Fossil Club of Lee County

August 2016

Letter from the President

Last month we had a small problem with the newsletter, so I hope this one gets to you this month! I believe that eventually all current members got theirs last month, but it was a bit difficult to get it forwarded, and if you missed it, I apologize! Remember, you can always access the newsletters from the club website: www.fcolc.com

Last month one of our long time members, Gunther Lobisch, gave a terrific fossil presentation. He spoke about his personal experiences and stories about fossil collecting. Gunther also brought a large assortment of quality fossils to show and tell and members were encouraged to view them up close.

This is the type of activities that help us all learn. Seeing the actual fossil in person is the very best way to learn identification. That is one reason we always encourage show and tell at each meeting. Please do not be shy, but bring in your fossils so others can see them.

The October 15 fossil hunt at Mosaic is close to being filled up. We are awarded one trip a year, at their discretion, and ask that members who want to go to please attend the meetings so as to be able to sign up to go. We are allowed only 30 spots, so if you cannot make the monthly meetings to sign up you probably won't be able to go. Sorry, but the trip is very limited. Al Govin will have the signup sheet at the meeting. He is handling the arrangements, so please address any questions to Al at: algovin1@hotmail.com

This month's meeting will be matrix hunting. You will search through washed, unsearched micro matrix for small fossils and you keep what you find. We have some magnifiers, but if you can, bring your own so that everyone will have one. A tweezers may help as well. Also, we will have a

Continued from page 1

few small zip-locks, but again, if you can, bring your own.

Next month we will either have an outside speaker or I will do a fossil ID presentation. At this time, it's not decided.

Refreshments will be by Victoria O'Toole. Volunteers will be solicited for September and October at the meeting. The club will reimburse you for up to $40.

The 13th annual FCOLC Fossil Festival, to be held at the Shell factory on February 18, will only happen if we find a chairperson. Solicitation emails was sent to the current membership and at present we have two interested members who are willing to do it. Until the details are finalized I do not want to say the names, but it will be announced at the meeting. The festival requires a coordinator to put it together, and I appreciate these two members stepping forward.

Remember to send me any pictures/stories you have of fossil finds! We all want to see and hear about them!

See ya at the meeting on August 18!!

Louis Stieffel

President

Fossil Club if Lee County

Eleanor Elizabeth shared The FOSSIL Project's post.

The FOSSIL Project is offering a great opportunity: We will pay the registration fees for TEN fossil club members to attend the Geological Society of America national meeting in Denver, CO, scheduled for Sept 25-28, plus the fee for a cool pre-meeting short course we are hosting the afternoon of Sept 23! Contact me, Eleanor Gardner, at fossil@flmnh.ufl.edu to apply!

FCOLC Minutes 7/21/16 General Meeting

Louis Stieffel called the meeting to order

31 members present

Al Govin discussed October 15th Mosaic trip in detail. He read letter from Mosaic detailing what is expected of guests.

Orlando Show was discussed

National Fossil Day, October 1st, in Bradenton discussed

Louis discussed issues that prevented July newsletter from going out on time. All Newsletters are available on the FCOLC website.

Refreshments provided by Edgar Jestes & Linda Simmons

Gunther Lobisch was the evenings speaker. He spoke on a variety of fossils from invertebrate to vertebrate. He displayed a large and varied group of fossils.

Door prizes were awarded.

Refreshment break taken.

Show-n-tell after break.

Dollar raffle held.

Meeting ended by Louis Stieffel.

