



FLORIDA PALEONTOLOGICAL SOCIETY NEWSLETTER

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SUMMER 2012

Florida Paleontological Society, Inc. Spring Meeting – April 27-29, 2012 Gainesville, Florida

Submitted by Kevin Hutchenson

Saturday morning was the beginning of a warm day as members began to meet in the lobby of the Paramount Plaza Hotel. Members Alex Kittle and Paul Roth helped to get everyone organized for the trip to the Haile Quarries, outside of Newberry, FL. We had 57 members registered for the FPS field trip. Upon arriving at our first stop in the quarry, everyone donned hard hats and safety vests. Our field trip

The Ocala Limestone is rich in invertebrates, preserved as both molds and whole body fossils. There were many finds of echinoderms: sea biscuit (*Oligopygus haldemani*), sand dollars (*Neolaganum durhami* and *Weisbordella cubae*), and sea urchin (*Phyllacanthus mortoni*). There were also many finds of the paper scallop, *Amusium ocalanum*, and a few oysters. And a few lucky members found parts of or nearly complete crabs, most likely the stone crab, *Ocalina floridana*.

Several members checked out the filled solution features in the upper section. Solution features (caves, sinkholes, fissures) in the Ocala Limestone result from acidic dissolution of the limestone by groundwater. The voids later fill with continental sediments and many contain terrestrial vertebrate material of Miocene to Pleistocene age.



Members pose after the second stop of the Haile field trip. Here many people found terrestrial vertebrates, shark teeth, and lots of echinoids. Photo Credit: Mike Hein and Paul Roth

leader, Roger Portell, gave all a safety talk, noting areas to avoid and areas to search.

Haile Quarries are located north of Newberry, FL, in Alachua County, just a short drive from Gainesville. The Haile Quarries are an active complex, mining the nearly pure, late Eocene (35 million years ago) Ocala Limestone. The upper Ocala Limestone (formally the Crystal River Formation) is exposed in the top section of the quarry. Material from the lower Ocala Limestone (formally the Williston and Inglis Formations) is dredged from below the water table using drag lines and stored in piles to dry. Additionally, at the surface of the quarry are residual pockets of the Oligocene Suwannee Limestone.

The group then visited a second site in the Haile Complex where many people continued to find the typical invertebrates from the area. In addition, Roger Portell pointed out an area of the section containing layered limestone with voids, filled with freshwater sediments and snails.

After the mine, members returned to Gainesville for lunch or other activities. The meeting continued in the evening hosted by Alex Kittle. The hotel provided a marvelous southern dinner with BBQ ribs, chicken, catfish, and all the trimmings. Dr. Gordon Hubbell spoke on his fossil shark collection, relating how he started and the direction of his interests over the years. At the end, he answered a few questions from the audience. The evening concluded with a raffle and silent auction.

**FLORIDA PALEONTOLOGICAL SOCIETY
OFFICERS AND BOARD**

President: Wally Ward, 701 TC Jester Boulevard, Suite 8102,
Houston, TX wtw3arb@aol.com

President-Elect: Harley Means, Florida Geological Survey, Gunter
Building MS 72, 903 West Tennessee Street,
Tallahassee, FL 32304 Guy.Means@dep.state.fl.us

Past President: Marge Fantozzi, 475 Newhearth Circle, Winter
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Vice President: Paul Roth, PO Box 608, Waldo, FL 32694-0608
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Secretary: Marcia Wright, 1550 Mizell Avenue, Winter Park,
FL 32789 mmorganw@aol.com

Treasurer: Phil Whisler, Florida Museum of Natural History
Box 117800, Gainesville, FL 31611
treasurer.fps@gmail.com

BOARD OF DIRECTORS

Alex Kittle, Gainesville, 2012	Craig Samuel, Weeki Wachee, 2012
Kevin Hutchenson, Melbourne, 2013	Michael Hein, Gainesville, 2014
Joan Herrera, St. Petersburg, 2014	Sara Morey, Frostproof, 2014

