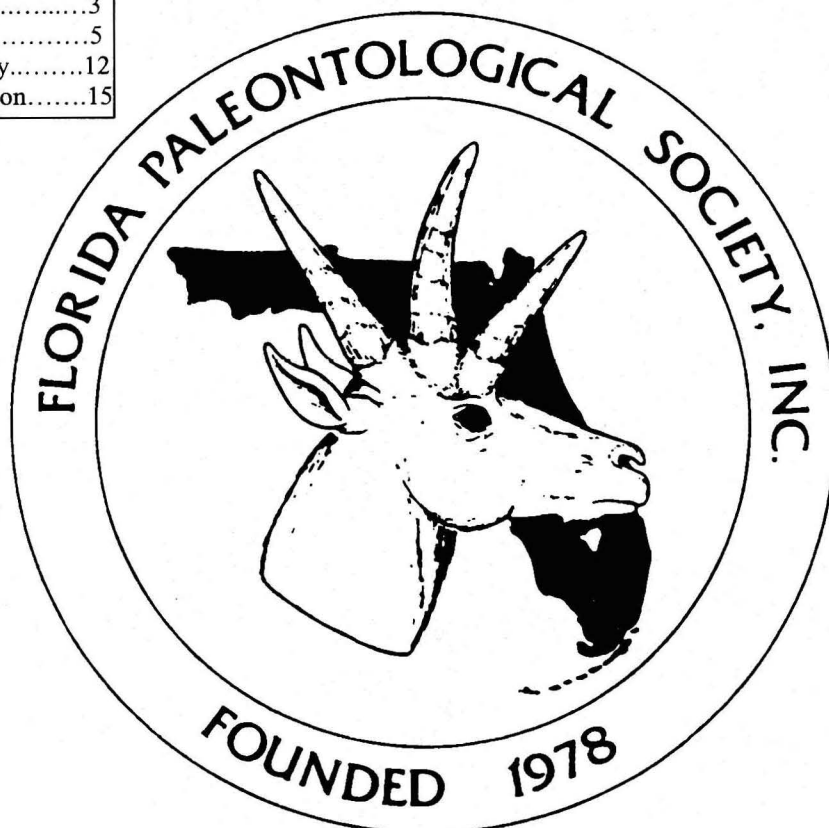


Florida Paleontological Society, Inc. *Newsletter*

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Vote For New Officers!
(see ballot inside)

Volume 16 Number 2 Spring Quarter 1999

FLORIDA PALEONTOLOGICAL SOCIETY, INC

OFFICERS

President:	Terry Sellari, 5555 Pentail Circle Tampa, FL 33625 (813) 968-6820
President-Elect:	Tom Ahern, 629 Gail Ave. Temple Terrace, Florida 33617 (813) 988-4943
Past President:	Gordon Hubbell, 150 Buttonwood Drive Key Biscayne, Florida 33149 (305) 361-5890
Vice President:	Jim Toomey, 6425 28 th Ave. E., Bradenton, FL 34208 (941) 748-4646
Secretary:	Eric Taylor, P.O. Box 3506 Lake City, Florida 32056 (904) 752-6764
Treasurer:	Phil Whisler, Fla. Paleo. Soc., Florida Museum of Natural History, Gainesville, Florida 32611 (352) 335-5550

BOARD OF DIRECTORS

Joyce Bode, Ft. Meade, 1999	Sue Hutchens, Old Town, 2000
Janet Burton, Havana, 1999	Bruce MacFadden, Gainesville, 1999
Douglas Dew, Palatka, 2000	Roger Portell, Gainesville, 2000
Barbara Fite, Lutz, 2000	Joyce Jackson Poulton, Ponte Vedra Bch., 1999
Steve Hutchens, Old Town, 2000	Dean Sligh, Orlando, 1999
Barbara Toomey, Sanibel, 2000	

COMMITTEES AND APPOINTMENTS

Book Committee:	R. Portell, B. MacFadden
Nominations:	G. Hubbell, J. Bode, J. Toomey
Finance:	J. Rupert, P. Whisler, R. Portell
Membership:	Erica Dew
By-Laws:	E. Taylor, R. Miller, B. Macfadden, B. Toomey
Honorary Members and Awards:	T. Sellari, B. Fite, R. Portell, S. Hutchens
Historical:	Tom Ahern
Board of Editors:	R. Portell, F. Rupert, E. Taylor, G. Hubbell
Spring Meeting	Jerry Bond, Christopher Gervais
Fall Meeting	J. Owen, T. Sellari, B. Fite, R. Miller
Resident Agent:	Bruce MacFadden

HONORARY MEMBERS

Anita Brown Lelia and William Brayfield David Webb Gary Morgan Clifford Jeremiah

INFORMATION, MEMBERSHIP, AND PUBLICATION INFORMATION

Please Address: Secretary, Florida Paleontological Society, Inc.
Florida Museum of Natural History
University of Florida
Gainesville, FL 32611

