraGeggel. Follow Live Science's Life's Little Mysteries @LLMysteries, Facebook & Google+.

Adorable Terror: Wolf-Size Otter Hunted in Ancient China

By Laura Geggel, Senior Writer | January 23, 2017 07:00am ET

A fearsome, wolf-size otter with a large head and a powerful jaw once swam around the shallow, swampy waters of ancient China, likely hunting for clams and other shellfish, a new study finds.

The 6.2-million-year-old beast is among the largest otter species on record, the researchers in the new study said. At 110 lbs. (50 kilograms), the animal would have been about twice the size of the modern-day South American giant river otter (*Pteronura brasiliensis*) and about four times the size of the Eurasian otter (*Lutra lutra*), the researchers said.

"This extinct otter is larger than all living otters," said study lead researcher Xiaoming Wang, a curator of vertebrate paleontology at the Natural History Museum of Los Angeles County in California. [See images of the fearsome wolf-size otter]

Researchers discovered the otter's remains in 2010, after a Chinese and U.S. field team found a nearly complete skull in Shuitangba quarry, located in southwestern China.

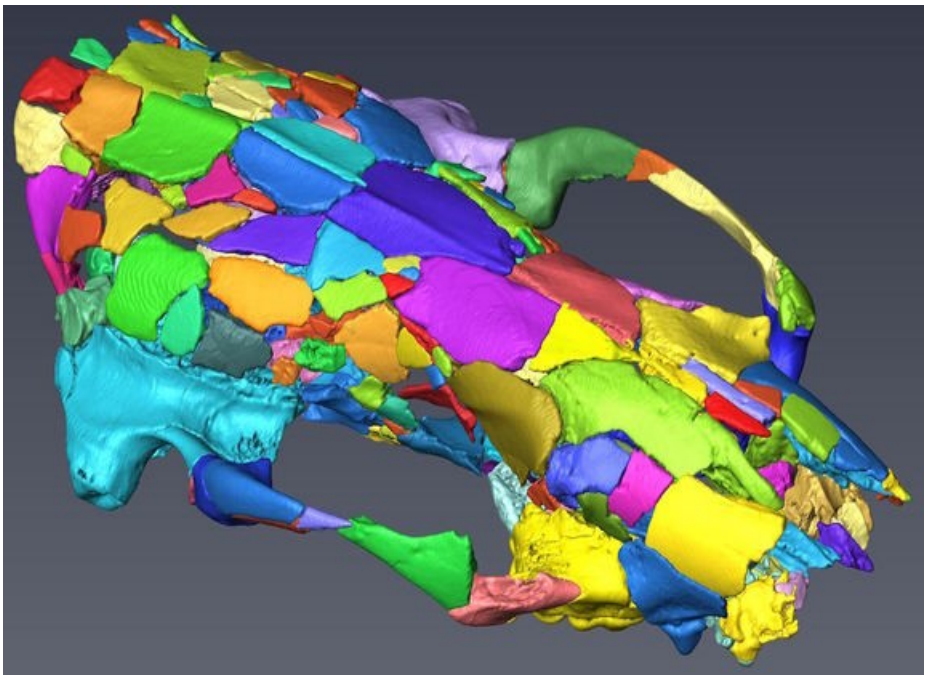
"The skull was unlike [that of] any other animals found so far, and that's when we realized that this is something unique and important," Wang told Live Science.

The wolf-size otter lived in a shallow swamp surrounded by thick vegetation.

Credit: Mauricio Antón

However, piecing the skull together was a challenging feat. "Because the skull was preserved in soft brown coal, it has been badly crushed into a pancake-like shape during the compaction of soft sediments," Wang said.

By using a computed tomography (CT) scanner, study co-author Stuart White, a professor emeritus of maxillofacial radiology at the University of California, Los Angeles, was able to digitally restore the skull's 3D shape. Wang compared the reconstruction to "playing a three-dimensional jigsaw puzzle, only to be done by computer mouse rather than by hands."



