Celebrating the Fossils from Calvert Cliffs: The Twenty-Fifth Anniversary

By Stephen J. Godfrey, Curator of Paleontology

On Saturday, November 11, over 150 paleontology enthusiasts crowded into the museum’s auditorium to celebrate the 25th anniversary of the Calvert Marine Museum’s Fossil Club. To mark the occasion, a symposium was held on The Geology and Paleontology of Calvert Cliffs that brought together experts on all aspects of the geologic history and the diverse fossil assemblage preserved in these world famous cliffs.

The abstracts (i.e., summaries for each presentation) for this symposium have been published on line as a special issue of the fossil club’s newsletter, The Ecphora, at: http://www.calvertmarinemuseum.com/cmmfc/newsletter/index.html

When the fossil club was established on April 16, 1981, Dave Bohaska, Ralph Eshelman, Norm Riker, and Calvin Taylor probably never imagined that twenty-five years later they would be together again to commemorate that day by listening to the scholarly contributions of at least twenty-eight geologists and paleontologists to our understanding of the geologic formation and fossils from Calvert Cliffs. In addition to celebrating the Calvert Marine Museum’s Fossil Club, the intent of this symposium was to summarize through platform and poster presentations our understanding of such diverse topics as the prehistoric environments in which the fossil-entombing sediments were deposited, as well as cursory surveys of some of the more than 600 prehistoric species of mostly marine organisms that have been collected from Calvert Cliffs.

The geologists set the stage by showing that, for the most part, the Miocene Atlantic Ocean over southern Maryland was more like the present-day Texas shelf than the modern mid-Atlantic Ocean. The gently sloping Miocene Epoch seafloor was muddier than the modern Atlantic off Ocean City, covering this area to a depth greater than 150 feet. Posters on the geology of Calvert Cliffs focused attention on the mechanics of water-driven sediment and fossil transport. They illustrated how a detailed understanding of modern sedimentary processes allows for an interpretation of the varied fossiliferous strata that now comprise Calvert Cliffs.

Building on the geology, several presenters described evolutionary changes in the extinct marine snail, Ecphora (one species of which is the state fossil of Maryland), and how the predatory habits of prehistoric moon snails spurred evolutionary changes in the size, shape, and thickness of the shells in both themselves and their prehistoric molluscan prey. Three presentations focused attention on the anatomy and diversity of the ever-popular sharks from Calvert Cliffs. The impressive suite of fossilized shark teeth from along the Chesapeake Bay and its tributaries illustrates how the shape of shark teeth has changed through geologic time in response to the evolution of new prey.

The entirely extinct fossil turtle fauna is comprised primarily of marine species, most similar to living turtle communities found along Florida’s Atlantic coast. Calvert Cliffs can boast preserving the remains of leatherback turtles, which are among the largest turtles that ever lived! As for the extinct crocodiles, whose teeth most often indicate their prehistoric presence, they...
New Directions in Education

By Sherrod Sturrock, Deputy Director for Education and Special Programs

Education is a core component of what we do here at the Calvert Marine Museum and permeates every aspect of our mission. The Education Department is busy re-inventing our basic programs. Young Sails, a favorite Saturday morning program, has expanded in two directions. We now offer Young Buccaneers for seven to nine year olds on one Saturday a month and Little Minnows for three to five year olds during the week. The programs are fuller, richer, and tied to monthly themes that relate to our overall collections. Check them out in the calendar.

We are adding a new component to our Discovery Room – the Discovery Room Loft. Young visitors and their parents will be able to check out Activity Boxes, take them up to the loft, and spend time learning about things like fossils, signal flags, marsh creatures, and navigational aids by working with the real objects.

Camp CMM is also changing. We are expanding our middle school offerings, partnering with other institutions, and focusing on more in-depth, experiential learning throughout all of the age groups. This coming summer we will repeat our highly successful Summer Center for paleontology as well as expand the Bay Trek camp to a second, more advanced level. We will also be offering a two-week John Smith-focused program for rising fourth and fifth graders tied in to the John Smith 400 Celebration.

