



# The Ecphora

QUARTERLY NEWSLETTER OF THE CALVERT MARINE MUSEUM FOSSIL CLUB

Volume 2, Number 1  
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Editor: Sandy Roberts

## CLUB ACTIVITIES

### Dr. Bruce Saunders Lecture on the Chambered Nautilus

On October 5, Dr. Bruce Saunders, head of the Geology Department at Bryn Mawr College, presented a fascinating program illustrated with slides and films on the life of the Chambered Nautilus and his experiences in search of it. This was a Lincoln Dryden memorial lecture.

### Peter Harmatuk Honored

Our club was invited by the Smithsonian's Department of Paleobiology to join the North Carolina Fossil Club and several hundred other attendees for the opening of the "Jaws" exhibit at the National Museum of Natural History on October 11, 1985. Dr. Clayton Ray and his colleagues entertained members of the two clubs with a program of lectures, lunch, and lab tours during the day. That evening the exhibit, a breathtaking reconstruction of the jaws of Carcharodon megalodon, was officially opened. The evening program was largely a tribute to Peter Harmatuk of the North Carolina Club, who collected and donated the teeth used in the reconstruction. Peter was lauded for, as Clayton Ray put it in the Lee Creek report Volume 1, having "...collected with unflagging enthusiasm more fossils of more kinds for science than anyone who has ever worked the middle Atlantic Coastal Plain." He was presented with a beautiful plaque in appreciation for his contributions.

### Patuxent River Appreciation Days

On Saturday and Sunday, October 12-13, volunteers from the CMM Fossil Club manned an exhibit at the Museum during the celebration of Patuxent River Appreciation Days (PRAD). Featuring fossil identification, preparation, "hands on" exhibits and free fossils, it was declared by many of the visitors to be one of the most interesting exhibitions at PRAD.

### Jones Wharf Field Trip

The October 26 trip to the Patuxent River Cliffs (Zone 17) at Hollywood, Maryland resulted in a productive day. It was lovely and bright, the tide was extremely low and the "looking" was great! Most of us had picnic lunches and spent around five hours at the site. Some of the finds were: Isognomen maxillata in very good condition, whole sand dollars, a large skull fragment, shark centra, a good-sized Isurus hastalis and other miscellaneous shark teeth. In addition, an excellent

crocodile tooth, a panopea with both valves and an exceptionally fine dermal denticle were found. Our hostess at the site was Judy Roa and members of the group were: Mike Ellwood and his dog, General, Jeff Carolla, Elinor Cofer, Joe Turner, Joe Brindle (who made it down from Pennsylvania), Donna Richardson (who must surely have the definitive collection of Lunatia), Sandy Roberts, Sam and Nancy Shafer, Bob Novotny, Calvin Taylor and Norm Riker. Norm and Calvin spent a good half hour at a spot down the beach out in the water and we thought surely they must have a real "find" only to discover that they were collecting fresh oysters for dinner and had snagged several bags of the sumptuous looking bivalves. We all left the site heavily burdened with our specimens and determined to return in the near future.

### Field Trip to Lee Creek Mine

On November 21, with some trepidation, a group of Fossil Club members drove through a torrential downpour to Washington, N.C. We spent the night at the Econo Lodge. Fortunately over night the weather cleared and we were greeted the next morning by the sun. We met our guide, Becky Hyne, at the mine and with members from the North Carolina Fossil Club and the Delaware Valley Paleontological Society we spent a busy and productive day climbing up and down spoil piles and poking and prodding in gullies and ravines. Everyone found some interesting teeth, fish, bird, seal or marine mammal bones and several nice three, four and five-inch Carcharodon megalodon teeth were discovered. That, plus nightly seafood dinners and an interesting visit to the Hyne home to see Frank and Becky's tremendous fossil collection, made our trip a great success.

### Recent Finds at Calvert Cliffs

In November, Augie Selckmann found at least thirteen bones of a fossil bird in the Calvert formation south of Parkers Creek. Included are the pelvis, wing bones (a humerus, ulna, parts of both radii, carpo-metacarpus, phalanges), leg bones (femur and tibiotarsus) and two ribs. At least one other long bone is present, but is not yet uncovered enough to identify. The individual bones will be prepared out of the block of matrix after their positions are photographed and mapped. Preliminary indications are that the bird is a gannet. Bird bones are always rare at Calvert Cliffs. The finding of a single bone or the end of one bone is enough to make any field trip successful. This partial skeleton will not only tell us more about the animal, but will allow researchers to show that many of the isolated bones previously found belong to the same species.

