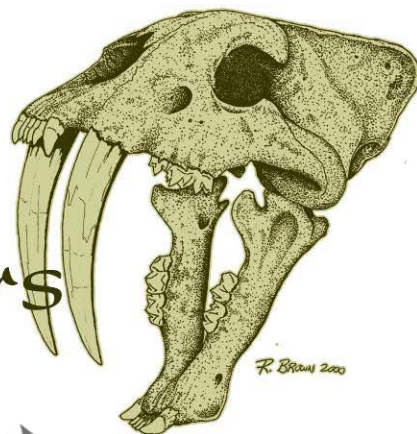


NEWS

Florida Fossil Hunters

Florida Prehistorical Museum, Inc. dba/ Florida Fossil Hunters
Volume 26, Number 1

January 2016



From the President.....

Well, Happy New Year to everyone. Hope Santa brought you that big white shark you've been asking for. As for me, maybe next year. She said I haven't really been THAT good.

It's hard to believe that it's 2016. No meeting at OSC this month. The club will be meeting down near the Orlando Eye to tour the Skeletons Unveiled museum. Don't miss out.... details inside this issue.

So we are starting the year with something different and planning on a few more special trips this year. Thanks goes out to all the club staff for sticking it out another year. The club rewarded our Fossil Fair Chairperson, Valerie First with a \$250 gift certificate to "Skulls Unlimited". It was well-deserved.

We had a good turnout for our December meeting/auction. People brought all kinds of great yummys and everyone went home with something. Special thanks to Aspen Tovar, my "Vanna White" for the event. Great job!

We spoke about having a trip to Yankeetown spoil islands (kayak-canoe-boat trip) in a few months, as well as a BBQ at Vulcan Mine. As soon as these are scheduled, we'll let you know. Meanwhile the Peace River is at 6 ft, so get your gear together. Women in Paleontology is in the planning stage also. It's going to even better this year. If you want to get in on the action, contact Bonnie or Cindy Lockner.

Volunteering is one of the ways to earn "Fossil Bucks". Another way is to write articles for the newsletter. Kids, Bonnie & I would like to have a 1/2 page article our picture from you.... by Kids to Kids. Please help Bonnie out in this endeavor.

Lastly, our club will again be donating to the FPS Morgan Award to a Florida college student for research. Once I hear back from Roger Portell with the FL Museum of Natural History, I'll announce the winner of our gift.

It's not too cold to go diggin', so GO!

Russell Brown
President

Join Our Facebook group, Search:
Florida Fossil Hunters



Coming Events

UPCOMING MEETINGS at the Orlando Science Center

January
No Meeting

February 20th
2 pm Kids Fossil Blast
3 pm Meeting

Saturday, March 19th
2 pm Kids Fossil Blast
3 pm Meeting

More events listed on back page

For more info...
www.floridafossilhunters.com

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Florida Fossil Hunters News

Fragments

Fossil & Mineral Shows

Tomoka Gem & Mineral Club will hold their annual show on Jan 16th & 17th, at the Volusia County Fairgrounds, State Road 44, Deland, FL (1/2 mi. east of I-4, exit 118). There will be gems, minerals, and some fossils.

Sat. 10am - 6pm, Sun 10am - 5pm

Admission \$4 (go to tomokagms.org to a \$1 off coupon). Children 12 & under get in free.

Fossil Club of Lee County will hold their show on Feb. 13th, 9am - 5pm, at the Shell Factory, 2787 N. Tamiami Tr., Fort Myers, FL. There will be fossils and minerals for sale, a Kids' Dig, exhibits. Admission is free. Go to www.fcolc.com for more info.

Tampa Bay Fossil Club will hold their Fossil Fest on Mar. 12th & 13th. Sat 9am - 6pm, Sun 10am - 4pm. Admission is \$7. Kids 12 & under get in free. It will be held at the Florida State Fairgrounds, intersection of I-4 and Hwy. 301, just east of Tampa. There is a charge for parking. (I think it's \$7). Fossils, minerals, exhibits, etc. For more info, go to tampabayfossilclub.com

Venice Shark's Tooth Festival will be on Apr. 8th - 10th, at the Venice Airport Festival Grounds, 610 E. airport Ave, Venice, FL. Admission is \$4. Kids 12 & under get in free.

Central Florida Mineral and Gem Society is hosting a Rock, Mineral, Gem, Jewelry & Fossil Show on April 22nd, 23rd and 24th, 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: faceting stones, cabochons and wire wrapping. Family Activities. Contact: phayes3@cfl.rr.com. Admission: Adults \$5, Students \$2. Website: www.cfmgs.org.