Minutes by Secretary/Treasurer

Al Govin

OFFICERS

Louis Stieffel, President
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Michael Siciliano, Vice President
239-980-1406
Al Govin, Secretary, Treasurer
239-910-2339

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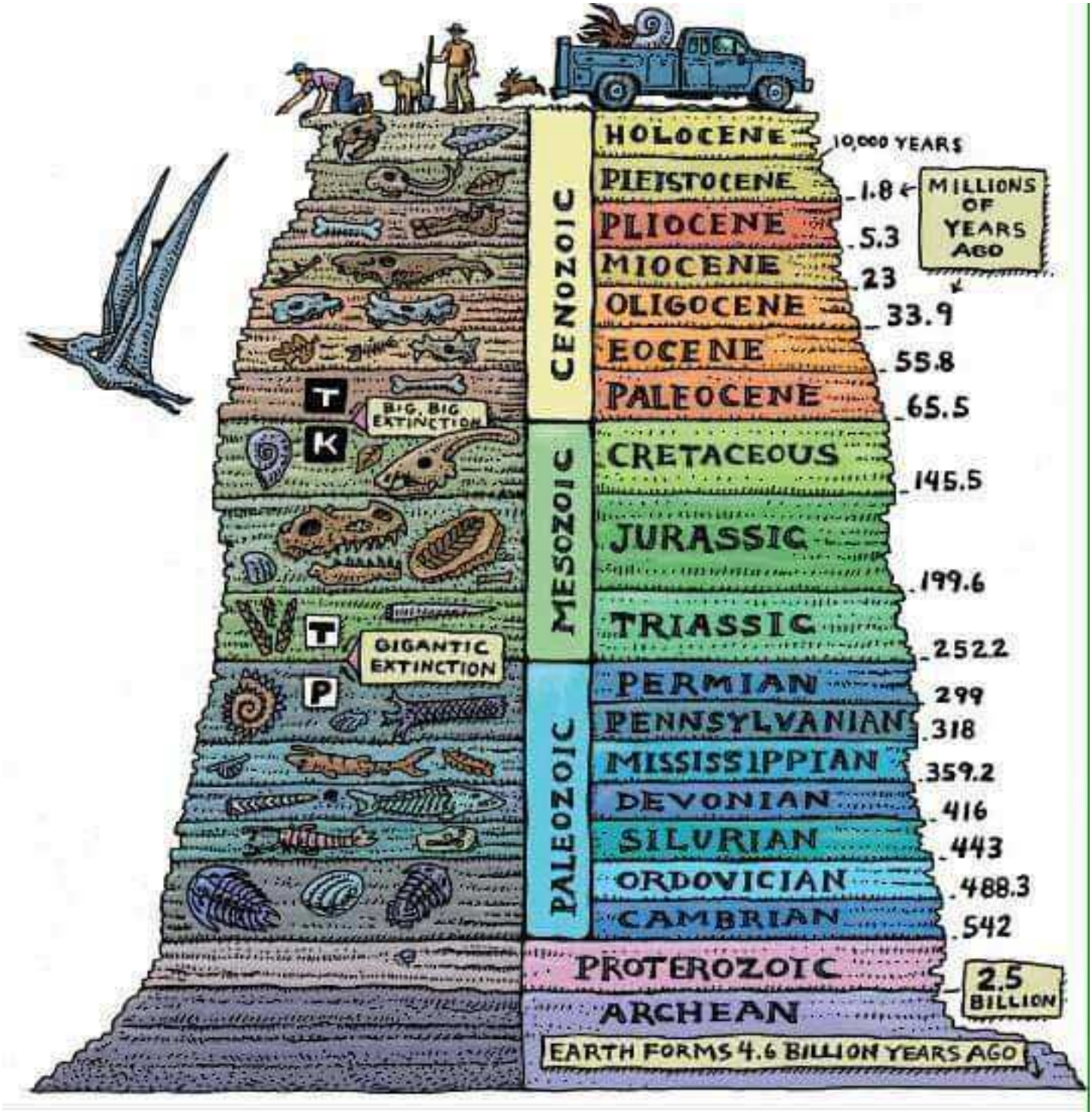
Dean Hart……941-979-8217
Dave Seehaver
Jeanne Seehaver
Jim Manderfield
Dr. John Taraska
Leslie Stieffel

COMMITTEES

Al Govin, Club Trips Director
Curt Klug, Web Master
Cherie Neat, 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, Speakers, Trips
Louis Stieffel, Auctioneer, Vertebrate Education, Newsletter editor, FOSSIL project representative

Meetings are held on the third Thursday of the month, at Zion Lutheran Church Fellowship Hall.