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Book Committee:	R. Hulbert
Nominations:	M. Cole
Finance:	P. Whisler, R. Portell
Membership:	A. Kittle
Honorary Members and Awards:	B. Toomey
Board of Editors:	A. Kittle, J. Herrera, R. Hulbert
Resident Agent:	R. Portell

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LIFE MEMBERS

Barbara Fite
Joan Herrera
Richard Hulbert
Roger Portell
James Toomey
Barbara Toomey

INFORMATION, MEMBERSHIP, AND PUBLICATIONS

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Field Trip Report: Possum Creek, Gainesville, FL - April 29, 2012

Submitted by Bret M. Boyd

On Sunday morning, nine members gathered at the Paramount Plaza Hotel and set off to collect vertebrate fossils in Gainesville. The group proceeded to Possum Creek in the Northwest section of town. There the creek exposes Miocene sands and clay containing abundant marine vertebrate fossils. Occasionally Plio-Pleistocene mammal-fossils are also found along this creek. Participants had an opportunity to collect from exposed gravel bars, as well as sieve through creek bottom sediments. Fossil shark and ray teeth dominated the finds, along with a few mammal fossils. Fossil sharks teeth found, included Tiger shark (*Galeocerdo* and *Physogaleus*), Snaggletooth shark (*Hemipristis*), Lemon shark (*Negaprion*), and *Carcharhinus* species. Large myliobatoid ray teeth and a partial sawfish (*Pristis*) rostral spine were also found. While many members sieved for larger sharks teeth, some searched for small fossils finding small stingray (*Dasyatis*) and sharks teeth. The group collected for about three hours with all participants finding Miocene sharks' teeth.



Some of the more common fossils from Possum Creek. Photo Credit: Bret Boyd

**Florida Paleontological Society, Inc.
Board Meeting - April 29, 2012
Gainesville, Florida**

Because of the unavoidable absence of both president and president-elect, the board members, by consensus, asked Roger Portell to conduct the meeting. Others present were: Marge Fantozzi, Joan Herrera, Kevin Hutchenson, Alex Kittle, Sara Morey, Paul Roth, Craig Samuel, Phil Whisler, and Marcia Wright.

The banquet evening's auction netted \$399.60 toward the \$1,000/yr Morgan Award. Paul Roth pointed out as a goal for FPS that we would need a minimum of a \$60,000 CD to support the \$1,000 in interest annually needed to make the award self-sustaining. It is important that we find ways to increase revenues to support the award and also to cover more of the expenses in equipment and equipment losses, supplies, and the myriad of incidental costs of the FPS weekends. Considerable and thoughtful discussion followed. Suggestions included soliciting endowments, seeking grants, matching funds, and charging field trip fees as other groups do. Also, the banquet reservations and fieldtrip RSVPs are often late. In an effort to solve both issues, the following motion was made by Sara Morey and seconded by Craig Samuel. **Only current members can go on fieldtrips. There will be a nonrefundable \$45.00 per person fee for the weekend. This fee will include the field trip and the banquet. For those who do not attend the banquet, the fee for the fieldtrip is still \$45 per person. Accompanied by a properly notarized waiver, this non-refundable fee must be paid two weeks in advance of the FPS weekend or by such date as has been set as the deadline.** The motion carried.

In addition, Roger Portell moved and Paul Roth seconded a motion that **the minimum age for future FPS field trips will be 16 years, unless an exception has been made for a particular trip.** The motion carried.

Treasurer, Phil Whisler gave his report and account balances as of 4/27/2012. Roger Portell requested that a complete inventory of FPS items for sale be prepared for the fall meeting. Mr. Whisler agreed and will take care of that.

Roger Portell requested funds for thank-you gifts for the quarry owners that allow FPS to bring members onto their properties to collect. Craig Samuel moved and Marge Fantozzi seconded that

we earmark up to \$200/yr for that purpose. The motion passed.