VULCAN MINE

JAN 9th | FEB 13th | MAR 12th

See page 6 for more details.



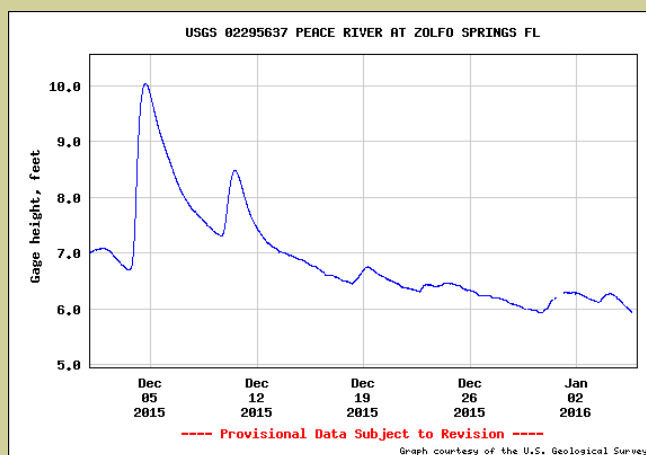
Kids' Fossil Blast

On Saturday, Feb. 20th at 2 pm we will explore the world of dinosaurs and their cousins, the birds. Don't be late for this one!

Kids' Fossil Blast is a an informal, hands-on experience with real fossils, casts, etc. aimed at kids ages 5 to 14..

Piece on the Peace River

Warning!!!! Predictions are that this El Nino will bring as much bad weather as 1998. That's the year the Peace River flooded more than in decades before. So get out there while it's low enough for even short people like me to stand in. The diggin' is great for the body, mind and soul. And you get to take treasures home. Always remember to check the water level through the link on our website. Anything 6 ft. and under is good.



Florida Fossil Hunters News

Skeletons: Animals Unveiled

This museum isn't like anything you've seen in a traditional museum before. The skeletons in the exhibits are 100% real, (except for the extinct ones) and there's over 400 of them. The museum is aimed at not grossing out guests, but more about learning through experiencing. The museum features over 450 species of animals from all over the world. In fact, education is the main goal of Skeletons.

And since most fossils are parts of skeletons, this is our kind of place. So, instead of a meeting at the Science Center in January, the Florida Fossil Hunters is arranging a group trip there on Saturday, Jan. 16th, 2016. We will meet in front of Skeletons at 10:00 am and go in as a group. Adults will pay \$10 each and kids will get in free.

You must be a current member and paid your 2016 dues by Jan. 5th to participate and get the discount.

Skeletons is located at
8441 International Dr, Orlando,
near the Orlando Eye ferris wheel.
Parking is free.

For more info, go to www.skeletonmuseum.com

South Florida Museum Think + Drink (Science)

Wednesday, February 10, 2016 7:00 PM

Hydrogeology 101

An Overview of Florida's Water Resources

With
Guy "Harley" Means
(Former President
of The Florida
Paleontological
Society)



With 7800 fresh water lakes, 1700 rivers and streams, more than 1000 springs, the Everglades, and one of the most productive aquifer systems in the country Florida is well endowed with water resources. Join Assistant State Geologist Guy "Harley" Means for a meaningful discussion on the state of Florida's prized water resources. This lecture kicks starts a season of water conversations inspired and partly funded through the Florida Humanities Council's 2016 *Think Florida*, *Think Water* project initiative. For more info, go to www.southfloridamuseum.org

South Florida Museum

201 10th Street West
Bradenton FL 34205 [\(941\) 746-4131](tel:9417464131)

TIME TO RENEW

Renew for 2016

still a bargain at \$17 per household

If you haven't already done so, be sure to renew your membership. This coming year will have more field trips and events that you won't want to miss. Just make a check out to Florida Fossil Hunters for \$17 and bring it to the meeting or mail it to: P.O. Box 540404, Orlando, FL 32854-0404



Florida Fossil Permit

Be sure to get yours or check your current permit for the expiration date.