HOLOCENE
10,000 YEARS
PLEISTOCENE
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MILLIONS OF YEARS AGO
PLIOCENE
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MIOCENE
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OLIGOCENE
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MISSISSIPPIAN
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DEVONIAN
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SILURIAN
443
ORDOVICIAN
488.3
CAMBRIAN
542
PALEOZOIC
PROTEROZOIC
2.5 BILLION
ARCHEAN
EARTH FORMS 4.6 BILLION YEARS AGO

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!!

Aimee Hankel finds agatized coral! Posted on the FCOLC face book site.

Hindsight is 20/20. I should've taken a before pic because this coral head was black with river stain when I picked it up out of the Withlacoochee, but Tom worked his cleaning magic.

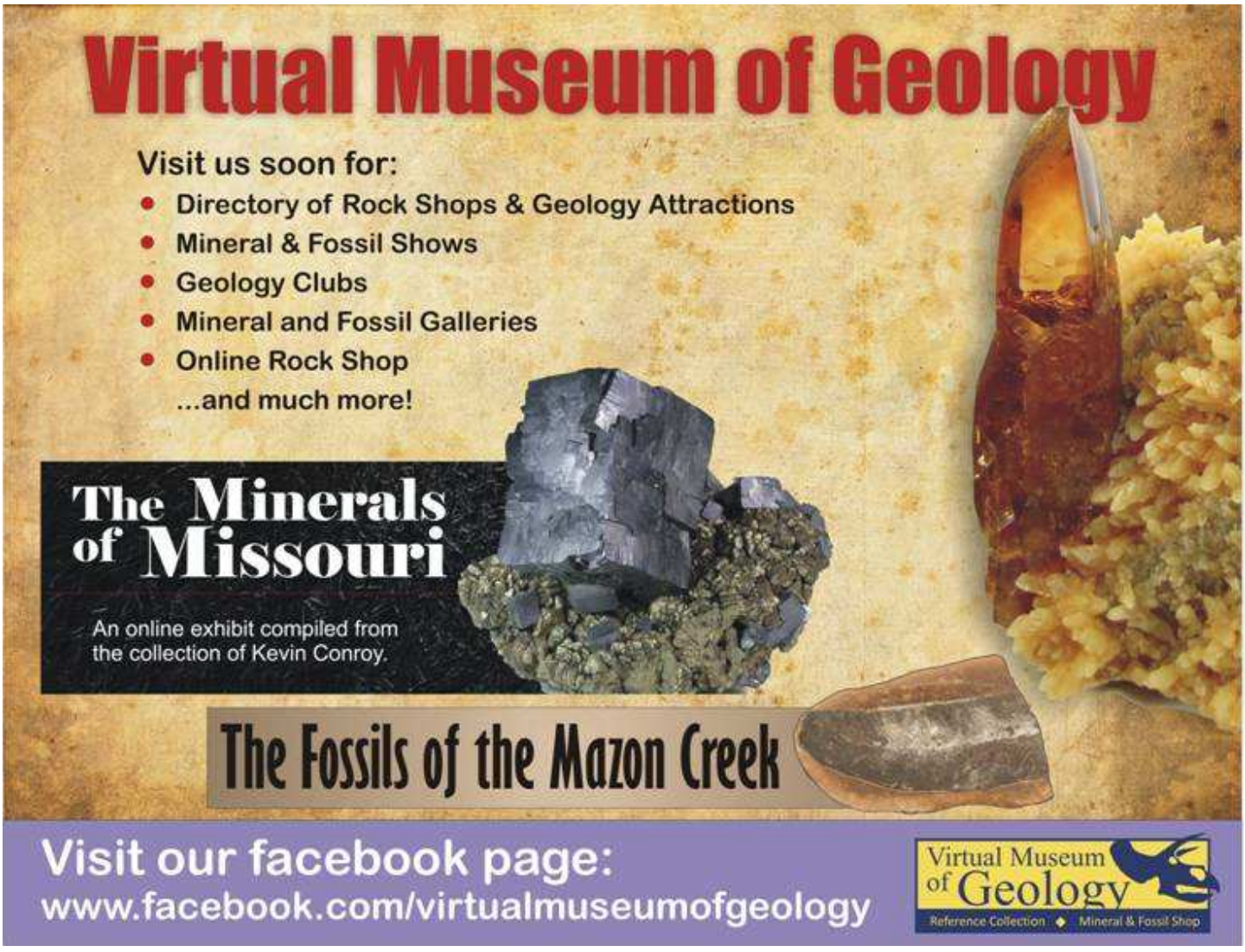
Aimeee's Corner!!