Student field trips are changing too. Instead of having a guided tour of our exhibits, every visit will also include a hands-on workshop that ties directly to the curriculum. These will also be available to home-schooled groups. We are simultaneously building outreach programs with the goal of offering distance learning within two years.

Adults aren’t being ignored either. We have run Elderhostel programs for several years, and plan to continue those and perhaps expand into elder day trip experiences. We are also planning to launch an adult workshop series in the spring where adult learners can sign up for a six-week course on one of our major themes taught by an expert in the field. Look for the line-up in the next Bugeye Times.

It is our goal to reach every age level with dynamic programming that enhances and broadens the museum experience. If museums are to survive and thrive in the twenty-first century, it is incumbent upon us to ensure that they are vital and responsive institutions that deliver a high quality product.

A SUCCESSFUL SUMMIT ON THE PATUXENT RIVER

On a blustery, rainy Friday afternoon in October, the Calvert Marine Museum, in collaboration with the Patuxent River Commission, hosted the first “State of the River Summit.” The miserable weather did nothing to discourage the folks who gathered to hear the experts in the field discuss the state of our beautiful Patuxent River. Mark Bundy, former Assistant Secretary of the Maryland Department of Natural Resources, served as the moderator. The summit kicked off with an overview of the state of the river by Dr. Walter Boynton, a marine biologist working with the UMCES Chesapeake Biological Laboratory, who is a recognized authority on the Chesapeake Bay and the Patuxent River. This was followed by two panels: the first focused on what is currently being done to address the problems, and the second discussed the challenges we face. Panelists included representatives from federal, state, and local governments, the scientific community, the agricultural community, working watermen, and wastewater treatment plants. The summit concluded with a stirring “Call to Action” by former State Senator Bernie Fowler, the undisputed champion of the Patuxent River. Elected officials from around the state participated in the gathering, which attracted almost 200 people. A surprise visit Governor Robert Ehrlich added to the excitement of the day. (Sherrod Sturrock)
John Smith’s Chesapeake: A Collaborative Approach

In the historic Southern Maryland counties of Calvert and St. Mary’s, an alliance of Gateways sites has joined together to highlight John Smith’s exploration of the Chesapeake Bay 400 years ago. “Gateways” refers to The Chesapeake Bay Gateways Program that, under the auspices of the National Park Service, has created an impressive network of sites all along the shoreline of this incredible estuary. The goal is to connect people with inspiring Chesapeake experiences. (www.baygateways.net)

Our smaller partnership links the natural resources of Kings Landing Park, Flag Ponds Nature Park, the American Chestnut Land Trust, and Greenwell State Park, with the historic sites of Sotterley Plantation and Historic St. Mary’s City, with the marine research expertise of the UMCES Chesapeake Biological Laboratory, with Jefferson Patterson Park and Museum, and the Calvert Marine Museum. Each of us has a different story to tell; all are part of the larger Chesapeake story. Recognizing the strength of our collective voices, we have come together to invite you to embark on your own exploration of the Chesapeake.

To further entice you, from March through November 2007 we offer John Smith’s Chesapeake: a Speaker’s Series from Nine Perspectives. A distinguished group of scholars will examine the legacy of Smith’s voyage through the lenses of archaeology, anthropology, cartography, geography, estuarine ecology, history, and marine biology. You can also hear tales from Anas Todkill, one of Smith’s crew members, and have the opportunity to learn about the 121-day reenactment of Smith’s 1608 voyage undertaken by the Sultana’s reproduction shallop.

This project, which is funded by the Gateways Program, will also produce a 2007 John Smith calendar, available free by request here at the museum. We encourage you to take advantage of this exciting opportunity to hear the top experts in the field talk about John Smith’s amazing voyage, to use the calendar to help you get to the talks and the sites that are hosting them, and to visit our web site for more information. So come to one talk or come hear all nine, but come and discover the many local Gateways to the Chesapeake. (Sherrod Sturrock)

Reproduction of John Smith’s 1607 shallop.