Roger Portell reported that Anna Janosik continues to maintain the FPS website. The website needs some updating; there are photos of members that are no longer on the board. FPS is also now linked to the Southeastern Geological Society's (SEGS) website.

There are positions on the board that need to be filled. Roger Portell moved and Paul Roth seconded that we select Joan Herrera, a Courtesy Curator of the FLMNH, for a seat on the board. The motion carried.

Roger Portell moved and Marge Fantozzi seconded a motion to extend Sara Morey's board position for two more years; Sara graciously accepted the extension. The motion carried.

Mike Hein was nominated to fill the remaining vacant position on the board and Paul Roth was nominated to fill the vacant Vice President position. Mike Hein was nominated by Craig Samuel and the nomination was seconded by Roger Portell. Paul Roth was nominated by Craig Samuel for VP. Roger Portell seconded the nomination.

The board thanked Paul Roth for the loan of some of his fossils for the FPS display case in Powell Hall of FLMNH this past year. Russell Brown graciously loaned some of his fossils for the next display.

For new business, Paul Roth presented plans and ideas for National Fossil Day - Wednesday, Oct. 17, 2012. He reported that the FPS is now an official partner with the National Park Service for National Fossil Day and requested that the FPS have a booth/table at the festivities on the grounds of the Castillo de San Marcos in St. Augustine. Marcia Wright moved and Kevin Hutchenson seconded a motion to allot up to \$1,000 for expenses for the day's activities. The motion carried. "Jr. Paleontologist" badges from the Park Service will be offered for children and a discussion followed about possibly having small coquina samples as giveaways.

Possible sites for the fall meeting and field trip were discussed, but no decision was made.

The meeting was adjourned at 10:20 AM.

Respectfully submitted,
Marcia M. Wright
Secretary

FLORIDA PALEONTOLOGICAL SOCIETY, INC.

As stated in the Articles of Incorporation, "The purposes of this Corporation shall be to advance the science of Paleontology, especially in Florida, to disseminate knowledge of this subject and to facilitate cooperations of all persons concerned with the history, stratigraphy, evolution, ecology, anatomy, and taxonomy of Florida's past fauna and flora. The Corporation shall also be concerned with the collection and preservation of Florida fossils." (Article III, Section 1).

CODE OF ETHICS**ARTICLE X**

Section 1. Members of the Florida Paleontological Society, Inc., are expected to respect all private and public properties.

Section 2. No member shall collect without appropriate permission on private or public properties.

Section 3. Members should make a sincere effort to keep themselves informed of laws, regulations, and rules on collecting on private or public properties.

Section 4. Members shall not use firearms, blasting equipment or dredging apparatuses without appropriate licenses and permits.

Section 5. Members shall dispose of litter properly.

Section 6. Members shall report to proper state offices any seemingly important paleontological and archaeological sites.

Section 7. Members shall respect and cooperate with field trip leaders or designated authorities in all collecting areas.

Section 8. Members shall appreciate and protect our heritage of natural resources.

Section 9. Members shall conduct themselves in a manner that best represents the Florida Paleontological Society, Inc.

New UF study shows early North Americans lived with extinct giant beasts

UF Press Release by Danielle Torrent
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A new University of Florida study that determined the age of skeletal remains provides evidence humans reached the Western Hemisphere during the last ice age and lived alongside giant extinct mammals.

The study published online in the *Journal of Vertebrate Paleontology* addresses the century-long debate among scientists about whether human and mammal remains found at Vero Beach in the early 1900s date to the same time period. Using rare earth element analysis to measure the concentration of naturally occurring metals absorbed during fossilization, researchers show modern humans in North America co-existed with large extinct mammals about 13,000 years ago, including mammoths, mastodons and giant ground sloths.