Fossil Finds of the Month!

Mike Siciliano, our FCOLC Vice President, and serious fossil diver, had a great day earlier in the month while diving at Venice. He found a few megalodon teeth, but also discovered three mammoth teeth, a partial mammoth tusk and a rare Mastodon lower tusk. (These animals had two lower tusks jutting from the front of the mandible.) Mike has also found several other mammoth teeth recently, as well as a section of the pelvis of a mammoth!
Goes to show you that you can still find fossils even though the rivers are too high!!

ORLANDO FOSSIL FAIR

Due to a conflict at the fairgrounds, the dates for the Orlando Fossil Fair will be changed from October 15-16. The new dates are Nov. 5th & 6th at the Central Florida Fairgrounds.



New Dinosaur Had the T. Rex Look: Tiny Arms

By Laura Geggel, Senior Writer | July 13, 2016 03:15pm ET

Like *T. rex*, *Gualicho shinyae* had two clawed fingers at the end of its small arms. Also like *T. rex*, the new-found dinosaur likely would have preyed on smaller animals, as seen here.
Credit: Copyright Jorge González and Pablo Lara

Tyrannosaurus rex wasn't the only meat-eating menace with teeny-tiny arms.

Like its distant relative, *T. rex*, a newly identified dinosaur, named *Gualicho shinyae,* sported small arms and hands with two clawed fingers.

"We're slowly getting more information on this sort of pattern of limb reduction, and getting at this question of why tyrannosaurs and some other theropods shortened their forelimbs," said study corresponding author Peter Makovicky, curator of dinosaurs at the Field Museum in Chicago. [See Images of the Tiny-Armed *Gualicho shinyae*]

G. shinyae belonged to a group called the allosaurs and lived about 90 million years ago, during the Cretaceous period. That's a good 23 million years before *T. rex* entered the scene between 67 million and 65 million years ago.

Because they are only distantly related (both are considered theropods, which are bipedal and mostly carnivorous dinosaurs), the two species likely developed their tiny arms and two-digit hands independently due to similar evolutionary pressures — a process called convergent evolution, the researchers said.

Bony discovery

Study lead author Sebastián Apesteguía, a paleontologist with the Natural History Foundation (AZARA) in Buenos Aires, Argentina, and a team of researchers discovered the dinosaur along the northern edge of a large reservoir in Patagonia, Argentina, in 2007. (In fact, five other predatory dinosaurs have also been found in that area, called the Huincul Formation.)
"Unfortunately, it's one of those specimens that was discovered probably 50 years too late," Makovicky told Live Science. "We have the hind limbs and the forelimbs, we have the section of the back and the tail, a little bit of the hips." But they couldn't locate the skull and much of the vertebral column, likely because of erosion.

A schematic showing the excavated bones of *Gualicho shinyae*.
Credit: Copyright Jorge González and Pablo Lara

However, based on what they found, as well as the anatomy of other allosaurus dinosaurs, they estimate that at its hips *G. shinyae* was about 6 feet (1.8 meters) tall, and that it measured about 25 feet (7.6 m) long and weighed about 1 metric ton (1.1 tons), Makovicky said.
"It's not a giant animal by dinosaur standards, but not small, either, so [it's] a midsize predator," he said.
G. shinyae is also a bizarre mosaic of different dinosaurs. It looks a bit like *Carcharodontosaurus*, another carnivorous theropod, as well as *Deltadromeus*(delta runner), a carnivorous dinosaur with slender arms found in Africa, which is possibly a close relative, the researchers said. [Photos: Dinosaur's Battle Wounds Preserved in Tyrannosaur Skull]