Willie Balderson, as Anas Todkill (October 13)

John Smith’s Chesapeake: A Speaker’s Series from Nine Perspectives

Friday, March 23, 7:00 p.m. “John Smith’s Chesapeake: State of the Bay in 1608,” presented by Kent Mountford at Sotterley Plantation.

Wednesday, April 11, 7:00 p.m. “To Have Their Hatchets and Commodities by Trade:’ How Indians Inspired the Upper Chesapeake Fur Trade,” presented by J. Frederick Fausz at Kings Landing Park.

Thursday, May 17, 7:00 p.m. “Algonquian, Iroquoian and English Language Speakers of the Chesapeake Bay Drainage through the Time Machine of Archaeology,” presented by Wayne E. Clark at Greenwell State Park.

Thursday, June 21, at 7:00 p.m. “What’s For Captain Smith’s Dinner? — A 400 Year Comparison of the Plants and Animals of the Chesapeake Bay,” presented by Dr. Walter Boynton at Flag Ponds Nature Park.

Saturday, July 7, 7:00 p.m. “A Collision Of Worlds: The Indians and the English As They Were In 1607,” presented by Helen Rountree at Jefferson Patterson Park and Museum.

Wednesday, August 22, 7:00 p.m. “Beginning In 1608: Epic Encounters and Dramatic Changes around Chesapeake Bay,” presented by Henry M. Miller at UMCES Chesapeake Biological Laboratory.

Tuesday, September 11, 7:00 p.m. “What’s Happening to Our Beloved Chesapeake: A Geographer’s Perspective,” presented by Professor Daniel McDermott, sponsored by the American Chestnut Land Trust at the Prince Frederick Library.

Saturday, October 13, 2:00 p.m. “The Strange Adventures of Anas Todkill,” presented by Willie Balderson at Historic St. Mary’s City.

Thursday, November 15, 7:00 p.m. “The Voyage of the John Smith Shallop: 2007,” presented by Drew McMullen at the Calvert Marine Museum.
Patuxent River Appreciation Days on October 7 and 8 drew the largest number of visitors of any of the fall events, although the two events reported in other articles — the Patuxent River Symposium — were highly successful, as were Pirate Day and Basket Bingo. All in all, it was a very busy fall at the museum.

Two of the educational exhibits at PRAD. CMM photos by Bob Hall

Former state senator Bernie Fowler (center) signs Patuxent River posters. CMM photo by Sherrod Sturrock

The Southern Maryland Concert Band provided entertainment for PRAD. CMM photo by Bob Hall

Doug Hill, Channel 7 Weatherman (center), chats with guests at the Bugeye Ball in the museum on October 14; he also served as auctioneer. CMM photo by Bob Hall

View of boat basin during PRAD 2006. CMM photo by Bob Hall
**Fall Activities**

October 7 and 8 drew the largest numbers, although the two events reported in Summit and the Calvert Cliffs Symposium the annual Bugeye Ball, Pirate Day, as a very busy fall at the museum.

Former White House pastry chef Roland Mesnier presents dessert creations for the Bugeye Ball attendees.

CMM photo by Bob Hall

Model boats compete during the Traditional Watercraft Regatta, September 23-24.  CMM photo by Bob Hall

Governor Robert L. Erlich Jr. used the museum exhibition building for his announcement of state funds for planning a second span of the Gov. Thomas Johnson bridge.  CMM photo by Bob Hall

Governor Robert L. Erlich Jr. used the museum exhibition building for his announcement of state funds for planning a second span of the Gov. Thomas Johnson bridge.  CMM photo by Bob Hall

Canoe boatbuilding class on November 11.  CMM photo by Bob Hall

CMM’s Lori Cole (left) helps would-be pirates make telescopes on Pirate Day on November 7.  CMM photo by Bob Hall

Another full house at the CMM Basket Bingo, November 12.  CMM photo by Bob Hall
Celebrating the Fossils

(Continued from page 1)

are most closely related to the extant false gharial, which inhabits tropical Southeast Asia.