"The Vero site is still the only site where there was an abundance of actual human bones, not just artifacts, associated with the animals," said co-author Barbara Purdy, UF anthropology professor emeritus and archaeology curator emeritus at the Florida Museum of Natural History on the UF campus. "Scientists who disputed the age of the human remains in the early 20th century just did not want to believe that people were in the Western Hemisphere that early. And 100 years later, every single book written about the prehistory of North America includes this site and the controversy that still exists."

Following discovery of the fossils in South Florida between 1913 and 1916, some prominent scientists convinced researchers the

ANNUAL DUES for the FPS are \$10.00 for Associate Membership (persons under age 18) and \$20.00 for Full Membership (persons over age 18) and Institutional Subscriptions. Couples may join for \$25.00, and Family Memberships (3 or more persons) are available for \$30.00. Persons interested in FPS membership need only send their names, addresses, and appropriate dues to the Secretary, Florida Paleontological Society, Inc., at the address on page 2. Please make checks payable to the FPS. Members receive the FPS newsletter, *Florida Fossil Invertebrates*, *Fossil Species of Florida*, and other random publications entitled to members.

NEWSLETTER POLICY: All worthy news items, art work, and photographs related to paleontology and various clubs in Florida are welcome. The editors reserve the right not to publish submissions and to edit those which are published. Please address submissions to the Editors, Florida Paleontological Society, Inc. Newsletter, at the address inside the front cover.

human skeletons were from more recent burials and not as old as the animals, a question that remained unanswered because no dating methods existed.

“The uptake of rare earth elements is time-dependent, so an old fossil is going to have very different concentrations of rare earth elements than bones from a more recent human burial,” said lead author Bruce MacFadden, Florida Museum vertebrate paleontology curator. “We found the human remains have statistically the same concentrations of rare earth elements as the fossils.”

The little information known about the first humans to appear in North America is primarily based on bone fragments and artifacts, such as stone points used for hunting. Other sites in California, Montana and Texas show human presence around the same time period based on artifacts, but two nearly complete human skeletons were discovered at the Vero Beach site.

As bones begin to fossilize they absorb elements from the surrounding sediment, and analysis is effective in distinguishing different-aged fossils deposited in the same locality. Instead of radiocarbon dating, which requires the presence of collagen in bones, researchers used mass spectrometry to compare rare earth elements in the specimens because a lack of collagen in the Vero Beach specimens made radiocarbon dating impossible, Purdy said.

Researchers analyzed samples from 24 human bones and 48 animal fossils in the Florida Museum’s collections and determined the specimens were all from the late Pleistocene epoch about 13,000 years ago. While rare earth element analysis method is not as precise as radiocarbon dating, Purdy said the sig-

nificance of human skeletons found in Vero Beach is unquestionable in terms of their presence in the Western Hemisphere.

“It is important to note that they [the authors] did not provide an absolute or chronometric date, rather the geochemistry shows that the trace elemental geochemistry is the same, thus the bones must be of the same age,” said Kenneth Tankersley, an assistant professor in the University of Cincinnati anthropology and geology departments.

Native fauna during the last ice age ranged from extinct jaguars and saber-toothed cats to shrews, mice and squirrels still present in Florida. Researchers speculate humans would have been wanderers much like the animals because there was less fresh water than in later years, Purdy said.

“Humans would have been following the animals for a food supply, but that’s about all we know,” Purdy said. “We know what some of their tools looked like and we know they were hunting the extinct animals but we know practically nothing about their family life, such as how these ancient people raised their children and grieved for their dead.”

Study co-authors include Krista Church of UF and

the University of Texas, and Thomas Stafford Jr., of Stafford Research in Colorado and the University of Copenhagen.

“Vero is a historical context for the development of archaeology – these are the beginnings of the people of America,” MacFadden said. “The site is well-known in the literature but has been discounted, so we’re sort of reviving an understanding of this important locality and using newer techniques to revive the question about the antiquity of the humans.”



