

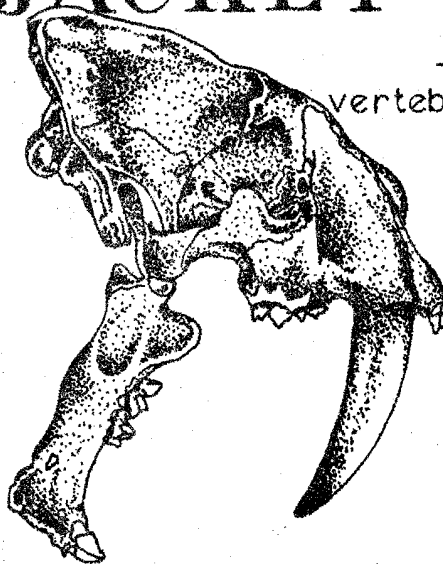
The PLASTER JACKET is a newsletter about fossil vertebrate animals of Florida. Its purpose is to circulate authoritative material on vertebrate paleontology and to foster communication among the growing number of enthusiasts of this subject.

Questions, announcements and other communications are solicited from all readers. Information of general interest will be included in future issues.

It is our intent to produce this series at the rate of about one issue per quarter year. We hope to add as many genuinely interested paleontologists as possible to our mailing list. If you are interested please send your name and address to the PLASTER JACKET. These issues are distributed free of charge to all interested people.

THE PLASTER JACKET
Florida State Museum
University of Florida
Gainesville, Fla. 32601

The PLASTER JACKET



-- about fossil
vertebrates of Florida

- FLORIDA STATE MUSEUM
- UNIVERSITY OF FLORIDA
- GAINESVILLE

NEWS NOTES

As the Plaster Jacket approaches the end of its third year of existence, we at the Museum would like to pause and express our deep appreciation to the many amateur and professional paleontologists in and outside the state of Florida who have been so helpful and cooperative in their attempts to share the rewards and challenges of paleontology with the general public. As our mailing list continues its explosive growth, we cannot help but be gratified by the enthusiastic response on the part of our readers. We hope we can continue to hold your interests for many future issues.

From the outset it has been our policy to solicit comments, questions and other communications from our readers, but to date we have not managed to publicize this sort of information. The present issue is devoted entirely to miscellaneous items of general interest to Florida paleontologists. It should be evident, however, that space limitations prevent us from reporting fully the encouraging flow of news reaching our office.

We would like to begin by acquainting our readers with the professional vertebrate paleontologists of the State of Florida and with their specific academic and research interests and activities. All of these scientists are associated with institutions of this state and are available to the public for identifying and answering questions about Florida's fossil vertebrates (although it is hoped that the Plaster Jacket series will soon enable you to accomplish much of this yourself.) The state is fortunate to have represented such a wide range of paleontological interests: paleoichthyology (fishes), paleoherpetology (amphibians and reptiles), paleoornithology (birds), and paleomammalogy (mammals).

By introducing these scientists to you we hope not only to provide you with an idea of the scope of

vertebrate paleontological research in the State of Florida, but also with a better knowledge of to whom you should address your specific paleontological inquiries.

Dr. Walter Auffenberg, Florida State Museum and Department of Zoology, University of Florida, Gainesville.

During the past few years Dr. Auffenberg's work has centered on the biosystematics of fossil and Recent land tortoises of the world. He has analyzed courtship behavior of several living species, and is presently engaged in several long-term studies on the ecology, life history, population density, color preception, feeding habits and activity cycles of several species of Gopherus. His most recent research emphasizes the interrelation of phylogeny and ecology to behavior and the evolution of behavioral patterns in land tortoises of the world. A number of his publications have dealt with phylogenetic relations of fossil tortoises.

Dr. Pierce Brodkorb, Departments of Zoology and Biological Sciences, University of Florida, Gainesville.

Dr. Brodkorb is interested in the evolution of birds. He has studied Florida avifaunas of Miocene to subrecent age, and he has reported on material ranging back to the Mesozoic era from other areas. Three of the projected five volumes of his Catalogue of Fossil Birds, a standard reference work of world-wide scope, have been published by the Florida State Museum. Among the material which he is currently studying is a large collection of bird bones discovered by the Leakeys at Olduvai Gorge, Tanzania, East Africa. He teaches evolution, ornithology, and zoogeography.

Mr. Stanley J. Olsen, Department of Anthropology, Florida State University, Tallahassee,

Mr. Olsen is actively engaged in research on vertebrate remains from archeological sites, especially

mounds and middens in Florida and refuse deposits from pre-Columbian ruins in the Southwestern United States. He is also completing a comprehensive guide to the identification of vertebrate remains from such deposits. In addition, he is currently studying Miocene and Pleistocene vertebrates in relation to stratigraphic interpretation.