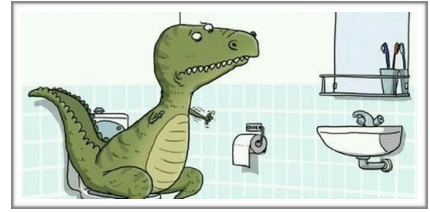
Go to our website for the link to the application or renewal
OR get the printed version at our meetings.

www.flmnh.ufl.edu/vertpaleo/vppermit.htm

Florida Fossil Hunters News

The Science of “Stank”

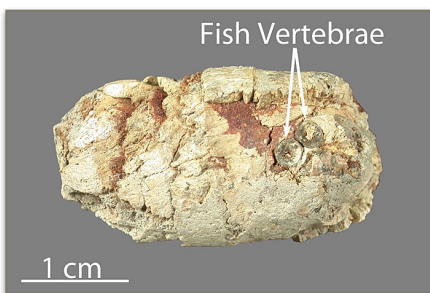
By: Jason Spalding



We have many names for it. We often call it poop, feces, stool, and others that are less socially appropriate. No matter what we choose to call “it”, excrement is less appealing than other topics and we typically want nothing to do with it. However, when it becomes fossilized, excrement is transformed into something beautiful and it is known as *Coprolite*. The term means “dung stone”, translated from the Greek roots “*kopros*” meaning dung and “*lithikos*” meaning stone.

What can we learn from it?

Coprolite is more than just another pretty rock. Specimens can be used to tell us many facts about the species that they came from. The information renders even more useful when the species no longer exists. The basics begin with diet. Vegetarian dung comes with reminiscences of plant matter, while carnivores’ dung leaves traces of crushed bits of bones, sinew (fibrous tissue) and claws. Carnivore coprolite’s are also rich in calcium and phosphorus from the digested bones. Do keep in mind that not all coprolites have such signs of diet traces. We can even tell the type of environment in which the species lived, or even how it ate it’s food. While the coprolite can tell us about the animal, it cannot tell us the specific animal in which it came from.



Different Composition and Types :

Coprolite specimens may sometimes look similar, but no two are identical. You can find them in various shapes and sizes. A lot of this is due to the animal that the dung came from. It would be easy and assumable to say that all coprolites are brown. It is far from the truth though. The color of coprolite is based upon the type of soil and minerals in which it was buried. Over time minerals from the soil are absorbed into the dung, replacing other minerals within the specimen. Dating a dung specimen is similar to dating other fossils. If you are unsure of how to date fossils, I may suggest a quick internet search and you’ll have more information than you’ll ever need. For a quick overview, think of depth. We often find fossils in layers of sedimentary rock/ formations. The deeper the layer, the older the specimen. A more complex way is the chemical analysis of carbon and potassium of the fossil. This process is known as radiometric dating.

Where can Coprolites be found?

Most coprolites are found in exposed sedimentary rock. Some more popular areas of coprolite are the badlands of the western United States. Badlands are a type of dry terrain where sedimentary rocks have been eroded by wind and water. This doesn’t mean Easterners are out of luck as many coprolites have been pulled from the formations in South Carolina. We even have a fair share of quality dung here in the sunshine state. Also, you don’t have to embark on a special dung quest to find those beauties. Most coprolites can be found in the same areas that other fossils are found. How do we know though if we found a high quality turd or just another rock. It can be tricky, but



not impossible. If it has bits of organic matter or bone fragments within it then it is most likely coprolite. Another possible indication is high concentrations of calcium or phosphorus within the specimen. One could only assume we would be looking for colors as calcium is white and phosphorus tends to be reddish/ brown in color. As previously mentioned, no part of the coprolite can tell us the specific species it came from, though if it is found with a cluster or group of species specific fossils, then it could be assumed it was from that species.



As with any fossil, beauty is in the eye of the beholder. Just don’t classify coprolite as a glorified turd, as they are much more. Like with the other fossils in our collections, they hold a link to the past. They too can tell a story. So next time your hunting and pick up a rock, be sure to look twice. Every collection needs a little dung in it, and always remember that...”coprolite happens.”



*Cheetah on the Masai Mara in Africa (stock image). The cheetah is descended from a relative of American pumas and their fossil record extends across the Americas, Europe and Asia.
Credit: © Bryan Busovicki / Fotolia*

Cheetahs migrated from North America

December 8, 2015, BioMed Central

The cheetah (*Acinonyx jubatus*) is now at home on the African plains, but it started a migration 100, 000 years ago from North America towards its current habitat. The research, published in the open access journal *Genome Biology*, found that the migration from North America was costly for the species, triggering the first major reduction in their gene pool.

The modern African cheetah is found across eastern and southern Africa, but it is highly endangered because of their small free ranging population and inbreeding. Researchers from St. Petersburg State University, Russia, in collaboration with BGI, China and CCF, Namibia, sequenced the genome from a male Namibian cheetah, called 'Chewbaaka', and six other wild cheetahs from Tanzania and Namibia. This gave further insight into the species evolutionary history and the breadth of genome impoverishment, which elevates juvenile mortality, causes extreme abnormalities in sperm development and increases vulnerability to infectious disease outbreaks.