Divine inspiration

Researchers named the dinosaur *Gualicho shinyae* after two women: The genus honors Gualichu, a goddess of animals who was revered by the Tehuelche people of Patagonia. When Europeans brought Christianity to the area, the newcomers reinterpreted Gualichu as a demonic entity, the researchers wrote in the study.
The paleontologists joked that Gualichu had put a curse on them during their fieldwork, after their truck flipped over (no one was seriously hurt), Makovicky said. The species name honors Akiko Shinya, who discovered the specimen.
The newfound dinosaur is an exciting find, said Thomas Carr, an associate professor of biology at Carthage College in Wisconsin, who was not involved in the study.
"It really provides a sharper focus on the whole phenomenon of forelimb reduction and finger loss in theropods," Carr said. "It clearly occurs across many different lineages for different reasons and in different ways."
It also shows that "tyrannosaurs' [arms] really aren't unusual," Carr said. "It's not just a one-off."
The new study was published online today (July 13) in the journal PLOS ONE.
Original article on Live Science.

How Did Dinosaurs Communicate?

By Laura Geggel, Senior Writer | July 27, 2016 11:10am ET

Reconstruction of theropods engaged in scrape ceremony display activity, based on trace fossil evidence from Colorado.

Credit: Xing Lida and Yujiang Han

Dinosaurs didn't have email or text messages to keep in touch, but scientists are quite certain the beasts engaged in dialogue. Those communications likely included hoots and hollers, cracking sounds, dance and song, and even symbolic love calls made with showy plumage.

Clues from the fossil record and related, living animals, such as birds and crocodiles, hint at the ways the ancient creatures may have communicated, said Thomas Williamson, curator of paleontology at the New Mexico Museum of Natural History and Science.

"We rely heavily on modern animals to make inferences about extinct animals," Williamson told Live Science. [Is It Possible to Clone a Dinosaur?]

Coos, booms and hoots

Dinosaurs may have made closed-mouth noises, much like the booms and hoots that some birds make today, according to a study published in July 2016 in the journal Evolution.

"Closed-mouth vocalizations are sounds that are emitted through the skin in the neck area while the beak is kept closed," said study lead researcher Tobias Riede, an assistant professor of veterinary physiology at Midwestern University in Arizona. "To do so, birds typically push air that drives sound production into an esophageal pouch, rather than exhale through the open beak."
The coos of doves are a good example of this behavior, he said.
To figure out how closed-mouth sounds arose, the researchers analyzed the distribution of this ability in birds and other reptilian groups, Riede said. The scientists found that these hoots evolved at least 16 times in Archosaurs, a group that includes birds, dinosaurs and crocodiles.

"Interestingly, only animals with a relatively large body size (about the size of a dove or larger) use closed-mouth vocalization behavior," Riede told Live Science in an email.
He added that "since dinosaurs are members of the Archosaur group, and many had large body sizes, it is likely that some dinosaurs made closed-mouthed vocalizations in a manner similar to birds today."

Frills and dances

Extinct dinosaurs — like their living relatives, modern birds — may have "talked" via song, dance, scent and colorful plumage, Williamson said.

The horns, frills and crests that adorned dinosaur heads may have been used for mating rituals or to intimidate rivals. For instance, fossils show that a *Triceratops* relative (*Protoceratops andrewsi*) developed larger frills and cheek horns as it matured, suggesting that these decorations helped the species communicate, and possibly catch the attention of mates.

These horns and frills may have also conveyed the dinosaurs' dominance and age to others of their kind, the researchers said in the January study, published in the journal Palaeontologia Electronica.

Dinosaur fossils have offered other tantalizing clues about the animals' senses. Based on the size of their eyes and the vision of their relatives (that is, birds and crocodiles), it's likely that dinosaurs had excellent color vision, Williamson said. Plus, recent discoveries of color patterns on dinosaur feathers suggest that colorful feathers might have played a role in signaling, he said.