Dr. Thomas H. Patton, Florida State Museum and Department of Zoology, University of Florida, Gainesville.

Dr. Patton's main interests include the systematics, evolution, paleoecology and zoogeography of mammals of the Gulf Coastal Plain and the West Indies. His present research concerns Eocene, Oligocene, and Miocene vertebrate faunas from the gulf coast and Pleistocene faunas in the Greater Antilles. He teaches the graduate seminar in evolution and a course in biostratigraphy.

Dr. W. G. Weaver, Jr., Santa Fe Junior College, Gainesville.

Dr. Weaver's interests include the ecology and behavior of recent reptiles and the osteology and systematics of fossil turtles. Studies currently underway include an evolution of fossil turtles of the genus Chrysemys in Florida.

Dr. David Webb, Florida State Museum and Department of Zoology, University of Florida, Gainesville.

Prior to coming to Florida Dr. Webb studied the evolution of camels and described some Nebraskan Pliocene vertebrate faunas that were particularly rich in carnivores and horses. He is presently studying North American sloths. His principal research areas are the Late Cenozoic mammalian faunas of Florida and Central America. Current field work includes the stratigraphy of the Bone Valley District and underwater collecting of a Pliocene river site. At the University of

Florida, Dr. Webb teaches vertebrate paleontology.

Dr. Elizabeth S. Wing, Florida State Museum, University of Florida, Gainesville.

Dr. Wing is a zooarchaeologist and is presently conducting a program of research based on the study of vertebrate remains excavated from Indian sites in the Southeast and Caribbean. Currently emphasis is being placed on the study of faunal remains from coastal sites in order to gain a better understanding of prehistoric Indian fishing and hunting practices, butchering, cooking techniques and diets as well as prehistoric animal populations.

Dr. Glen E. Woolfenden, Department of Biological Sciences, University of South Florida, Tampa.

Dr. Woolfenden's main interests include ecology and comparative osteology of recent birds. Studies completed by Dr. Woolfenden include the post-cranial osteology of waterfowl, and the fossil avifaunas of Rock Springs and Devil's Den. He is also editor of periodical literature for the Auk.

NOTES FROM AROUND THE STATE

Mr. Edwin S. Hicks reports the following history of the analysis of certain puzzling bones:

"In 1962, when I started collecting fossils on the spoil banks dredged from the St. Johns River, I began picking up curiously shaped, swollen bone lumps about half as large as a ping-pong ball. Not having any idea what they were, I asked other local amateur fossil collectors about them. Most gave me a straightforward "don't know" or "have no idea" but some said they were diseased vertebrae of butterfly fish. However, I noticed that some of the lumps could not possibly be vertebrae and I began studying the bones and their peculiarities in some of the bony fishes.

With retirement, I had much more time to hunt fossils and I found many of these bones. In 1964

Dr. William J. Clench, Curator of Mollusks, Museum of Comparative Zoology at Harvard University, and I were hunting fossils on spoil banks when I showed him some of these curious bones. He passed them on to Dr. Tilly Edinger, Research Paleontologist at the Museum. She was very interested in my material and stated that though much has been written on the subject in Europe, it had been mentioned only twice in American literature in 1850 and 1889.

One of the specimens, a vertebra, was of a type which had been mentioned only by an Austrian paleontologist, who called it Platax arthriticus. This is possibly where the diseased vertebra idea began. The original vertebra is now believed to represent Chaetodon, butterfly fish. Another was a swollen skull bone of Chaetodipterus, another a swollen rostrum from the mouth of a swordfish, and another a skull element referred to Pomadasys.

Dr. Edinger was particularly interested in the last specimen because she had just received two similar bones from the Chicago Natural History Museum for determination. They had puzzled zoologists in both museums. These bones were recent, and from the Indian Ocean. The bones I sent were fossil, possibly from the Upper Miocene, but certainly not later than Pliocene. At about this time Dr. Edinger accepted an invitation to the 50th anniversary of her Alma Mater, Frankfurt a. M. University. She took 16 specimens of the peculiar inflated fish bones, including 6 of mine, for comparison with specimens in the Frankfurt Museum.

The unusual development of this skull element has been found only in Pomadasys hasta - - not even in closely related species of the family Pomadasyidae. The skull of juvenile specimens of P. hasta is like that of other species, but in subadults the bones have already merged and tend to assume the described shape. As this always seems to develop in a similar way, it should not be regarded as pathological.