Because the skull was flattened like a pancake, researchers did a computed tomography (CT) scan of the fossil. Each color in this digital scan represents an individual fragment.
Credit: Stuart C. White

Later, in 2015, the researchers found more fossils in the quarry belonging to the same species; these finds included lower jaws, teeth and several limb bones, Wang said.

Obscure otter

A cranial analysis showed that while the skull of the newly discovered creature is like that of an otter, it has badger-like teeth, Wang said. This inspired the researchers to name the newfound species *Siamogale melilutra*, because "meles" is Latin for badger and "lutra" is Latin for otter, Wang said.

S. melilutra belongs to an "obscure group of extinct otter in East Asia [that] diverged early from the main otter lineage and formed a distinct group of its own," Wang said. Until now, researchers only knew about this lineage from fossilized teeth found in Thailand, the scientists said.

The skull is like that of an otter, but the teeth are like those of a badger.
Credit: Xiaoming Wang

Moreover, the new findings suggest that *S. melilutra* belongs to one of the oldest and most primitive otter lineages, one that goes back at least 18 million years, to the European, badger-like animal *Paralutra*, the researchers said.

It's unclear why *S. melilutra* was so big, the researchers said. Usually, when carnivores evolve to be large, it's so that they have the strength to subdue prey, Wang said.

"But in our fossil otter, it is more likely a mollusk eater, and its powerful skull and jaws may be designed to crack tough shells of clams," he said.

Wang noted that modern sea otters also crack mollusks. But in addition to using their powerful teeth, these modern species also use tools — that is, rocks — to smash open the shells. [10 Animals That Use Tools]

"Perhaps our fossil otter had not learned to use rocks, and instead [would] apply brute strength to crush hard shells," Wang said.

This question is just one of many that researchers have about *S. melilutra*, said study co-researcher Denise Su, a curator at the Cleveland Museum of Natural History.

"We are working to answer questions regarding its paleobiology, like, 'How did it swim? How did it move on the ground? Why is it so large?'"

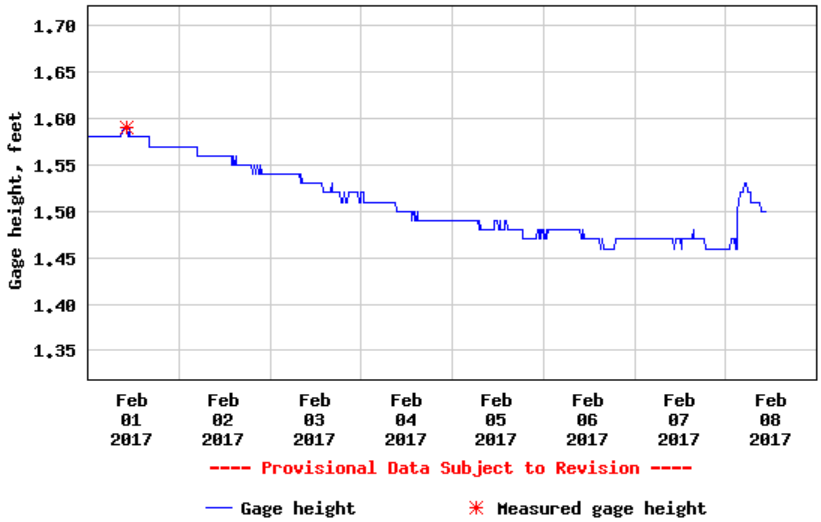
The study was published online today (Jan. 23) in the Journal of Systematic Paleontology.

Original article on Live Science.