Deep dino-sounds

Some duck-billed dinosaurs, called hadrosaurs, had elaborate crests that contained long and resonant extensions of the breathing tracts. Williamson and colleagues found that these crests are naturally resonant and so could easily produce low-frequency sounds. [See photos of a 'Superduck' hadrosaur with a lizard-like skull crest.]

"Based on the physical properties of the bones that transmitted sound between the eardrums and middle ear, we know that these dinosaurs were capable of hearing the sounds produced by the crests of other hadrosaurs," Williamson said.
The extremely long tails of *Diplodocus* and other sauropod dinosaurs could also have made some noise. Some researchers have suggested that the tips of these tails could have been flicked atsupersonic speeds, making bullwhip-like cracking sounds that may have traveled long distances.

Moreover, ankylosaurs had elongated and convoluted respiratory tracts that might have been used to make or modify sounds used for communication. And the huge sauropod dinosaurs had long respiratory tracts in their long necks that, quite possibly, produced low-frequency sounds, Williamson said.

Based on analyses of dinosaur ears, scientists concluded the beasts had excellent low-frequency hearing, Williamson said. Such low-frequency sounds could "penetrate through thick vegetation and over large distances, and may have allowed individual dinosaurs to be heard over vast areas," Williamson explained.

"The Mesozoic must have been an amazing place, made all the more noisy and colorful by the communications of dinosaurs," he said.
With additional reporting by Corey Binns.
Original article on Live Science.

Could Dinosaurs Swim?

By Byline: Corey Binns, Life's Little Mysteries Contributor | August 16, 2010 04:26pm ET

A herd of centrosaurs (a type of horned dinosaur) swimming in a flood millions of years ago in what is now Alberta, as depicted in this illustration.

Credit: Royal Tyrrell Museum

Whether a team of dinosaurs could win an Olympic relay race is up for debate. But they wouldn't be afraid to jump in the water.

All dinosaurs could swim, said Dave Gillette, curator of paleontology at the Museum of Northern Arizona in Flagstaff.

"They might not have been graceful, but they could swim nevertheless. Think of elephants, orhorses they swim quite well even though their bodies do not look like the bodies of swimmers at all."

Why swim?

Dinosaurs were motivated to swim by the same instincts that send a beaver or a duck to take a dip.

"They might swim to find food in water, to hide from predators, to cool off, to go from one bank or another, or even to swim across a river or a bay to a barrier island, and all the other reasons that an animal would decide to swim," Gillette said.

Like all reptiles, dinosaurs breathed air and had to take regular breaths, whether they were in or out of the water.

"Dinosaurs were surely just as adept at swimming, and just as talented at taking in sufficient air to continue breathing," Gillette said. "This all means that they had to be buoyant, too, so they could stay close to the surface of the water, rather than sinking and drowning."

Although most dinosaurs spent a majority of their time roaming the land, some dinosaurs, such as Spinosaurus

and Baryonyx, were likely amphibious. Both of these species were as large as Tyrannosaurus rex and had an anatomy similar to that of crocodiles . They also had huge skeletal spines on their backbone that looked like a sail, but Gillette said those spines were covered with muscle and tendons and skin, and could not have functioned as an actual wind-catching sail.

Other than skeletons of swimmers, scientists have also discovered tracks of wading dinosaurs.

Tracks of swimmers

"Some trackways indicate that dinosaurs 'poled' their way around in shallow water, like a boatman use a pole to push a boat," said Gillette. "Or, like the way humans push off and glide, then sink a little and then push off again, and glide..."

For example, in 2007 paleontologists from the University of Nantes in France came across S-shaped prints on the bottom of what was once a lake in the Cameros Basin in Spain. The unusual tracks suggest the animal's body was supported by water when it scratched the lakebed.

In 2005 in Wyoming, Debra Mickelson from the University of Colorado at Boulder discovered dinosaur tracks in what was an ancient sea floor. The footprints were left behind 165 million years ago by an ostrich-sized dinosaur .