On the other hand, according to Dr. Edinger, the other bone lumps from the ribs, vertebrae, and above the skull, occur in many fish families. After much research on the subject, Dr. Edinger came to the conclusion that these swollen bones are not pathological, and they seem to do the fish no harm.

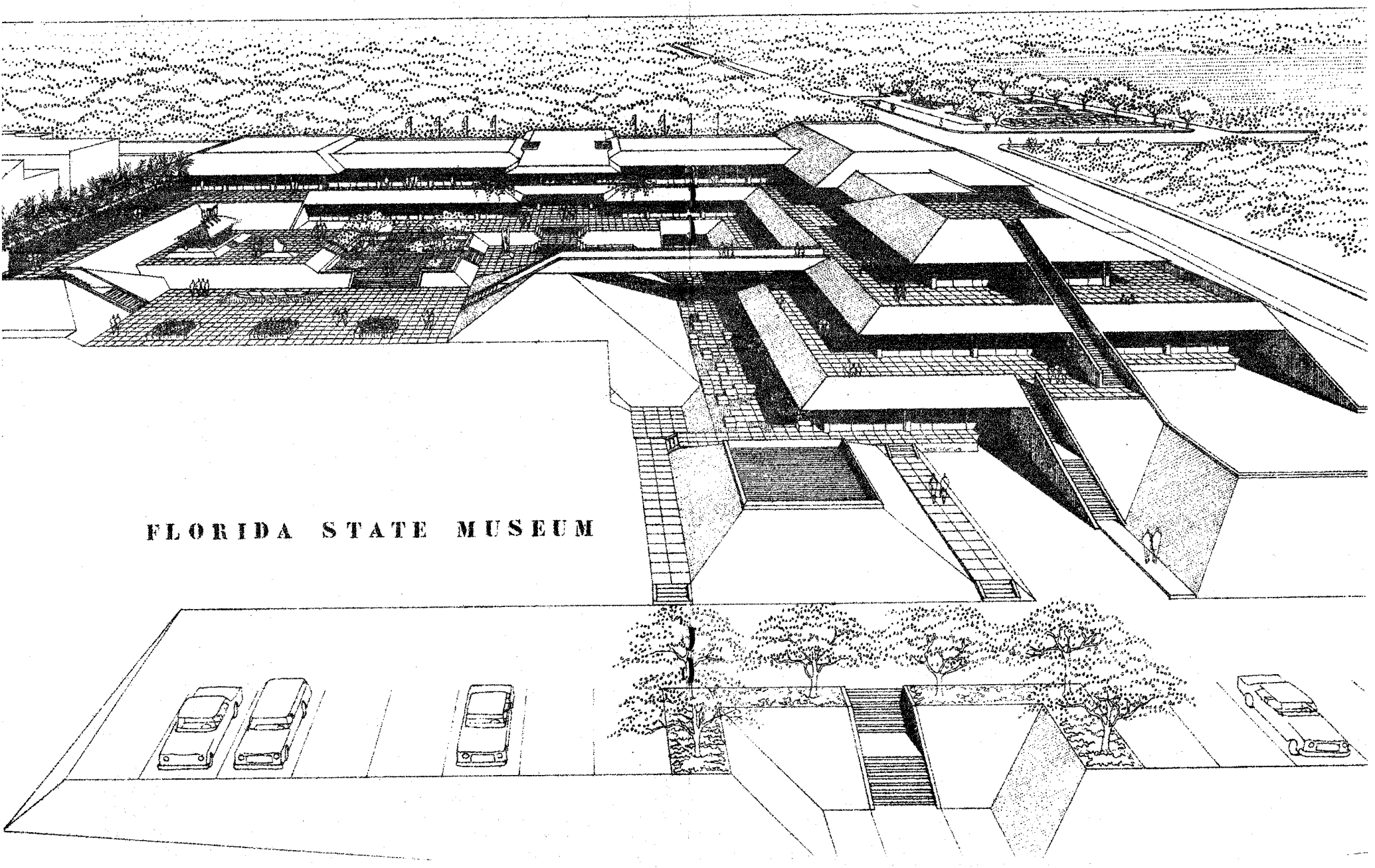
On the second of June I received a letter from Mr. Stanley Olsen, Vertebrate Paleontologist, Florida Geological Survey, (now in the Department of Anthropology at Florida State University) informing me that Dr. Edinger had died following an accident. Her tragic death leaves one of her pet projects uncompleted, since the other types of thickened fossil fish bones in Florida have not yet been studied. It is my sincere hope that someone will take up where she left off. To this end I have continued to collect fish bones; friends have given me others, and I now have quite a supply of all shapes and sizes I would be glad to cooperate with anyone on such a study as I feel that I have not only lost a dear friend, but that science will also be the loser unless this subject is pursued further."