Barbara Purdy and Bruce MacFadden, inspect an ankle-bone of a giant ground sloth unearthed at Vero Beach in the early 1900s. Photo credit: Kristen Grace (FLMNH)

UF receives \$455,000 grant to curate, digitize vertebrate fossils

UF Press Release by Danielle Torrent
dtorrent@flmnh.ufl.edu

University of Florida scientists will use a new National Science Foundation grant to prepare vertebrate paleontology specimens at the Florida Museum of Natural History, which houses the nation's third-largest collection of cataloged vertebrate fossils.

The \$455,000 three-year project includes preparing 2-million-year-old skeletons recovered from a limestone quarry near Newberry, Fla., a recently donated private collection of more than 40,000 Florida specimens and others recently collected during the expansion of the Panama Canal in Central America. Many specimens from

these sites have already been the subject of published research, including ground sloths the size of bull elephants, armadillos the size of wolves, saber-toothed cats and the oldest known porcupine skeleton. The Florida Museum's collection is the most comprehensive for fossil vertebrates found in the eastern U.S. and circum-Caribbean Basin spanning the last 65 million years.

"Not only does this grant provide much needed

support for curation of significant specimens but also for critical digitization of our collections," said vertebrate paleontology associate curator Jonathan Bloch. "Using high-resolution digital photography, three-dimensional laser-scanning and even video, we will make our collections available to everyone in the world with an Internet connection."

The grant will allow for rapid curation of specimens that otherwise would have taken many years to accomplish, said museum vertebrate paleontology collection manager Richard Hulbert. Researchers are also using a 3-D scanner that laser scans and digitizes fossils for analysis.

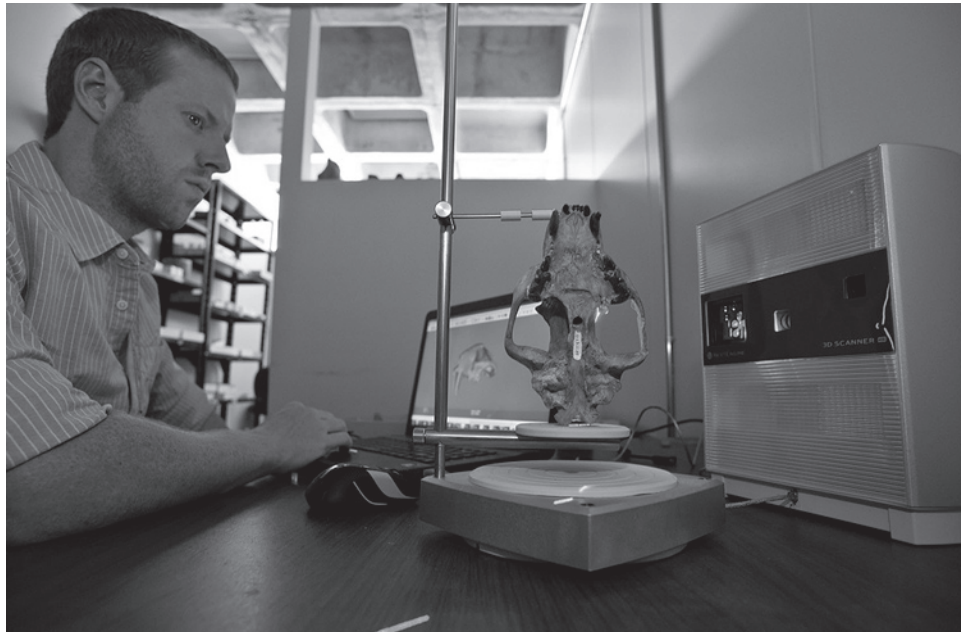
"The 3-D scanner allows researchers to understand comparisons of specimens in different ways," Bloch said.

The Haile 7G Collection, which Hulbert describes as "the most important find of its age in the last

40 years," was recovered from a limestone quarry near Newberry from 2005 to 2007. It includes fossils still stored in plaster "jackets" used to carefully remove bones from the earth, which are now beginning to deteriorate, Hulbert said.