The vast majority of the delicate and exceedingly rare fossil bird finds are of oceanic species, similar, but for the most part smaller than their living counterparts, with one notable exception, the giant pseudodontorn supersoarer bird, *Pelagornis* (see the reconstructed skeleton of one of these giant birds on display in our Paleontology Gallery).

Not surprisingly, the fossilized remains of terrestrial mammals are rare because the sediments were being laid down in a marine rather than a terrestrial or freshwater environment. Tiny fossil mammals are almost completely unknown from Calvert Cliffs; however, from time to time, teeth and isolated bones of Miocene horses, camels, pig-like peccaries, bear-like bear-dogs, and elephants are found. Much remains to be learned about the terrestrial animals that lived in prehistoric Maryland.

The fossil record of marine mammals (i.e., seals, sea cows, whales, and dolphins) from Calvert Cliffs is especially impressive. The seals represent primitive members of some of the living families of both oceanic and river dolphins. Seacows were also regular inhabitants of this area during warmer Miocene times. Their very heavy and thickened ribs are dead ringers. Calvert County’s prehistoric seacows were members of the dugong family, which today are confined to the Pacific Ocean, not manatees that inhabit the present-day Caribbean. Calvert Cliffs preserve one of the largest and most diverse assemblages of Miocene fossil whales and dolphins anywhere! This entirely extinct fauna was briefly introduced in three presentations and one poster. The poster showed how whale and dolphin finds are collected along Calvert Cliffs. The lectures concentrated on the large and primitive shark-tooth dolphins (a.k.a. the squalodonts), fossil dolphin pathologies, and the other known groups of toothed whales, some of which represent primitive members of some of the living families of both oceanic and river dolphins.

In addition to being impressed with how important the fossils from Calvert Cliffs are to our understanding of the Miocene world that used to be, attendees were also urged to support strongly the efforts to preserve Calvert Cliffs, to allow them to erode naturally. Without erosion, these cliffs, which comprise the principal aesthetic landmark of Calvert County, would no longer provide the scientific resource and portal into Maryland’s Miocene prehistoric past!

Continued on page 7

---

WALLACE L. ASHBY, 1920-2006

The museum lost a significant supporter when Wally Ashby died on 12 November. Mr. Ashby was a museum author and volunteer, with early ties to the paleontology program. His most important contribution was his authorship of the very popular museum booklet, *The Fossils of Calvert Cliffs*, first published by the museum in 1982. That edition went through several printings, but was expanded into a second edition in 1986, greatly enhanced through illustrations by his daughter, Mary A. Parrish, and again as a third edition in 1995. It is still on sale in the museum store or through the museum’s website.

Born in Minnesota, Wally moved as a boy with his family to Washington, D. C., where he completed high school and college. The booklet grew out of his interest in fossils, particularly those of the local cliffs, an area he searched for many years as a frequent visitor to his parents’ home at Scientists’ Cliffs in Port Republic.

When he retired in the 1970s and moved to Scientists’ Cliffs, he was able to devote more time to his interest in fossils. At that time he also began volunteering at the museum where he donated some of his fossil finds and assisted in organizing and cataloging the paleontology collection. Many of his finds were donated to the Smithsonian Institution as early as 1953. One notable find was the best-preserved skull of a sperm whale from the Maryland Miocene, illustrated by paleontologist Remington Kellogg in 1965 and often reexamined. His meticulous and indispensable records have been praised in the published literature, and he assisted scientists and students from all over the world in gaining access to the local area for research and educational field trips. In two instances, fossils were named in his honor.