Other recent finds include two different porpoise periotics (inner ear bones) and a partial wing bone (humerus) of an auk from the Choptank formation found by Norm Riker.

In November, Calvin Taylor and Norm Riker found numerous dugong rib and vertebral fragments in the Calvert formation. It is possible that this particular animal could be a new species of sea cow. Unfortunately, not enough of the skeleton was found to identify it and follow-up trips have not located the skull nor any additional bones.

## FOSSILS ON STAMPS

by Wally Ashby

Whether your fossil interest be fish or fowl, plant or pterodactyl, you probably can have the fun of finding it on a postage stamp. Fossils Magazine put it well in a beautifully illustrated and annotated article on "Fossils on Stamps" in their first and only issue of May 1976:

"Neither snow, nor rain, nor gloom of night can keep some people from collecting fossils. When conditions don't permit them to collect in the field, they collect at the stamp store instead."

Dinosaurs are the most popular fossil subjects for postage stamps. Iguanodon leads the parade with 10 stamps, which seems appropriate since it was the first dinosaur to be adequately described. (If non-postal issues produced solely for the collector market are included, Stegosaurus leads with 13 stamps.) Belgian miners discovered more than two dozen Iguanodon skeletons in a coal mine in 1877; apparently a small herd fell into a crevice and perished. A fine mounted specimen is featured on a Belgian stamp issued in 1966.



Twenty one genera of dinosaurs are found on stamps, with other favorites being Tyrannosaurus, Apatosaurus (Brontosaurus), and Triceratops. You can trace the dinosaur family tree from their thecodont ancestors through all six suborders on stamps. Marine reptiles, flying reptiles and mammal-like reptiles also are well represented on stamps as are some more familiar forms such as fossil turtles, crocodiles and snakes. Two of every five fossil stamps depict reptiles.

India issued the first fossil stamp in 1951 to commemorate the centenary of the Geological Survey of India. This stamp features a pair of the Pleistocene elephant Stegodon ganesa. Algeria followed in 1952 with the first invertebrate fossil on a stamp, the ammonite Berbericeras sekikensis from the middle Jurassic. This stamp, still one of the most attractive of fossil stamps, was issued to publicize the 19th International Geological Congress in Algiers. Ammonites are the most popular invertebrates on stamps but several trilobites, brachiopods and bivalves appear as do a gastropod, a cephalopod and a sand dollar.



# SIMPLIFIED FAMILY TREE OF THE DINOSAURS



**CERATOPSIDS**  
Horned dinosaurs



**THEROPODS**  
carnivorous dinosaurs



**ANKYLOSAURS**  
Armored dinosaurs

**ORNITHOPODS**  
Duck-billed dinosaurs

CRETACEOUS  
JURASSIC



**STEGOSAURS**  
Plated dinosaurs



**SAUROPODS**  
Giant dinosaurs

ORNITHISCIA

SAURISCHIA

JURASSIC

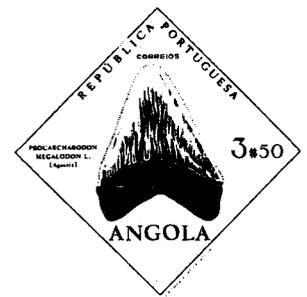
TRIASSIC



**THE CODONTS**  
Ancestors of the dinosaurs

ADAPTED FROM FOSSILS - A GUIDE TO PREHISTORIC LIFE, BY RHODES, ZIM AND SHAFFER.

The most ancient fossil on a stamp, the Precambrian algae Stromatolite, is found on an Angolan stamp issued in 1970. This same 1970 set depicts one of our favorite fossils, a tooth of the monster shark Procarcharodon megalodon. Teeth of this shark, familiar from Calvert Cliffs, are found in Angola as well as in Cenozoic deposits the world over.