"After three years of excavations involving hundreds of volunteers from all around Florida, we ended up with thousands of specimens," Hulbert said. "We brought in fossils and made plaster jackets faster than we could prepare them. This grant is going to help us in curating that collection. Many of these are incredibly valuable to science, and we know there are more great fossils out there."

Collector John Waldrop recently donated the Timberlane Research Organization Collection to the Florida



A researcher scans a 34-million-year-old skull of an extinct species closely related to cats found in the Toadstool Geological Park in Nebraska. Photo credit: Kristen Grace (FLMNH)

Museum and proper cataloging of the specimens is dependent on communication with Waldrop to correctly interpret hand-written field notes and localities, Hulbert said. This collection was the result of 40 years of fieldwork by Waldrop and his students throughout Florida.

"The fact is, we really need Mr. Waldrop's help on occasion to understand where exactly different specimens were found and

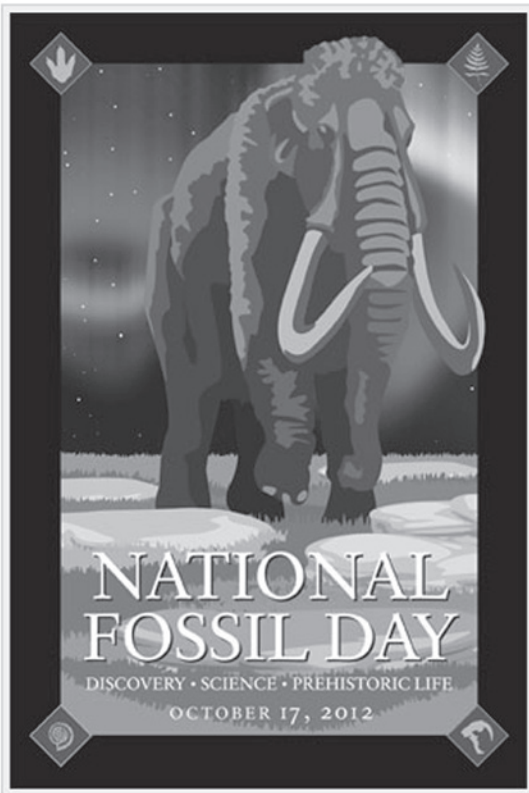
the circumstances around collecting them," Hulbert said. "And that's already proven to be the case – we have fossils from a site that potentially has the oldest land mammals in Florida and we've just been in contact with him for details about the geology. We're working with him on this project and the funding guarantees that we will get this done quickly."

Preparation of specimens from the Panama Canal Fossil Collection is integral for research as well as curation for an exhibit honoring the centennial of the Panama Canal opening, Bloch said.

Researchers intend to expand the Florida Museum's online catalog of specimens by imaging thousands of fossils after they are prepared and curated.

"We're working with NSF's initiative to digitize collections across the board," Bloch said. "Everything that we digitize will be accessible to the public through our database."

National Fossil Day – October 17th 2012



“Fossils At The Fort”

Come Join us on Wednesday October 17th, 2012 to celebrate this year’s National Fossil Day. Learn about Coquina, the “Fossil” that built the fort! Hear guest lecturers talk about its use as a construction material and the fossils that are contained within it. See museum collections of Florida fossils and others from around the world.

Location: Castillo de San Marcos, St. Augustine, FL

Time: 8:45am – 3pm (park open 8:45-5:15)

Cost: Free with park entrance fee (Adults 16 and above \$7.00, Children 15 and under free with adult)

Activities: Speakers, Giveaways, Fossil Displays, Junior Paleontologist Program...