Florida Paleontological Society

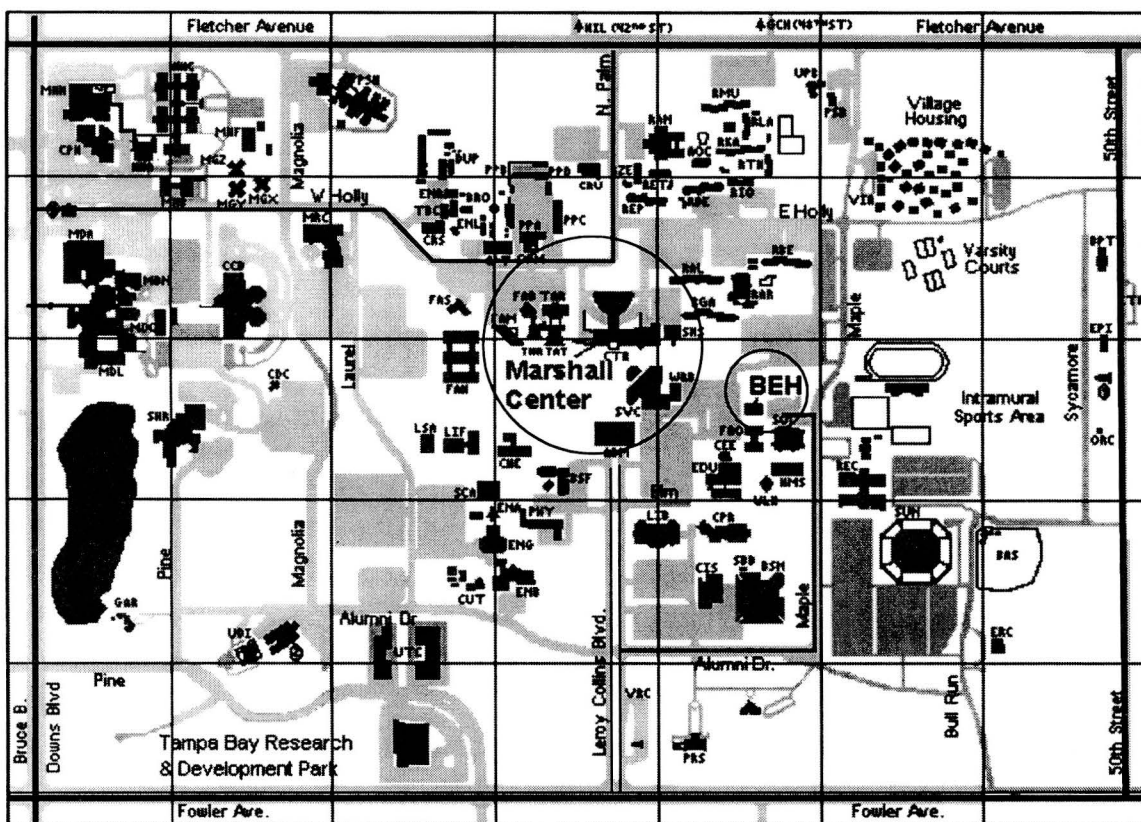
Fall Meeting Information

Saturday, November 20th, 1999

University of South Florida, Tampa, Florida

Behavioral Sciences Building (BEH) Room 103

Banquet/auction at Marshall Center (CTR) Room 270



USF Campus Map

Tentative Schedule of Events

November 20, 1999

- 9:00 – 10:30AM Coffee, doughnuts, Board Meeting, at BEH
- 10:30 – 12:00PM Fall Business Meeting

Events, continued:

- 12:00 – 1:30PM** **Lunch on your own**
- 1:30 – 3:30PM** **Paleontology presentations – guest speakers.**
- 3:30 – 6:00PM** **Paleo comraderie, mingling, and show and tell**
- 6:30 – 7:30PM** **Catered italian banquet dinner**
at USF Marshall Center (CTR) Room 270. Serving: Buffet
Dinner- Oven Roasted chicken, sides to include angel hair pasta,
oven roasted potatoes, fresh vegetable medley;
Salads-tossed or broccoli salad.
Dessert: peach cobbler.
Beverage: coffee or tea
Payment: Adults \$15.00, Children (6-12 years) \$7.50.
Make checks payable to Florida Paleontological Society
Send prepayment to:
Terry Sellari
5555 Pentail Circle
Tampa, FL 33625
- 7:30PM - ??** **Silent Auction during dinner. Regular Fossil Auction after,**
featuring casts by Tony Estevez (bring your donations too!).
Marshall Center Room 270.

ACCOMODATIONS (all 3 hotels listed give AAA discounts)

Days Inn Tampa North- 1 person \$48-65 and 2 persons \$54-\$71.
Located just east of I-275, exit 35, 701 E. Fletcher Avenue.
Phone 813-977-1550.

Holiday Inn Express- 1 or 2 persons \$60-80.
Located off I-275, exit 36 just west on Bearss Avenue, 400 E. Bearss.
Phone 813-961-1000.

Shoney's Inn- 1 person \$55-65, 2 persons \$59-71.
Located 2 miles from USF, off I-75, exit 54, 0.5 miles west on SR 582, 8602 Morris
Bridge Road.
Phone 813-985-8525.

**Florida Paleontological Society
1999 Officer and Board Member Ballot**

Please indicate your choices by placing an "X" in the boxes provided. Terms of office are for two years.

Secretary

Anita Akin

Treasurer

George Hecht

Board of Directors

Ted Akin

Joyce Bode

Jerry Bond

Bruce MacFadden

Frank Rupert

Eric Taylor

Please mark your ballot, remove ballot from newsletter and fold on lines indicated with the Museum address showing. Tape shut and mail or bring it with you to the Fall Meeting. You may return this ballot in your own envelope if you wish.

fold



**Florida Paleontological Society
Florida Museum of Natural History
Museum Road
University of Florida
Gainesville, FL 32611**

BALLOT

fold

FLORIDA PALEONTOLOGICAL SOCIETY, INC.

(Proposed) BY-LAWS

(NOVEMBER 1978 REVISED OCTOBER 1985, JANUARY 1995, currently under review)

Note:

~~Strikeout~~ = original wording to be deleted

Bold italics = new wording to be added

ARTICLE I

NAME AND TITLE

The name and title of this corporation shall be the FLORIDA PALEONTOLOGICAL SOCIETY, INC., and shall be located at the Florida State Museum, University of Florida, Gainesville, Florida 32611. The Corporation may have such other offices as the Board of Directors may determine, or as the affairs of the Corporation may require.

ARTICLE II

MEMBERSHIP

Section 1. Any natural person who has attained the age of 18 years may apply for Membership in the Corporation by submitting a completed Membership Application to the Secretary of the Corporation. ~~The Board of Directors shall ascertain whether the applicant is qualified for Membership under Article IV of the Articles of Incorporation, and upon so finding shall declare such applicant elected.~~ Regular Members may hold office in the Corporation and may exercise all voting rights, and shall enjoy all other benefits conferred upon regular Members by the By-Laws. *The following membership categories apply to such persons:*

A. Active Member - any individual natural person who has attained the age of 18. The Board of Directors shall ascertain whether the applicant is qualified for Membership under Article IV of the Articles of Incorporation, and upon so finding shall declare such applicant elected. Active Members may hold office in the Corporation, may exercise all voting rights, and shall enjoy all other benefits conferred upon Active Members by the By-Laws.

B. Couple - two natural persons, both of whom qualify as Active Members and who reside at the same mailing address. Both individual's names must disclosed to the Secretary of the Corporation. The Board of Directors shall ascertain whether the applicants are qualified for Membership under Article IV of the Articles of Incorporation, and upon so finding shall declare such applicants elected. A Couple Membership shall enjoy all benefits conferred upon Active Members by the By-Laws.