A total of 18 cheetah genes showed damaging mutations and one gene in particular, AKAP4, showed a large number of mutations, which could harm sperm development and may explain why cheetah have a large proportion of defective sperm, and hence their low reproductive success.

The cheetah is descended from a relative of American pumas and their fossil record extends across the Americas, Europe and Asia. The species has suffered two population bottlenecks -- an event

whereby the population is rapidly reduced due to environmental factors.

The first of these took place 100, 000 years ago, around the late Pleistocene -- a geological period shaped by repeated glaciations, when cheetahs started to move towards Asia across the Beringian landbridge and then travelled south to Africa. This migration was punctuated with dwindling populations and limited gene flow due to the individuals' own vast territory boundaries, measuring 300-800 square miles, thereby increasing incestuous mating.

The second bottleneck around 10- 12, 000 years ago, further reduced numbers, leading to further loss of endemic variability observed in modern cheetahs. This is because cheetahs disappeared from North America, when the last glacial retreat caused an abrupt extinction resulting in the loss of many large mammals, including cheetahs and pumas, from North America.

Cheetahs accept skin grafts from unrelated cheetahs as if they were clones. The genome analysis suggests that this is partly due to the loss of a few immune related genes and dramatic loss of diversity in the cheetahs' flagella genes. The variation is so limited that it is far below that observed in inbred dogs and cats. Tests carried out by the researchers show that the cheetah has lost 90-99% of the genetic variation typically seen in outbred mammals.

The researchers conclude that this latest insight into the history and adaptation of the endangered cheetah should be useful in efforts to sustain and increase cheetah population numbers in their present and former range habitats.

Florida Fossil Hunters News

VULCAN MINE Field Trip

Vulcan Mine Field Trip near Brooksville

*If you did not sign up at the meeting,
please call or email the trip leader at:*

Saturday, January 9th

Trip Leader: Stephen Chambers

stchamb1@outlook.com | cell ph: [321-806-0763](tel:321-806-0763)

FIELD TRIP LEADERS NEEDED FOR FEB 13th and MAR 12th

This is one of the few places where kids are allowed in to fossil hunt. Be sure to stay with them since there are steep cliffs, sharp rocks, and small sinkholes.

Meet on the driveway loop near the entrance to the Mine by 8:30 am to sign releases before we are escorted into the mine around 9 am. We get to drive our vehicles in so you can have your coolers, snacks, and equipment handy while you hunt. They usually allow us to dig until noon and sometimes people can stay till 2 pm.

All participants
MUST

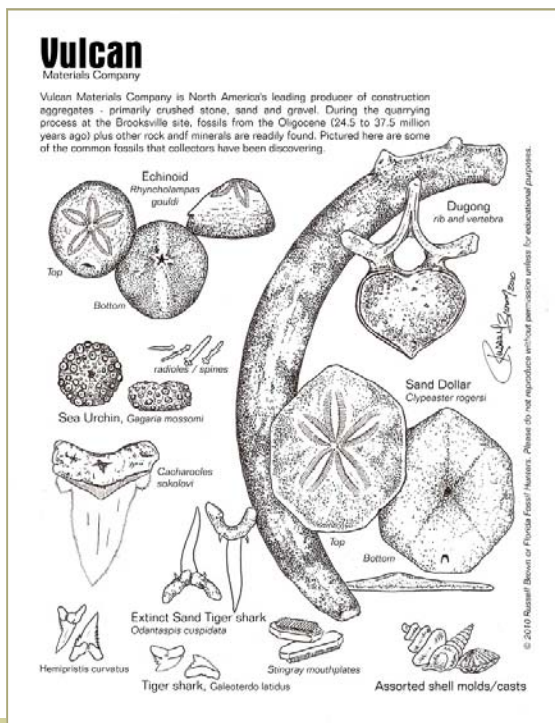
be escorted
into and out of the mine. Do
not leave on your own since
it is easy to become lost.

**THERE ARE
NO RESTROOM
FACILITIES AT
VULCAN MINE,**
other than the boulders
and the hills.

Directions: The trip will take approximately 2 hours from Orlando to Vulcan Mine. Be sure to allow for extra time to stop at a restroom before you get there.

From Orlando take Hwy. 50 west (or the 408 west to the FL Turnpike, take exit 272 and then continue west on Hwy. 50) to Brooksville. Follow 50A/98 North through Brooksville and turn right on Ponce De Leon Blvd. (Hwy 98 North). Go approximately 10 miles. Vulcan/Cemex will be on your left. The address is 16313 Ponce De Leon Blvd, Brooksville, for those of you who want to download a map.