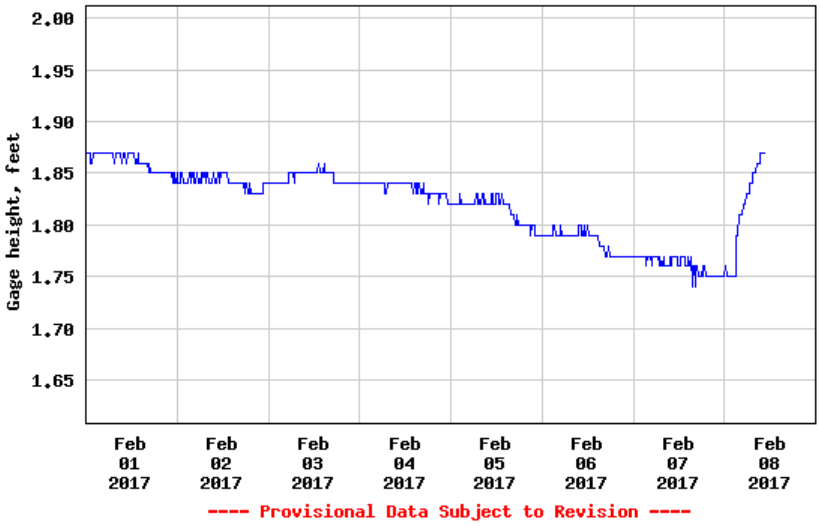
RIVER WATER LEVELS!!

It's low--go hunt!!

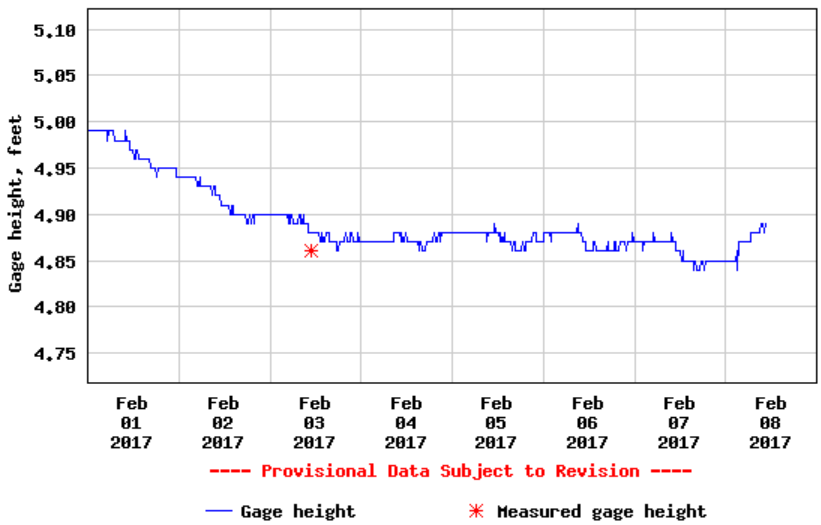
USGS 02296750 PEACE RIVER AT ARCADIA FL



USGS 02297310 HORSE CREEK NEAR ARCADIA FL



USGS 02295637 PEACE RIVER AT ZOLFO SPRINGS FL



FCOLC Fossil Festival

Our annual fossil festival will be held on February 18, again at the Shell Factory. This year we will be bigger, and even better, than last year! The festival enjoyed such success that the Shell factory requested us to expand from one large tent to two! Along with the fixed "carport" enclosures, this provides us with a lot of space to fill with vendors and club activities!

Mike Cox has volunteered to be the festival coordinator this year! He has been working hard at the planning necessary to put on such an event. He has vendors signed on, and club booths lined up and volunteer lists at the ready. A couple more pre-show planning meetings and he feels everything will be ready for another fun and successful festival!!

FCOLC volunteers will be needed. This is a fun way to spend your day! Support your club. It's a good thing that we are doing, as much of the proceeds are earmarked for scholarships, and community outreach. Please sign up at the next meeting as a volunteer.

The Shell Factory has been a terrific supporter of our club, and we ask that in turn you help support them. Events are always happening there, as well as their free museums (one is the "world famous" FOSSIL museum!). Between the Fish Bones restaurant, the Nature Park and the huge building filled with all sorts of things, you should plan on a visit soon.

Mike says to sign up to help and come and have fun!!