C. Family - two or more related natural persons, at least one of whom qualifies as an Active Member, and who reside at the same mailing address. All individual family member names must be disclosed to the Secretary of the Corporation. The Board of Directors shall ascertain whether the applicants are qualified for Membership under Article IV of the Articles of Incorporation, and upon so finding shall declare such applicants elected. Individuals of the family who qualify as Active Members may vote, and a Family Membership shall enjoy all other benefits conferred upon Active Members by the By-Laws.

D. Subscriber - Any person who wishes to receive the publications of the Society and otherwise take no active part in the affairs or to have voting rights may do so by enrolling as a Subscribing Member at the same rate as that charged an Active member. Such person may not hold office, vote, or participate in the activities of the Society. To change his or her status the subscriber must inform the Secretary of his or her desire to do so.

Section 2. Any person who has not yet attained the age of 18 years may apply for Associate ***Junior*** Membership in the Corporation by submitting completed Associate Membership application to the secretary. The Board of Directors shall ascertain whether the applicant is qualified *eligible* for Membership and upon so finding shall declare such applicant elected. The Secretary shall promptly notify new Associate ***Junior*** Members of their election. Associate ***Junior*** Members shall have all the benefits of Active Membership, except the right to vote and the right to hold office.

Section 3. The Board of Directors, by affirmative vote of two-thirds of its Members, may, after an appropriate hearing, suspend or expel a Member ~~or Associate Member~~ for cause. "Cause" is here defined as open and notorious conduct which may be associated in the mind of the public with the Florida Paleontological Society and which can reasonably be expected to injure the reputation of the Society.

Section 4. Any Member may resign by filing a written resignation with the Secretary, but such resignation shall not relieve the Member so resigning of the obligation to pay any dues theretofore accrued and unpaid. Any member, so resigning, may rejoin under the provisions of Article II, Section 1 & Section 2.

Section 5. Honorary Membership may be awarded by the Board of Directors to a person who has rendered eminent service to the Society, or to the cause of paleontology. Honorary Membership bears the privileges of individual Membership (except voting privileges) without the payment of dues. Nominations for Honorary Membership may be made by any member of the Society to the Board of Directors at least 30 days prior to the Annual meeting.

ARTICLE III

DUES

Section 1. Annual dues, for the calendar year shall be ~~ten (\$10.00) for Members and five (\$5.00) for Associate Members~~ *determined by a majority vote of the Board of Directors. Any change shall be effective January 1 of the following year.* All dues shall be payable in advance of the first day of January of each year.

Section 2. Notice of payment of Dues shall be printed in the Society's publication (~~Plaster Jacket~~, Newsletter). Arrearage in payment of dues beyond the month of January in any year shall be construed as resignation from the Corporation. A list of paid Members shall be published in the first yearly issue of the Society's publication; new Members to be published in subsequent issues.

Section 3. A Member shall not be entitled to vote on any issue or matter until such time as said dues are paid current.

Section 4. Any institution wishing to receive the Corporation's publications may subscribe at the same rate as an Active Member's annual dues, but shall not be eligible to hold office nor have voting rights.

ARTICLE IV

MEETINGS

Section 1. An Annual meeting of the Members shall be held on a Saturday ~~in the month of October~~ *during the months of September, October, or November* of each year, beginning with the year ~~1979~~ *1995*, at which meeting the Members shall elect the Directors and Officers for the coming year *if required*, and for the transaction of such other business as may come before the meeting. The hour and date of said meeting shall be fixed by the Board of Directors, *or their designee*.

Section 2. Special Meetings of the Members may be called by the President, the Board of Directors, or by not less than one-tenth of the Members having voting rights.

Section 3. The Board of Directors may designate any place within the State of Florida as the location for any Annual or Special Meeting called by the Board of Directors. If no designation is made, or if a Special Meeting be called other than by the Board of Directors, the place of meeting shall be at the principle office of the Corporation in the State of Florida.

Section 4. Written or printed notice stating time, place and purpose for any Special Meeting of the Members shall be delivered to each member either personally, by mail, *or by other electronic means* by the Secretary of the Corporation, not less than thirty not more than sixty days prior to the date of such meeting. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail, with postage paid thereon, addressed to a Member at such Member's address appearing on the records of the Corporation.

Section 5. Nominations of candidates for office, in addition to those presented by the Nominating Committee, may be submitted to the Secretary in writing no later than September 1, of each year, and any such nominations received shall be

noted on at the Annual Meeting. Nominations from the floor shall not be permitted and shall be ruled out of order by the President.

Section 6. Election of Officers and Directors shall be by sealed ballots at the Annual Meeting of the Corporation, which ballots shall be counted by the Election Committee, and the election results announced at the Annual Meeting. Ballots will be mailed to all eligible Members with an enclosed self-addressed envelope marked "Ballot" forty-five (45) days prior to the Annual Meeting. All ballots must be in the hands of the Secretary prior to 9:00 AM on the day of the Annual Meeting with the signature and return address of the member in the upper left hand corner of the ballot envelope in order to be counted.

Section 7. One-tenth (1/10) of the Corporation's Membership shall constitute a quorum at any meeting of the Membership. If a quorum is not present, a majority of the Members present may adjourn the meeting without further notice.

Section 8. A majority of the votes of the Members at any meeting where a quorum is present shall be necessary for the adoption of any matters coming before them, unless a greater proportion is required by law, the Articles of Incorporation, or these By-Laws.

Section 9(a). Matters which require urgency and approval by the general Membership may be noted upon by the Membership through the mail *or by electronic means*, provided each eligible member is mailed a copy of the items to be noted upon and a ballot for voting such items. A deadline of at least one month shall be set for the return of said ballots.

9(b). Matters which require urgency and approval by the Board of Directors may be noted upon by the Members of the Board of Directors through the mail *or by electronic means*, provided each eligible member is mailed a copy of the items to be voted upon and a ballot for voting such items. A deadline of at least one month shall be set for the return of said ballots.

Section 10. The Board of Directors shall hold two regular meetings annually. One regular Annual Meeting shall be held without notice other than this By-Law, on the same day and at the same place as the Annual Membership Meeting. The Board of Directors may provide by resolution the time and place for the additional regular Annual Meeting of the Board without other notice being necessary.