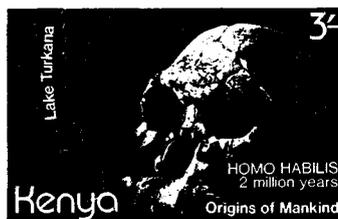


Archaeopteryx, the oldest known bird, has been called perhaps the most famous single fossil of all. A German Democratic Republic stamp issued in 1973 shows a skeleton of this bird found in 1877 in a Bavarian quarry. Reconstructions of Archaeopteryx were issued by Poland in 1966 and by Mali in 1984, and are to be found in the background of the Jurassic landscape on a United States stamp issued in 1969. Reconstructions of several Pleistocene birds also are featured on stamps.

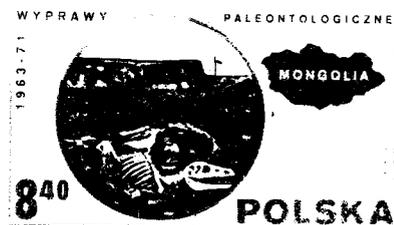
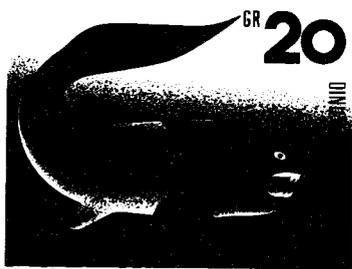
Many fossil land mammals appear on stamps but the only marine mammal is an eel-like reconstruction of the Eocene whale, Basilosaurus, on a "non-postal" issue from the Arab State of Oman. Two German stamps issued in 1978 show complete skeletons of an Eocene bat and horse from that area. Romania issued an interesting set in 1966 featuring both skeletons and reconstructions of six Pleistocene mammals: Cave bear, mammoth, bison, elephant, stag and proboscidean.



Man is the mammal featured most frequently on fossil stamps. A four stamp set from Kenya in 1982 recognized the important work on the origins of mankind done in that country; all four show skulls of man's ancestors. A 1967 Cuban set illustrated seven fossils of the genus Homo together with reconstructions of each. Early man also appears on the stamps of Chad, Ethiopia, Gibraltar, Great Britain, Greece, Kenya-Uganda-Tanzania, and Zambia.

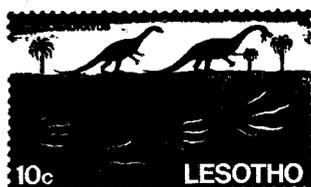


Polish paleontologists did important work in the Cretaceous of the Gobi Desert of Mongolia during the 1960's and 1970's. Perhaps in recognition of this, Poland in 1965 issued an attractive set of ten stamps featuring reconstructions of various fossil reptiles, and followed that in 1966 with a set of nine stamps that traced the evolution of the vertebrates from the Devonian fish Dinichthys through amphibians and reptiles to the Pleistocene mammoth Mammuthus. In 1980 Poland issued a set of stamps recognizing the contributions of six scientific disciplines, one of which was paleontology - specifically the 1963-71 Mongolian expeditions.



Some 352 fossil stamps have been issued by 73 stamp-issuing entities, which compares with thousands of lighthouses and locomotives on stamps, tens or hundreds of thousands of birds, and even more works of art. Two dozen of these depict quasi or questionable fossil subjects, e.g., a child's drawing of a dinosaur (Libya); Mickey Mouse's nephews painting a dinosaur egg for Easter (Gambia); small background figures that may or may not have been intended to represent fossils. Another 77 feature attractive reconstructions of fossil animals but were issued solely for the collector market, some by non-existent countries, and may never have seen the inside of a post office in the nominal country of origin. The remaining 251 stamps of 55 countries are valid postal issues that feature actual fossils or reconstructions of fossils:

| <u>Category</u>    | <u>Actual fossils</u> | <u>Reconstructions of fossils</u> | <u>Total</u> |
|--------------------|-----------------------|-----------------------------------|--------------|
| Microfossils       | 2                     | -                                 | 2            |
| Plants             | 14                    | 2                                 | 16           |
| Invertebrates      | 30                    | 2                                 | 32           |
| <u>Vertebrates</u> | <u>72</u>             | <u>129</u>                        | <u>201</u>   |
| Total              | 118                   | 133                               | 251          |