The FL Museum of Natural History is currently working at a large-scale, extensive excavation at the Montbrook fossil site.
The Hemphillian Montbrook Siteis about a 40-minute drive south of Gainesville, near the town of Williston in Levy County
.
The Montbrook Siteis very productive and almost all volunteers will find some fossil specimens on their first day.
The most commonly found fossils are bones from the shell of freshwater turtles and vertebrae, spines, scales, and skull bones of
fish, including gar, catfish, snook, and drum. Fossils of alligator, birds, and mammals are also found, but less frequently. For more information about the Montbrook fossil site, visit:
http://www.flmnh.ufl.edu/museum-voices/montbrook/

We will be working at the site from January 14 to May 21, 2017.
Work at the site will occur from Tuesdaythrough Sunday, with a few exceptions for some weeks. Volunteers from 15 to 17 years of age will be accepted but must be accompanied by an adult sibling (18+ years old), ora parent or guardian.
Otherwise, volunteers must be at least 18 years old
.
Volunteers must be physically fit enough to work outdoors for several hours and be able to walk up and down irregular slopes. Volunteers can work just a single day, a few days, or a regular schedule one or more
times a week. There is no limit to the number of times a volunteer can work at the site.

Fossil Identification

Fossils are not subjective. They are what they actually are, not what they MAY look like. It's very difficult sometimes to ID fossils, especially vertebrate fossils, from a picture. Or a book. It's one dimensional, and you're looking at a three dimensional object to compare. And you need to know some history of the fossils found in your area and the age it may be and the formation it was in to help positively ID. This can come from books. And, keep in mind that erosion and wear and millions of years of age make that fossil you found look different than the perfect ones pictured in books. 90+% of vertebrate fossils you find are partials. A complete one is an easy guess. But the broken, worn ones can be difficult to impossible to ID. Google can help, but you need to know WHAT to google, and even then, it's rarely an exact match so you may still not know. The BEST way to learn, and compare, is with REAL fossils. the best identifiers have found or seen or own many real, identified fossils to compare with. The best identifiers are the ones with the best comparable collection. Looking at your "search results" picture cannot show you the true look and feel of a matching fossil and you may never find an exact match to the picture. Go to museums, fossil shows, people's collections. Look and compare real fossils. Soon you will be able to tell a rock from a real fossil, and then start learning what that fossil really is from. Good luck.

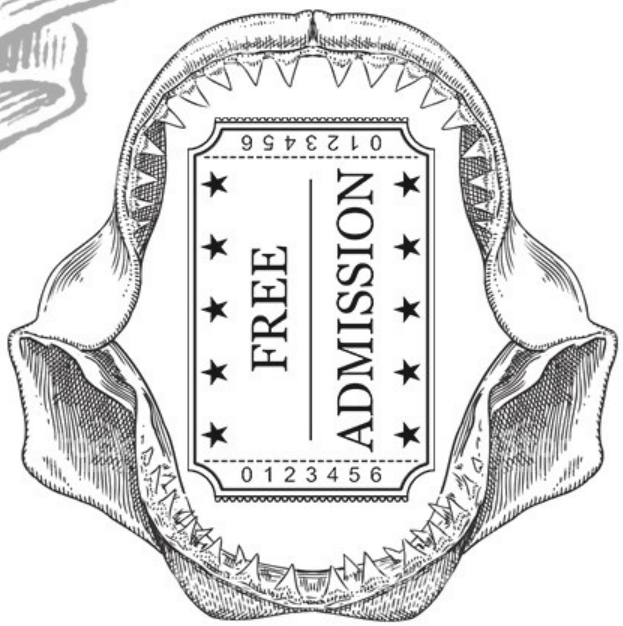
THE FOSSIL CLUB OF LEE COUNTY

PRESENTS

THE 12TH ANNUAL

FOSSIL FESTIVAL

WWW.FCOLC.COM



- Silent Auction
- Grand Prize Raffle
- Vendors and Fossil Dealers
- Kids Dig!
- Free Fossil museum & Exhibits
- Fun and Games for all, with Prizes!

FEBRUARY 18TH 2017 9AM-5PM

AT

THE WORLD FAMOUS SHELL FACTORY AND NATURE PARK

15th Annual

Burrowing Owl Festival

Saturday, February 25, 2017
10:00 a.m. – 4:00 p.m.
Rotary Park in Cape Coral

Celebrate the official city bird

- Mote Marine Mobile Lab
- Live Animals
- Free Butterfly House Tours
- Guided Owl Burrow Bus Tours
- Photographer's Bus Tour
  7:30am By RSVP only + Additional Fee
- Wildlife Presentations
- Nature & Wildlife Exhibitors & Vendors
- Owl Burrow Maintenance Demonstrations
- Owl Starter Burrow Demonstrations
- Student Wildlife Art Contest
- Silent Auction
- Tasty food & treats
- Butterfly Plants for sale and more!