Section 11. Notice of any Special Meeting of the Board shall be given at least thirty days prior thereto by written notice delivered personally or by mail or telegram to each Director at the address shown on the records of the Corporation.

Section 12. A majority of the Board of Directors shall constitute a quorum for transaction of business at any meeting of the Board; but if less than a quorum is present at said meeting, a majority of the Directors present may adjourn the meeting without further notice.

Section 13. The act of a majority of the Directors present at a meeting and whereby a quorum is present, shall be the act of the Board of Directors, unless the act of a greater number is required by law, the Articles of Incorporation, or these By-Laws.

Section 14. All meetings of the Members and of the Board of Directors of the Corporation shall be conducted in accordance with Roberts' Rules of Order, Newly Revised.

ARTICLE V

BOARD OF DIRECTORS

Section 1. The affairs of the Corporation shall be managed by its Board of Directors. To be eligible for election, Directors must be Members of the Corporation in good standing.

Section 2. Commencing with these first Annual Meeting of the Members, the Board of Directors shall consist of not less than ten nor more than seventeen persons.

Section 3. The Board of Directors shall consist of the President, President-Elect, Vice-President, Secretary, Treasurer, Immediate Past-President, and a current Curator of the Florida State Museum (appointed by the Director of the Museum). Additionally, there shall be not less than three (3) nor more than ten (10) other directors who shall serve staggered three year terms.

Section 4. No salary shall be received by the Members of the Board of Directors for their services in such capacity. However, by resolution of the Board of Directors, expenses of attendance, if any, may be allowed for each Regular or Special Meeting of the Board.

Section 5. Any vacancy occurring on the Board of Directors may be filled by the affirmative vote of a majority of the Board of Directors though less than a quorum of the Board. A Director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office or until his or her successor is duly elected.

ARTICLE VI

OFFICERS

Section 1. Commencing with the first Annual Meeting of the Members, the Officers of the Corporation shall be: President, President-Elect, Vice-President, Secretary, and Treasurer, all of whom (except as herein provided) shall be elected by the Members from among themselves at each Annual Meeting *held in even numbered years*. After the first Annual Meeting the President-Elect shall automatically assume the office of President for the ensuing year *term* and there shall be no election for the office of President.

Section 2. Each Officer shall assume office immediately upon election and shall hold such office *for a term of two years until the Annual Meetings of the Members held in even numbered years* or until a successor has been duly elected or appointed.

Section 3. A vacancy in any office because of death, resignation, removal or otherwise may be filled by the Board of Directors for the unexpired portion of the term.

Section 4. The President shall be the principal executive officer of the Corporation and shall in general supervise and control the business and affairs of the Corporation. He shall preside at all meetings of the Members, and of the Board of Directors. At each Annual Meeting of the Members, the President shall render a report of his activities and those of the Board of Directors during his tenure in office. He may sign, with the Secretary or any other proper Officer of the Corporation authorized by the Board of Directors, any instrument which the Board of Directors has authorized to be executed, except when the signing and execution thereof shall be expressly delegated by the Board of Directors or by these By-Laws or by Statute to some other Officer or Agent of the Corporation. The President shall establish needed committees and appoint chairpersons thereof; and, in general, perform all duties incident to the office of President and such other duties prescribed by the Board of Directors.

Section 5. The Vice-President, in the absence of the President or in the event of the President's inability or refusal to act, shall perform the duties of the President, and when so acting shall have all the powers of and be subject to all the restrictions upon the President. The Vice-President shall perform such other duties as may be assigned to him by the President or the Board of Directors.

Section 6. The President-Elect shall assist the President in any fashion as the President may deem necessary, and in the absence of both the President and the Vice-President, or in the event of their inability or refusal to act, the President-Elect shall assume all the privileges and perform all the duties of the President, and when so acting shall have all the powers of and be subject to all the restrictions upon the President.

Section 7. The Secretary shall keep the Minutes of the meetings of the Members and the Board of Directors in one or more books provided for that purpose; maintain the Minutes of Committee Meetings when those Minutes are submitted by committees; see that all notices are duly given in accordance with the provisions of these By-Laws or as required by law; prepare and mail notices of meetings, Minutes, proxy forms, ballots and all other correspondence of the Corporation, act as custodian of the Corporate records and seal of the Corporation and see that the seal of the Corporation is affixed to all documents as authorized by the provisions of these By-Laws; issue Membership cards as approved by the Board of Directors, keep a register of the mailing address of each Member, maintain files on all Corporation activities, and in general, perform all duties incident to the office of Secretary and such other duties assigned by the President or Board of Directors. The Board may authorize hiring the services of a competent person, who need not be a Member of the Corporation, to assist the Secretary.

Section 8. The Treasurer shall have charge and custody of and be responsible for all funds and securities of the Corporation; receive and give receipts for monies due or paid to the Corporation from whatever source; deposit such funds in the name of

the Corporation in such banks, trust companies or other depositories as shall be selected in accordance with the provisions of Article VII of these By-Laws; disburse Corporation funds "in accordance with the Corporation's budget or as directed by the Board of Directors; keep full and accurate fiscal accounts; submit a complete annual financial statement at the Annual Meeting of the Members of the Corporation; prepare, at the direction of the Board of Directors, an annual budget for the corporation; issue dues notices and collect all dues and financial contributions to the Corporation; and, in general, perform all duties incident to the Office of Treasurer or such other duties assigned to him by the President or Board of Directors. If required by the Board, the Treasurer shall give bond for the faithful discharge of his duties in such sum and with surety or sureties as determined by the Board, cost of which surety shall be paid by the Corporation. Some or all of the duties of the Treasurer any, upon recommendation of the Board, be contracted out to a Certified Public Accountant or appropriate agency.

ARTICLE VII

COMMITTEES

Section 1. The President shall appoint all committees and designate their chairpersons.

Section 2. The President shall appoint a Publications Committee and a chairperson who shall be designated as Editor. The Editor shall be responsible for the publications of the Corporation, subject to the direction of the Board of Directors.

Section 3. The President shall appoint a Historical Committee and a chairperson who shall be designated as the Historian of the Corporation. He shall maintain the Corporation's Archives and shall correspond with its Members and others on matters of Paleontological significance.