"The swimming dinosaur had four limbs and it walked on its hind legs, which each had three toes," Mickelson said. "The tracks show how it became more buoyant as it waded into deeper water the full footprints gradually become half-footprints and then only claw marks."

Dinosaurs weren't the only creatures showing off their swim strokes during the Mesozoic period. Many reptiles living during the same time as dinosaurs were restricted to living in the sea.

"Plesiosaurs, mosasaurs and sea turtles are all non-dinosaurian reptiles that lived the sea in the Mesozoic and perhaps only came to land to lay eggs," Gillette said.

Central Florida Mineral and Gem Society, a non-profit educational organization, is hosting a Rock, Mineral, Gem, Jewelry & Fossil Show on October 7th, 8th and 9th, 2016 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.

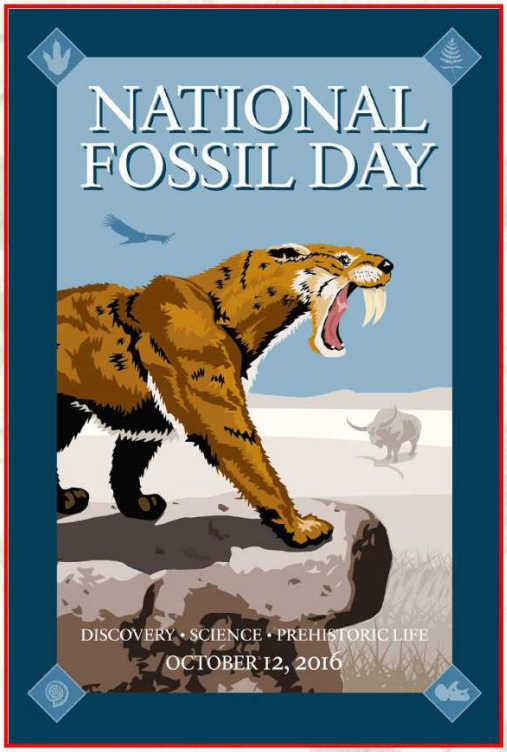
If you have any questions, please e-mail or call me at 407-816-1229. Thank you.

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

Mark Your Calendar!

Please Join us in Celebrating National Fossil Day 2016!!!

"Fossil's & Dino's at Play"



National Fossil Day Celebration!

Saturday, October 1st, 2016

South Florida Museum
Bradenton, Florida

Come join us in celebrating this year's *National Fossil Day*. The South Florida Museum is excited to be a host institution this year and to partner with local and state agencies, organizations and clubs. Guests can come and meet real paleontologists and geologists who work everyday to uncover the secrets fossils reveal about our ancient Earth.

Location: South Florida Museum, 201 - 10th St. West, Bradenton, FL 34205

Time: Museum hours 10 a.m. to 8 p.m. Special Family Night Event extended hours.
Fossil Clubs and Vendor Displays 10 a.m. to 4 p.m. Special 1/2 price admission to museum all day! $9 adults, $8 Seniors 65+, $7 children, kids under 3 FREE. Fossil Display Tables & and a Free Kids Dig Pit Sponsored by Mosaic.

Activities: Fossil Displays, Fossil Giveaways, Fossil Vendors, Kids Fossil Dig Pit, Speakers, Florida Paleo Authors & Book Signing, Junior Paleontologist Badge Program presented by the De Soto National Memorial Park Rangers, Special exhibit from the American Museum of Natural History: "*Dinosaur Discoveries: Ancient Fossils, New Ideas*". Special Screening of *Sea Monsters: A Prehistoric Adventure* in the Bishop Planetarium, Meteorite Display, Stone Knapping Demonstrations, and so much more!

Updates at: *NFD.FLGEO.COM*

National Fossil Day Sponsors

SOUTH FLORIDA MUSEUM
BISHOP PLANETARIUM • PARKER MANATEE AQUARIUM

FLORIDA MUSEUM OF NATURAL HISTORY

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Mosaic

Florida Geological Survey Est. 1907

Southwest Florida Fossil Society — Preserving the Past for the Future

SMR Aggregates, Inc.

Fossil Club of Lee County