Photo by Dan Tudor

www.ccfriendsofwildlife.org

$5 donation requested at the gate, FREE for children under 16.
All proceeds stay locally to help the owls and other wildlife of Cape Coral

Rotary Park Environmental Center
5505 Rose Garden Road
Cape Coral, FL 33914
WWW.CapeParks.com

CCFW
Cape Coral Friends of Wildlife

Cape Coral
FLORIDA
Parks & Recreation Department

FOSSIL FEST

TAMPABAYFOSSILCLUB.COM

PALEO WORKSHOPS

Learn about Florida's prehistoric past in a FossilFest workshop! Experienced collectors will teach you how to find, identify, and preserve fossil treasures of your very own! All workshops are free to FossilFest attendees!

Saturday & Sunday

Discovering Florida's Fossil Treasures with TBFC's own Dr. Bob Sinibaldi PhD. Learn where and how to find fossils of your own right here in Florida!

Florida's Fossil Vertebrates & the Fossil Hunting Permit with Dr. Richard Hulbert PhD of the Florida Museum of Natural History. It's cheap and easy! Learn how to get your fossil permit and participate in the science of paleontology.

The Perfect Plaster Jacket & Other Preservation Techniques with Bill Faucher. Learn how to successfully get fossils from the field to your lab. Jacketing, glues, and preservation techniques are discussed for the beginner.

Be a part of the adventure!
JOIN TBFC TODAY!
www.tampabayfossilclub.com

FLORIDA'S LARGEST PREHISTORIC SHOW!

FOSSILS & ARTIFACTS
GEMS - MINERALS - SHELLS
FOSSIL EXHIBITS - WORKSHOPS

KIDS GAMES * FOSSIL MINE * RAFFLES
DOOR PRIZES * SILENT AUCTIONS

Tampa Bay Fossil Club

Presents the 30th Annual
March 11th & 12th, 2017
Sat: 9AM–5PM, Sun: 10AM–4PM

Adults $8, Kids 12 and under FREE!

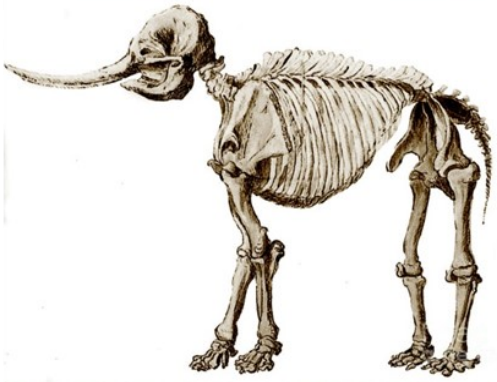
Florida State Fairgrounds
Intersection of I-4 & Hwy 301 just east of Tampa.

TAMPA BAY FOSSIL CLUB
FOSSIL FEST

FOSSIL SHOW

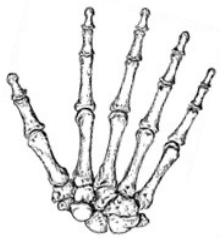
Saturday, April 1
10:00 a.m. – 3:00 p.m.

Come to Rotary Park Environmental Center to learn about Florida's pre-historic past and maybe take a piece home with you. Come to shop or talk with experienced fossil hunters to learn all about the fascinating fauna of Florida's prehistoric times. Something for everyone: fossils, gems, Calusa Indian art, children's activities and more!



Vendor spaces available!
Call for details and to reserve your space (239)549-4606

Cape Coral
FLORIDA
Parks & Recreation Department



Admission is just $3 at the door! (Under 10 FREE)

For more information contact: Rotary Park

5505 Rose Garden Road
Cape Coral, FL 33914
Phone: (239) 549-4606

E-mail: rotaryparkinfo@capecoral.net
www.CapeParks.com
https://www.facebook.com/CapeCoralParks