Section 4. The President, at least two months prior to the Annual Meeting shall appoint an Auditing Committee to consist of three Members of the Corporation, none of whom shall be an Officer or Member of the Board of Directors of the Corporation for the current year. The Auditing Committee shall carefully examine the Corporation's financial records and submit a report to the Members at the Annual Meeting.

Section 5. The President, prior to June 1 of each year, shall appoint a Nominating Committee to consist of the most recent Past-President of the Corporation, as chairperson, and two Members, which Committee shall, prior to July 1 of each year, submit to the Secretary of the Corporation a list of the Committee's nominees. The Secretary, not later than July 31 of each year, shall publish and distribute to all Members the names of the Nominating Committee's nominees, with a brief biographical sketch of each nominee.

Section 6. The President shall appoint an Election Committee of at least three (3) Members present at the Annual Meeting for the purpose of counting election ballots. No member who has been nominated for office in that election will be a member of this committee.

ARTICLE VIII

CONTRACTS, CHECKS, DEPOSITS, FUNDS

Section 1. The Board of Directors may authorize the President of the Corporation to enter into any contract, or execute and deliver any instrument, in the name of and on behalf of the Corporation.

Section 2. All checks, drafts or orders for the payment of money issued in the name of the Corporation shall require any two (2) signatures of the following officers: President, Vice-President, and Treasurer.

Section 3. The Board of Directors may accept on behalf of the Corporation any contribution, gift, bequest or devise for the general or special purposes of the Corporation.

Section 4. The fiscal year of the Corporation shall begin on the first day of January and end on the last day of December, in each year.

ARTICLE IX

CODE OF ETHICS

Section 1. A Member of the Florida Paleontological Society is expected to strive to increase his own knowledge of paleontology, particularly to Florida prehistory.

Section 2. A Member is expected to share his knowledge with fellow Members and with the public to encourage the study of paleontology.

Section 3. A Member is expected to share significant information with professional paleontologist so that important data is not lost to science.

Section 4. A Member is expected to make fossil material available for examination, under reasonable terms and conditions, by professional and non-professional Members in order to further the study of paleontology.

Section 5. A Member who is a professional paleontologist is expected to deal with non-professional Members in a helpful supportive manner.

Section 6. A Member is expected to be sensitive to ecological concerns when doing field work.

Section 7. A Member is expected to conduct his paleontological activities in such a manner that the Florida Paleontological Society will not be brought into disrepute.

ARTICLE X

AMENDMENT OF BY-LAWS

Section 1. Prior to the annual Meeting of the Members in 1979, these By-Laws may be amended, rescinded, altered or added to by a majority vote of the Board of Directors. The By-Laws adopted by the Members at the first Annual Meeting of the Corporation in the year 1979 may thereafter be amended, rescinded, altered or added to by a majority of the Members at any meeting where a quorum is present, and when written notice of such intended action has been given to all Members in advance of such meeting, in accordance with the By-Laws.

ARTICLE XI

CHAPTERS OF THE SOCIETY

Section 1. Status as a chapter of the Florida Paleontological Society is open to any group of at least ten (10) person who:

- a) As individuals meet the qualifications for Membership in the Society;
- b) Band together for establishment of a local (city, county, or area) organization to pursue the objectives of the Society, as well as for the purpose of their own, so long as such purposes are not contrary to the Constitution of the Society.
- c) Request formal recognition by the Society as a chapter.
- d) Adopt a Constitution and By-Laws (not in conflict with the Society's Constitution and By-Laws) to provide efficient operation of the chapter.
- e) Agree that all Members of the chapter shall maintain Membership in the Florida Paleontological Society, Inc.

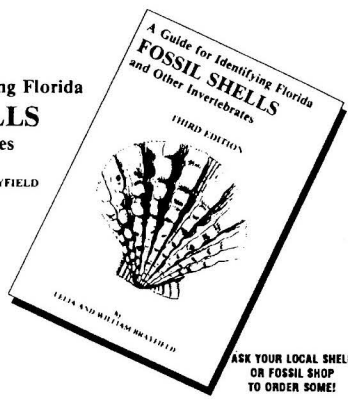
Section 2. Application for chapter status shall be made by the interested group to the Board of Directors of the Society. Upon majority vote of approval, the Board of Directors shall instruct the Secretary to issue formal recognition to the chapter.

These By-Laws were adopted by the initial Board of Directors of the Corporation on November 20, 1978; last amended October 5, 1985 at the Annual Meeting of the Corporation.

FPS Books and Supplies

New Edition!

A Guide for Identifying Florida FOSSIL SHELLS and Other Invertebrates
by LELIA AND WILLIAM BRAYFIELD



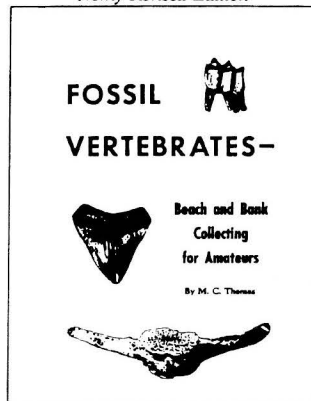
Updated by the staff of the Invertebrate Paleontology Division, Florida Museum of Natural History.

"Our hope is that collectors of Florida fossils will continue to enjoy the Brayfields' book, find this edition more useful than ever in identifying their specimens, and feel that we have been faithful to the authors with our revision."
Dr. Douglas S. Jones, Roger W. Portell and Kevin S. Schindler.

\$5.97 each plus shipping

Newly Revised Edition

FOSSIL VERTEBRATES—



Beach and Bank Collecting for Amateurs
By M. C. Thomas

Take It With You!

- Use this guide to help you get started as an amateur collecting fossils on the coastal beaches or on spoil bank deposits.
- Attractively presented 72 page book explains the exciting **Where, When, How and Why** of beginning this hobby and of understanding the ancient past.
- High quality photographic illustrations for comparison.