## WINTER SCHEDULE OF EVENTS

- February 1-2, Saturday and Sunday: Carolina Fossil Fair at Schiele Museum of Natural History, 1500 E. Garrison Blvd., Gastonia, N.C.  
(No formally scheduled field trip)
- February 7, Friday, 7:30 p.m. "More Than you Ever Wanted to Know About Boring Snails." Lecture by Jim Stasz at the Calvert Marine Museum.
- February 22, Saturday: Field trip to the Smithsonian Institution to visit public displays. Ever wonder where hyperostotic (Tilly) bones fit into a fish skeleton or what a hypural fan does? Then plan to see the Osteology Hall. Have you seen the Cretaceous plants, including a cycad stump from Maryland, on display? Also included will be a visit to the small, but excellent National Aquarium in the basement of the Commerce Building. For those staying late, we will eat dinner in Chinatown. Meet at the Calvert Marine Museum at 8:00 a.m.
- March 7, Friday, 7:30 p.m.: Lecture by Dr. Peter Vogt on the Topography of Calvert County at the Calvert Marine Museum. Discover the shape of our county and the secrets of its cliffs, rivers and ravines.
- March 8-9, Saturday and Sunday: Delaware Valley Paleontological Society Fossil Fair at the Academy of Natural Sciences, Philadelphia, Pa. Volunteers are needed to demonstrate fossil preparation, answer questions and give samples to visitors. The Academy contains the first dinosaur skeleton found in North America. Many of the early collections from Calvert Cliffs are in the Academy's collection. As one of the earliest natural history museums in the country, and the headquarters of paleontologist E. D. Cope, it should be considered a shrine that all those interested in paleontology should visit. Arrangements for an overnight stay can be made. Patty Decina's lasagne alone was well worth the trip to the "City of Brotherly Love" last year. We really need your help on this weekend. All volunteers welcome.
- March 15-16, Saturday and Sunday: The Montgomery County Gem, Mineral and Lapidary Society Show at the Montgomery County Fairgrounds. Volunteers are needed for this show also. Last year our club was presented a plaque in appreciation of our display. Displays include gems, minerals, molluscs, fossils and lapidary demonstrations. There are also numerous tables with high quality specimens and supplies for sale. If you can help at either of these two fairs, please call Dave Bohaska at the Calvert Marine Museum (301-326-2042).
- March 22, Saturday: Calvert Cliffs Fossil Collecting Field Trip. Leave Calvert Marine Museum at 8:00 a.m.
- April 4-5-6, Friday-Sunday: Field trip to Lee Creek, N.C. Leave Calvert Marine Museum Friday morning. Strictly limited to 50 people age 18 or older. Call the Calvert Museum for reservations on a first come basis up until March 25.

## PUBLICATIONS

Be sure to pick up a copy of the winter issue of Maryland magazine. Featured is an article about Calvert Cliffs written by Augie Selckmann and illustrated with his excellent photographs. Familiar Club member names in the article include those of Ralph Eshelman, Peter Vogt, Norm Riker, Wally Ashby, and Dave and Paula Bohaska. The Fossil Club and some of our activities are mentioned. The article is actually composed of three parts. "On Assignment" contains a personal view of fossil collecting. Within the main article is a "boxed" article on the official State fossil, Ecphora. (As a sidelight, the Calvert County Tourism advertisement in Maryland contains a photograph of "posed" fossils from the CMM teaching collection.)

Wally Ashby's booklet, Fossils of Calvert Cliffs, is being revised. The new edition will contain a few text changes and many new illustrations by his daughter, scientific illustrator Mary Parrish.

Dr. Robert Weems paper on Ocean Sunfish of the mid-Atlantic has been published in the Journal of the Washington Academy of Sciences. Two new species of Ranzania are named (both occur in the Maryland Miocene). A third species (in the genus Mola) occurs in later sediments elsewhere.

## FOSSIL SHARK TOOTH IDENTIFICATION POSTER

The Smithsonian Institution recently published a shark tooth identification poster. It is a combination of Bob Purdy's research and Mary Parrish's excellent art work. Teeth from the Cretaceous through the Pleistocene are shown natural size. The poster can be purchased for \$5.00 from the Sales Shop at the National Museum of Natural History or from the Calvert Marine Museum. Mail orders should be placed to: Smithsonian Institution Press, Customer Services, P.O. Box 4866, Hampden Station, Baltimore, MD 21211. Add \$1.50 for mail orders.

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