If you follow the truck route for Hwy. 50, you have to turn right onto 41, and then take the fork to the left to hook up with Ponce De Leon Blvd/98. There are several fast food places on 41 where you can take advantage of the bathroom facilities. Be sure NOT to keep following 41 north. You want to take 98 north from Brooksville.



This is mostly surface collecting with occasionally a little digging to pry out a specimen. Bring a small trowel or screwdriver or rock hammer, and a bucket to put your fossils and rocks into. You may want to bring small containers and tissue for fragile fossils.

Wear a hat, sturdy shoes, long pants (some of the rocks are sharp), and sunscreen. Bring lots of water and/or drinks and some snacks or lunch to eat.

**JOIN US
JAN 9th
& FEB 13th**

*ID Sheet above is available on
the field trip and website.
floridafossilhunters.com/Field_Trips.htm*

***You MUST be a member of the
club for insurance purposes
to participate in this field trip.***

Florida Fossil Hunters News

Florida Fossil Hunters

is a fun and educational group whose goal is to further our understanding of the prehistory of Florida. We encourage family participation and welcome explorers of all ages.

Membership is \$17 per year. Other household members may be included at no charge.

Meetings are usually held on the third Saturday of the month but may vary with club activities. Check the website for the date and location of the next meeting or call one of the officers.

Officers:

President	Russell Brown	(352) 429-1058
Vice President	Dave Dunaway	(407) 786-8844
Secretary	Bonnie Cronin	(352) 429-1058
Treasurer	Sara Morey	(619) 302-4863

Chairs:

Education	Bonnie Cronin	(352) 429-1058
Field Trips	OPEN	
Fossil Fair	Valerie First	(407) 699-9274
Fossil Auctions	Dave Dunaway	(407) 786-8844
Fossil Bucks	Dave Dunaway	(407) 786-8844
Fossil Lotto	Ed Metrin	(407) 321-7462
Membership	Bonnie Cronin	(352) 429-1058
Newsletter	Bonnie Cronin	(352) 429-1058
	Elise Cronin-Hurley	(407) 929-6297
Photography	John Heinsen	(407) 291-7672
Webmaster	Elise Cronin-Hurley	(407) 929-6297
	elise@liseydreams.com	

Board of Directors:

Melissa Cole	(407) 834-5615
Ed Metrin	(407) 321-7462
Dave Cass	(407) 409-9095
Shelley Zimmerman	(407) 891-1260
Marge Fantozi	
Marcia Wright	
Cindy Lockner	

Membership Application

Names: _____

Associate Members: _____

Address: _____

City: _____

State: _____ Zip: _____ Phone: _____

e-mail: _____

_____ New _____ Renewal

Please list any interests, experience, talents or just plain enthusiasm, which you would like to offer to the club:

Membership is \$17 per year. Our membership year runs from January to December. All renewals are done in December and January.

Please make your checks payable to:

Florida Fossil Hunters
Post Office Box 540404
Orlando, Florida 32854-0404

Associate members are people in the same household, included at no extra charge, 2 adult votes per household.

Newsletter Policy

Articles must be submitted by the first of the month to be included in that month's newsletter. These can be mailed to the above Post Office Box or e-mailed to: bonnierussell62@gmail.com . Articles can be sent as text in the e-mail or in Microsoft Word files (.doc or .docx).

Please note in subject of email 'FFH'.

**Florida Prehistorical Museum, Inc.
dba/ Florida Fossil Hunters**

Florida Fossil Hunters News

Florida Fossil Hunters Mark Your Calendar

See inside for more information on events.

Saturday, January 9th
Vulcan Mine

Saturday, January 16th
No meeting at OSC
Field Trip: Group tour of ***Skeletons Unveiled***
10:00 am

January 16th & 17th
Tomoka Gem & Mineral Show, Deland

Saturday, February 13th
Vulcan Mine
Need trip leader

Saturday, February 13th
Lee County Fossil Club Show
Fort Myers

Saturday, February 20th
2 pm - Kids' Fossil Blast
3 pm - Meeting

Saturday, March 12th
Vulcan Mine
Need trip leader

March 12th & 13th
Tampa Bay Fossil Fest, Tampa

Saturday, March 19th
2 pm - Kids Fossil Blast
3 pm - Meeting

Join Our Facebook group, Search:
[Florida Fossil Hunters](#)

facebook

Be Green

Email Bonnie at bonnierussell62@gmail.com
to receive the newsletter via email.



Visit us online at www.floridafossilhunters.com

Articles and comments should be sent to: bonnierussell62@gmail.com

Florida Fossil Hunters

Post Office Box 540404
Orlando, Florida 32854-0404



Florida Fossil Hunters News