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The Florida Paleontological Society
Florida Museum of Natural History
University of Florida
Gainesville, FL 32611
\$3.75 plus shipping

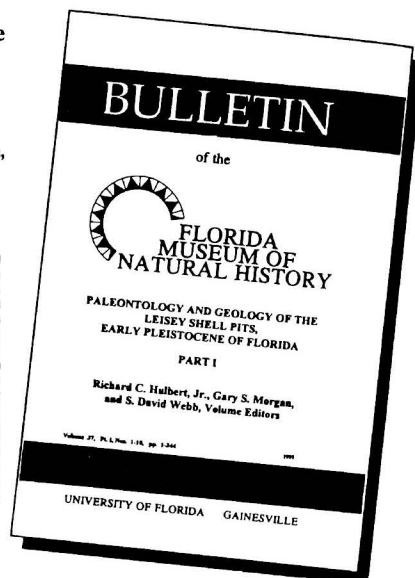
Paleontology and Geology of the Leisey Shell Pits, Early Pleistocene of Florida

Volume Editors:
Richard C. Hulbert, Jr., Gary S. Morgan, and S. David Webb

Bulletin Editors:
F. Wayne King and Rhoda J. Bryant

For the last two decades the Leisey Shell Corporation has operated several pits along Tampa Bay. Draglines unearthed numerous invertebrate fossils and, occasionally, vertebrate fossils. The spoil piles and quarry walls were periodically explored by several avocational paleontologists. In 1983 a tremendous concentration of fossil bones was exposed. Quarrying in the area ceased, thanks to the cooperation of the owner, C.E. "Bud" Leisey, Jr., and manager, Eric Hunter. In 1984, after meetings among representatives of the Florida Museum of Natural History (FLMNH), Leisey Shell Corporation and avocational paleontologists, a major operation was planned. The owners subsequently transferred ownership of the fossils to FLMNH. That Spring major excavations resumed as a cooperative effort among the FLMNH, the Tampa Bay Mineral and Science Club, and the Leisey Shell Corporation. The dig has attracted the attention of local, state, and national news media, including a spot on NBC's "Today Show", an article in Newsweek magazine, and a lengthy Sunday feature in the Tampa Tribune.

Publication Date: March 1995

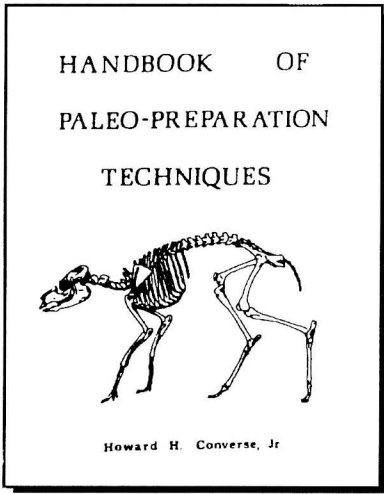


Bibliographic Data

1995 Volume 37, Part I	352 pages	21 halftones	40 line diagrams	numerous tables
1995 Volume 37, Part II	324 pages	40 halftones	26 line diagrams	numerous tables

FPS Members may order this set for \$25.00 plus \$3.00 shipping and handling. Please indicate the number of copies desired, and include your name and complete mailing address with your order. Make check or money order payable to Florida Paleontological Society.

HANDBOOK OF PALEO-PREPARATION TECHNIQUES



An FPS classic; \$6.50 each plus postage

Order and Shipping Information

- All books require a minimum order of 10.
- Terms: 30 days Net from billing
- Shipping Charges will be calculated on the total number of items ordered

Send orders/inquiries to:
Florida Paleontological Society
Florida Museum of Natural History, Powell Hall
University of Florida
Gainesville, FL 32601

Butvar™ specimen consolidant
by the one pound bag
\$7.50 ea.



Geology of the Tampa Bay, Florida Area with Notes on Some Classic Paleontological Sites

Frank Rupert
Florida Geological Survey

The Tampa Bay area of Florida's west coast is part of a broad, gently-terraced plain known as the Coastal Lowlands (Scott, 1999 in preparation). This region was flooded by high-standing seas several times during the Pleistocene Epoch (about 1.8 million to about 10,000 years ago). The Pleistocene, or "Ice Age", was characterized by multiple cold glacial periods with intervening warmer interglacial periods. During peak glacial times, the world's oceans were at least 300 feet lower than modern sea level. Along Florida's west coast, the Gulf shoreline was 30 to 40 miles west of its modern position. Warm interglacial periods caused melting of the ice sheets, and sea level rose. Maximum sea levels attained during the Pleistocene were about 60 feet above modern mean sea level, making much of the Tampa Bay area sea bottom. The final glacial period ended about 18,000 years ago as global temperatures began to rise again. At that time, the Gulf waters once again began a gentle landward transgression reaching modern levels during the Holocene Epoch, about 6,000 years ago.

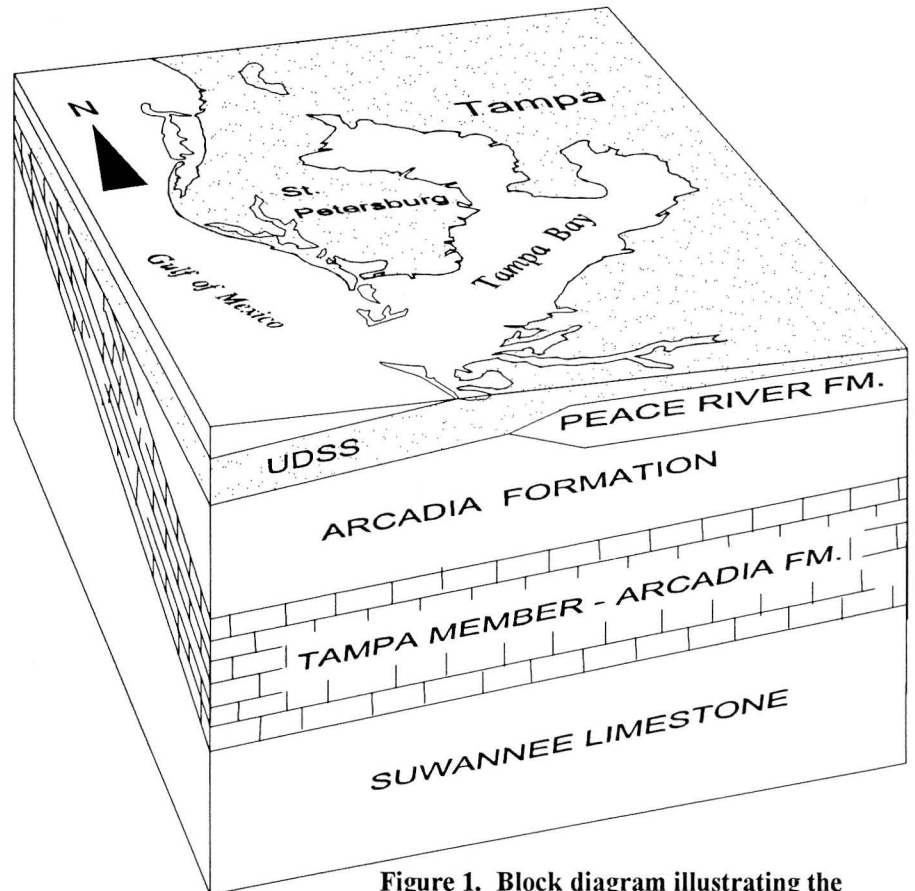


Figure 1. Block diagram illustrating the generalized stratigraphy of the Tampa bay area.