Mr. Howard H. Converse, Jr. summarizes some of his findings along the Kissimmee River.

"The river originates just below Orlando, Florida and is fed by Lake Kissimmee. It drains into Lake Okeechobee about seventy miles to the south. Along the river between Lake Okeechobee and U. S. Route 98 the U. S. Army Corps of Engineers have been dredging for the past few years. They have dredged 35 feet below the old river bed and have straightened the once very crooked river.

In the spoil banks Miocene, Pliocene, and Pleistocene animal remains have been found. Miocene fossils include a large number of invertebrates, which are the basal material of the dredged fill, and various sharks' teeth including Carcharodon megalodon.

FLORIDA STATE MUSEUM



Pliocene remains include teeth, tusk fragments, and bones of the mastodont Gomphotherium floridanus, horse teeth - Nannipus ingenuus, sea cow maxillae and teeth - Felsinotherium floridanum, porcupinefish mouthplates - Diodon sp. and teeth of the whale, Kogiopsis sp.

In the Pleistocene the animal herds inhabiting the Kissimmee River area were so large that their size is difficult to imagine. Horse teeth Eguus fraternus are exceedingly numerous. Camel teeth - Tanupolama mirifica, deer teeth and antlers - Odocoileus virginianus, peccary teeth - Platygonus, bison teeth - Bison latifrons were found among the mounds of shellrock. Other specimens include glyptodon teeth - Boreostracon floridanus, mammoth teeth - Mammuthus columbi, and Archidiskodon imperator, capybara molars and incisors - Hydrochoerus homesi, giant sloth teeth - Eremotherium mirabile, tapir molar teeth - Tapirus veroensis, and a canine tooth from a saber-tooth cat.

The river and its spoil banks are the only means of access to this area. The site is a collector's paradise."

In response to issue 8 of the PJ, Ripley P. Bullen, our Curator of Anthropology, has brought to our attention that there is a post-Pleistocene record for Florida of Ondatra zibethicus. A dentary of this animal was found in Site J-5 on the bank of the Chattahoochee River immediately north of the Forks. It has a radiocarbon date of 1200 B.C. \pm 250 years. It was associated with fiber tempered and St. Johns incised pottery of what is known as the Florida Transitional period.

Mr. Mitchell Hope, well known to many readers of this journal through his former leadership of the energetic "fossil scouts", troop 410 of Wauchula, is now curator at the new Pioneer Park Museum, P. O. Box 1239, Wauchula, Florida. We discovered this when we returned a fine jaw of Canis ayersi he had collected along the Peace River.

THANKS

The department of Vertebrate Paleontology of the Museum would like to express appreciation to the following persons for their assistance:

- to Mr. Dave Bowman who discovered a site near Orange Springs and provided transportation and good hospitality to our crew.
- to Mrs. Hazel Cooper who donated Megatylopus and nurse shark material from Bone Valley.
- to Mrs. William R. Hall for bringing attention to a mammoth skeleton near Sarasota and for her assistance in its recovery.
- to the late Mrs. Susan Harper for locating the Withlacoochee 7A site and for the gift of her collection from that deposit.
- to Mr. R. C. Maynard for locating a new early site along the cross-Florida barge canal with a critical micro fauna.
- to Mr. Richard Ohmes for calling our attention to a new mammoth site in the Aucilla area and for donating valuable specimens. Fossils from other sites in the area were collected by John P. Carr and Jake Stowers.
- to Mr. Phillip Kinsey of Jacksonville Beach for his donations of valuable fossils from the Haile XV Blancan locality. Mr. Jesse Robertson, a graduate student in Vertebrate Paleontology at the Museum will be studying these and other vertebrate remains from the same site for his doctoral dissertation.
- to Mr. Robert L. Armistead who called our attention to and intensively helped in excavating a new river site near Gainesville. Rob is now on our staff as assistant in the Exhibits Department and is presently helping with the restoration of historical objects for display at several museums around the state.

-to Mrs. Margaret C. Thomas, Mr. Howard J. Converse and Mr. Ben Waller for assistance rendered to Mr. Robert A. Martin, a graduate student at the Museum, in completing a manuscript on the past distribution of the giant beaver Casteroides in Florida. They will be thanked again soon in the Journal of Mammalogy.