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FPS Product Sales

Prices are for current FPS members only
Shipping and Handling Extra

Hulbert, Fossil Vertebrates of Florida \$31.00
Olsson & Harbison, Pliocene Mollusca \$15.00

Florida Fossil Invertebrates

Part 1, Eocene Echinoids \$7.00
Part 2, Oligocene and Miocene Echinoids \$7.00
Part 3, Pliocene and Pleistocene Echinoids \$7.00
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Part 5, Eocene, Oligocene, and
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Part 7, Larger Foraminifera (Common Taxa) \$7.00
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Part 10, Mollusca (Anastasia Formation) \$10.00
Part 11, Eocene and Oligocene Corals TBA

Part 12, Mollusca (Fort Thompson Formation) \$10.00
Part 13, Mollusca (Bermont Formation) \$10.00
Part 14, Cephalopoda Eocene to Middle Miocene \$10.00

Fossil Species of Florida

Number 1, *Mammut americanum* \$1.00
Number 2, *Tapirus veroensis* \$1.00

T-shirt (Small - XL) \$14.00

Coffee Mug \$4.00

Sales Tax (Florida residents) add 6.25%

To purchase the above items, please visit our website at:

<http://floridapaleosociety.com/publications>

or contact: fps@flmnh.ufl.edu

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Treasurer
Florida Museum of Natural History
Box 117800
University of Florida
Gainesville, Florida 32611-7800

FLORIDA PALEONTOLOGICAL SOCIETY, INC. APPLICATION FOR MEMBERSHIP

Mail completed form to :

Florida Paleontological Society
University of Florida, Box 117800
Gainesville, FL 32611-7800

New _____ Renewal _____

Name _____

Address _____

City _____ State _____ Zip Code _____

Email address _____ Phone Number _____

TYPE OF MEMBERSHIP

- | | |
|--------------------------------------|---------------------------------------|
| 1. INDIVIDUAL ACTIVE (\$20.00) _____ | 2. INSTITUTIONAL (\$20.00) _____ |
| 3. COUPLES (\$25.00) _____ | 4. FAMILY (3 or more \$30.00) _____ |
| 5. LIFE (\$500.00) _____ | 6. ASSOCIATE (under 18 \$10.00) _____ |

NOTE!! MEMBERSHIPS ARE FOR A CALENDAR YEAR AND ARE DUE NO LATER THAN JANUARY 1 EACH YEAR!
PLEASE RENEW ON TIME!

BIOGRAPHICAL FACT SHEET

1. NUMBER OF YEARS OF INTEREST IN PALEONTOLOGY _____
2. WHICH BEST DESCRIBES YOUR STATUS: COLLECTOR _____ OCCASIONAL DEALER _____ FULL TIME DEALER _____ PROFES-
SIONAL POSITION _____ JUST STARTING _____

3. PRIMARY AREAS OF INTEREST:

	VERTEBRATE	INVERTEBRATE	BOTANY	MICRO
PLEISTOCENE	_____	_____	_____	_____
PLIOCENE	_____	_____	_____	_____
MIOCENE	_____	_____	_____	_____
OLIGOCENE	_____	_____	_____	_____
EARLIER	_____	_____	_____	_____

4. LIST ANY PREFERRED TYPES (Echinoids, Crabs, Horses, Sloths, Plants, etc.).

5. LIST ANY PUBLISHED WORKS ON PALEONTOLOGICAL SUBJECTS.

6. DO YOU BUY _____ TRADE _____ FIND _____ FOSSILS?

7. LIST ANY SKILLS OR ABILITIES THAT MAY BE OF USE TO THE SOCIETY'S PROJECTS (RESTORATION, PERPARATION, COM-
PUTER USE, GRAPHICS SKILLS, SPEAKING, PHOTOGRAPHY, PUBLIC RELATIONS, WRITING, FUND RAISING, ETC.).

8. LIST ANY UNUSUAL SPECIMENS FOUND, CIRCUMSTANCES UNDER WHICH THEY WERE LOCATED AND THEIR DISPOSITION.

PLEASE USE AN ADDITIONAL SHEET IF REQUIRED. THANK YOU!

Payments, contributions, or gifts to the Florida Paleontological Society are not deductible as charitable contributions for federal income tax purposes.
Dues payments may be deductible by members as ordinary or necessary business expenses. We recommend that you consult with your tax advisor.