Much is still unknown about the age and geologic history of Tampa Bay. Ancestral streams of the Hillsborough, Alafia, and Manatee Rivers likely cut deep valleys in the older strata underlying the area as they sought base level with the much-lowered sea levels during glacial times. During interglacial periods, the rising Gulf waters would have filled the incised stream valleys, forming the large estuarine embayment know known as Tampa Bay.

As a result of the Bay Area's close association with the sea, the predominant surface sediment is relict marine quartz sand. The sand was originally carried southward from the eroding Appalachian mountains into Florida, as long ago as the Late Oligocene, by rivers and long-shore marine currents. Later the sand was reworked and deposited by the waves and currents in the Pleistocene and Holocene seas. Much of the Pinellas peninsula, which encloses Tampa Bay, probably developed as a marine sand spit shaped by southward flowing littoral currents.

The surficial sands obscure the more interesting older geological units. Figure 1 is a block diagram illustrating the generalized stratigraphy underlying the Tampa Bay area to a depth of about 500 feet below land surface. The deepest unit shown is the Oligocene (about 30 million years ago) Suwannee Limestone. The Suwannee is a pale white to cream colored marine, skeletal limestone and dolostone. It is a unit of the Floridan aquifer system, an important source of potable water. The Suwannee Limestone occurs only in the subsurface locally. However, it rises gently to the surface in a northward direction, and is exposed in limerock quarries north of Tampa.

Immediately overlying the Suwannee Limestone is the Upper Oligocene to Lower Pliocene Hawthorn Group (Scott, 1988). The Hawthorn Group statewide is a lithologically diverse unit, consisting of interbedded quartz sand, clay and carbonates, and nearly always characterized by the presence of phosphate. It has been commercially mined in Florida for many years for its Fullers Earth clay and phosphate deposits. The Hawthorn Group sediments have been a fabulous source of vertebrate fossils. It is locally comprised of several geologic subunits, the Arcadia Formation, the Tampa Member of the Arcadia Formation, and the Peace River Formation.

The Tampa Member is a subdivision of the Arcadia Formation. It underlies most of the region, rising to the shallow subsurface in the Tampa area. The Tampa Member is comprised principally of sandy, clayey, slightly phosphatic limestone and dolostone. Siliceous beds are present in the updip portions. The Ballast Point area of Tampa is a well-known collecting site for silicified (agatized) Miocene corals and molluscs and chert boulders. The type area of the Tampa Member is around northern Tampa Bay, at Ballast Point and Six Mile Creek (Dall and Harris, 1892). However, many of the classical outcrops have been obliterated by urban development.

Overlying the Tampa Member is the Arcadia Formation (Scott, 1988), a unit also composed of sandy, clayey, phosphatic limestone and dolostone. It occurs only in the subsurface in the Tampa Bay area, but in some areas lies at depths of only about 20 feet deep.

The Middle Miocene to Lower Pliocene Peace River Formation (Scott, 1988) is principally restricted to the eastern portion of the Tampa Bay area. Lithologically it is comprised of light gray to olive gray, interbedded quartz sands, clays and carbonates. Perhaps its greatest significance is its economic and fossil content. The Peace River Formation east of Tampa contains the famous Bone Valley Member, historically a source of Miocene and Pliocene vertebrate fossil material as well as commercial phosphate deposits.

Blanketing the Hawthorn Group sediments and forming the surficial deposits throughout the Tampa Bay area are a series of undifferentiated sands and sandy shell beds, with some minor carbonates, referred to as UDSS on Figure 1. These deposits include sediments historically assigned to the Plio-Pleistocene Caloosahatchee Formation, the Pleistocene Belmont and Ft. Thompson Formations, as well as undifferentiated Holocene sediments. Discontinuous outliers of Pliocene Tamiami Formation may also be present under the southern part of the Bay area. All are principally marine in origin but may contain lenses of freshwater deposits representing lowstands of sea level. The high-standing seas of the late Tertiary and Pleistocene transported, deposited, and then reworked quartz sands, forming a veneer of these sediments throughout the region. Fossil molluscs thrived in the shallow seas, as evidenced by the abundant shell deposits observable at Fossil Park in St. Petersburg, the Leisey Pits, as well as in many digging and dredging operations in the bay area. During emergent periods, Pleistocene vertebrates roamed the local landscape. Their bones too become part of the fascinating paleontologic history of the region, and are commonly associated with freshwater sediments.

Some Classical Paleontologic Sites in the Tampa Bay Area

- 1. Ballast Point** – Bayshore Boulevard at Hillsborough Bay, Tampa. The beautifully preserved fossils of the “Silex Beds” at Ballast point have long attracted the attention of both professional and avocational paleontologists. Scientific literature on this unique locale dates back to at least 1846. In this area, the Tampa Member of the Arcadia Formation of the Hawthorn Group (originally the Tampa Limestone) is exposed in the shallow waters along the western shore of Hillsborough Bay. Portions of the rock and its contained fossils, principally molluscs and corals, have been replaced by the mineral silica. The shape and fine structures of the replaced fossils are well preserved as siliceous pseudomorphs. Silicified, or “agatized” coral was designated as Florida’s State Stone by the 1979 Florida legislature. These corals commonly occur as hollow geodes, displaying the fine coral structure on the outside and with botryoidal agate or quartz crystals lining the interior cavity. Today much of the original beach at Ballast Point has been sea-walled, and the large, easy finds are long gone. However, diligent searching in the shallow water still yields silicified molluscs and some small corals.
- 2. Seminole Field** – At Seminole, 2.25 miles south-southwest of Pinellas Park, on Joes Creek, Pinellas County. Excavations in 1924 by property owner Walter Holmes uncovered a vertebrate fossil bed overlying Pleistocene marine sands. Bones from forty-six vertebrate species were collected and sent to the American Museum of Natural History. These were described by Cooke (1926). Drainage ditches had previously exposed Pleistocene shell beds in the area. Fossil molluscs from the Seminole Field area were