-to Dr. Margaret Elliott, M.D., a regular visitor to Florida from the Chicago area, for recently donating to the Florida State Museum an excellent sample of Oligocene vertebrate fossils she had collected from the White River Badlands of South Dakota. These make valuable additions to our teaching and research collections.

-to Mr. Joe Larned, the "fossil man" of Bradley Junction, for again providing us with a most unusual fossil vertebrate; the third known (and best) horn core of the rare six-horned Pliocene antelope, Hexobelomeryx simpsoni White. The other two horn cores reside in the Museum of Comparative Zoology at Harvard. A rare related genus or species is known from the Pliocene of central Mexico, but the Mexican and Floridian species have never been directly compared.

-to Mr. Don Serbousek of Don's Radio & TV Doc in Ormond Beach for providing a beautiful Megatherium skull.

Last but not least we would like to thank some of the people who helped build our collection during the early days when the vertebrate collection was more a hope than a reality. These "old-timers" include:

-Larry Roberts, Kent Ainslie, and Denny Vidal, who scoured the Itchatucknee river - and filled drawer after drawer with valuable fossils.

-Dave Desautels, who gave us the Hornsby material which contains one of the best preserved chlamythere skulls in North America.

-Ben Waller who has been a close friend of ours for many years and who has donated material critical to many a paper.

-Bob and Tom Allen who spent countless hours both under water and in our basement when the Museum was short of people and funds.

-Bill Hunt, who spent a couple of his summers diving and working for us and who provided us with some very interesting Blancan material from the Santa Fe river.

-Jane Larsen, after collecting extensively in Florida, left us only to send us some White River Oligocene material for our teaching collection.

-Larry Ogren donated much time and effort to collect our Thomas Farm Locality and the Haile sites.

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The Museum regretfully notes the sudden passing of Mr. H. James Gut of Sanford on March 20th. Among many other endeavors, Mr. Gut was instrumental in locating and developing the prolific Reddick site near Ocala. He also collected at many other localities in Central Florida, both paleontological and archeological.

In addition to his own writings, Mr. Gut co-authored several papers with noted scientists around the state.

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The Florida State Museum has been feeling growing pains for some time. The collections have grown far more rapidly than the exhibits space presently available. Even finding space for compact storage of research collections has been difficult.

However, several recent developments have been of considerable help. Temporary relief has been afforded by the Museum's receiving two additional floors in the Seagle Building, downtown Gainesville. This space gives the exhibits staff vital additional work space

and allows the mammal and bird collections to be moved from temporary buildings on campus. It is a considerable relief to know that all collections are now in relatively fireproof housing.

Unfortunately, the Museum staff and collections are still somewhat scattered, and most are now removed from the University campus where they logically belong. The solution to this problem lies approximately one year away when a new museum building will be completed near the center of the campus. (see center fold). After hiding for decades in makeshift buildings, the Florida State Museum is finally finding a home of its own. Conceived by Jacksonville architect Bill Morgan, graduate of the Harvard School of Design, the Museum resembles ancient Mayan pyramids rising to above an Indian ceremonial mound. Located on campus at the intersection of Radio and Newell roads it will include a Hall of Earth Sciences, Life Sciences, Prehistoric Man, Florida History, Special Exhibits, and General Education, as well as working and storage space for the departments of Exhibits, Natural Sciences and Social Sciences.

Completion of the 2.4 million dollar structure is slated for mid-1970. The National Science Foundation donated 1,112,650 dollars, 948,850 dollars came from the University of Florida Foundation, and 350,000 dollars (less than 15%) from the State of Florida.

The design of the 107,000 square foot building is strictly functional. There are no elevators, no carpets and no expensive furniture. Steps run to the third floor and exterior walls will be mostly opaque glass. Clear panels in selected areas will allow exhibits to be viewed from the outside.

The only thing tempering our elation is the prospect of moving all the collections, a task that is expected to take some four to five months.

When completed for use this facility will be the largest natural history center south of the Smithsonian Institution in Washington and among the top

We hope that along with our increase in size we will be able to extend our services and that this institution will become nationally more prominent as a center of research and education as well.

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Any vertebrate paleontologists wishing to be nominated to the national/international Society of Vertebrate Paleontology should write Dr. Thomas H. Patton, Florida State Museum, Seagle Building, Gainesville FL 32601. Dues are \$4.50 per year and entitle members to receive the news bulletins published three times a year and an annual V. P. bibliography.

We hope that you have enjoyed our first news issue. When time, space, and money allow, we will attempt to provide you with still further information on V.P. activity in our state, so keep writing - and good hunting.