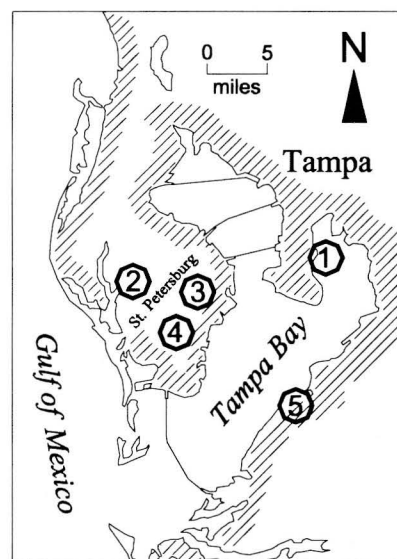


Figure 2. Fossil sites in the Tampa Bay area.

described by Cook and Mossom (1929). Today the area once called Seminole Field is a mature residential community and is largely private property.

3. **Fossil Park** – 9th Street and 70th Avenue North, St. Petersburg. During residential development of north St. Petersburg in 1938, excavations uncovered an extensive shell bed containing a Plio-Pleistocene Caloosahatchee Formation fauna. This fauna is described in Olsson and Harbison (1953). The original discovery site is now in a City Park, and some of the abundant fossil shells may be observed in a drainage ditch bordering the park.
4. **St. Petersburg Times Site** – 13th Avenue North and 31st North, St. Petersburg, Pinellas County. In 1979, during excavation work for the construction of Interstate 275, a late Pliocene (Blancan) vertebrate bone bed was exposed in a barrow pit at this site (Morgan and Ridgeway, 1987). Brian Ridgeway collected fossils from a black, sandy deposit about 40 feet deep in the pit. A semi-indurated shell bed containing a Pliocene Pinecrest Bed invertebrate fauna directly underlies the bone deposit. Only a limited vertebrate collection could be made before the pit flooded. The fauna included terrestrial mammals, snakes, turtles, alligator, fish, and freshwater gastropods.
5. **The Leisey Shell Pits** – Three and a half miles southwest of Ruskin, near Sun City, Hillsborough County. In July 1983 a concentration of early Pleistocene (Irvingtonian) vertebrate fossils was unearthed by a dragline during mining operations. Paleontologist Frank Garcia had originally found abundant vertebrate fossils covering nearby mine spoil piles. Alerted by the fabulous quantity of bones, he traced the fossils back to a richly fossiliferous bone bed in the mine wall (Garcia, 1993). The mine operators delayed mining the deposit while Frank and other amateur paleontologists excavated about a quarter of the estimated 2000 square meters deposit which became known as Leisey 1A. Several collections from the pit were donated to the Museum of Science and Industry in Tampa and to the Florida Museum of Natural History (FLMNH). With the assistance of the Leisey Corporation, excavation of 1A continued in 1984 as a joint effort with the Tampa Bay Mineral and Science Club and the FLMNH. Numerous avocational paleontologists volunteered their time to help with the excavation work, resulting in a much larger collection of material than would have been possible with the limited professional manpower available. Over 50,000 identifiable species were collected.

In 1986, another site at the Leisey property known as 1B was excavated by Frank Garcia and the Tampa Bay Fossil Club. Late in 1986 a third site across the road from 1A, and named Leisey 3A, was discovered by Frank Garcia and also worked largely by avocational paleontologists. At least 203 vertebrate species from four different geological ages were ultimately collected at the Leisey pits. These included sharks, rays, bony fish, amphibians, reptiles, birds and both large and small mammals. The Pleistocene vertebrates came out of deposits referred to the Bermont and Ft. Thompson Formations. Also included in the finds were fossils from the Miocene-Pliocene Arcadia and Peace River Formations. The Pleistocene deposits represent one of the richest early Pleistocene vertebrate faunas in North America. In addition to vertebrate remains, an abundant Pleistocene freshwater and marine invertebrate fauna was present in beds above and below the bone bed. The fauna was dominated by mollusks, but also included sponges, anemones, bryozoans, arthropods, worms, and echinoderms.

The Leisey Shell Pits are perhaps the most significant single site in Florida paleontological history. As mining continues in this area the potential for finding similar future deposits remains high.

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FLORIDA PALEONTOLOGICAL SOCIETY, INC. APPLICATION FOR MEMBERSHIP

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FAMILY AND COUPLES PLEASE LIST NAMES OF ALL APPLICANTS IF NEW. PLEASE COMPLETE PERSONAL FACT SHEET BELOW IF NEW OR CHANGES HAVE OCCURRED SINCE PREVIOUS YEAR.

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BIOGRAPHICAL FACT SHEET

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

3. PRIMARY AREAS OF INTEREST:

<u>VERTEBRATE</u>	<u>INVERTEBRATE</u>	<u>BOTANY</u>	<u>MICRO</u>
PLEISTOCENE _____	_____	_____	_____
PLIOCENE _____	_____	_____	_____
MIOCENE _____	_____	_____	_____
OLIGOCENE _____	_____	_____	_____
EOCENE _____	_____	_____	_____
EARLIER _____	_____	_____	_____

4. LIST ANY PREFERRED TYPES (Horses, Sloths, Echinoids 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, PREPARATION, COMPUTER 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!

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 cooperation 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 IX

- 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.

ANNUAL DUES for the FPS are \$5.00 for Associate Membership (persons under age 18) and \$15.00 for Full Membership (persons over age 18) and Institutional Subscriptions. Couples may join for \$20.00, and Family memberships (3 or more persons) are available for \$25.00. A Sustaining membership is also available for \$50. Persons interested in FPS membership need only send their names, addresses, and appropriate dues to the Secretary, Florida Paleontological Society, Inc., at the address inside the front cover. Please make checks payable to the FPS. Members receive a membership card, the FPS newsletter, the Papers in Florida Paleontology, and other random publications entitled to members.

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