Wally Ashby’s significant contributions will be his legacy to future museum visitors and researchers.
MEMBERSHIP & DEVELOPMENT

Amos Hutchins, Jr.
June 1928 – January 2006
Remembering a Museum Friend

On January 11, 2006, CMMS lost a longtime supporter and friend, Amos Hutchins Jr. of Bethany Beach, DE.

Mr. Hutchins was a museum member for over 16 years, including spending the last seven years at the Bugeye Society level, CMMS’ highest membership. Although he rarely used his top benefits, Amos always had a kind word to say about the museum. When responding to a form for his complimentary concert tickets, Amos would write, “please use this to raise additional funds for the museum...thank you!” Amos also kindly remembered the museum in his Will, and his very generous gift will support the J.C. Lore Oyster House restoration project.

Self-described as “very much a Marylander,” Mr. Hutchins was born in Baltimore on June 12, 1928, the youngest of three children of Dr. Amos and Helen Hutchins. He was raised on the Severn River near Annapolis, MD, where he developed a love of waterfowl hunting. Hunting led to a lifelong interest in acquiring antique and contemporary decoys. His collection eventually numbered more than 1,000 carvings and was featured in “Wildfowl Carving and Collecting” magazine. Other interests included bird watching, photography and traveling.

Always civic-minded, Mr. Hutchins was active in community affairs in Baltimore and Bethany Beach. He also served on the board of the Ward Foundation, which operates the Ward Museum of Wildfowl Art in Salisbury, MD.

To his family he was also a devoted family man, cherishing time with his beloved wife, Nellie, their four children and 13 grandchildren. To the museum, he was a true believer, and long-term supporter, who had a positive impact on the mission and goals of the Calvert Marine Museum.

Celebrating the Fossils

(Continued from page 6)

The fossil biota from Calvert Cliffs is so large that a one-day series of lectures did not come close to covering all the known groups of fossils that have been collected from the cliffs. Nothing was said about the vast majority of the microscopic planktonic fossils, including all of the following groups of organisms: the bryozoans, corals and hydrozoans, mollusks, crustaceans, fish, baleen whales, and the plants. There are so many unknowns and questions that remain to be answered, clearly, we have a long way to go before we plumb the depths of information waiting to be discovered and decoded from the sediments and the fossils they entomb along Calvert Cliffs.

We anticipate that most of those who presented at this symposium will join other researchers to contribute to a published volume summarizing the state of our knowledge on the geology and paleontology of Calvert Cliffs.

Acknowledgements: This event would not have been possible without the concerted efforts of many, from the presenters, to museum staff and volunteers, and Solomons Holiday Inn Select – thank you! The Clarissa and Lincoln Dryden Endowment for Paleontology at the Calvert Marine Museum sponsored this symposium.

Livingston Taylor

LIVE - In Concert

The Calvert Marine Museum kicks off its Waterside Music Series’ winter concerts on Friday, January 19, 2007, with pop singer Livingston Taylor. Showtime is at 7:30 p.m. in the museum auditorium. Tickets go on sale December 18, and are $30 for museum members and $32 for the general public. Tickets will be available at www.calvertmarinemuseum.org, or by calling 410-326-2042 ext. 16, 17, or 18.

Born in Boston in 1950 and raised in Chapel Hill, North Carolina, Livingston is the fourth of five children, and is brother to musician James Taylor. He has toured with such major artists as Jimmy Buffett and Fleetwood Mac. His repertoire includes such top forty hits as “I Will Be In Love With You,” “I’ll Come Running,” and recorded with his brother James “I Can Dream of You,” “Going Round One More Time,” and “Boatman.” Livingston is an Artist-in-Residence at Harvard and a full professor at Berklee College of Music in Boston.


A new incentive for charitable contributions:

Under the Pension Protection Act of 2006, signed into law in August 2006, taxpayers 70½ years of age and older may donate money to charity directly from their traditional and Roth IRA accounts. The distributions will be tax-free and avoid the penalty on early withdrawals, but are limited to $100,000 per year through December 31, 2007. For more information, please call our Development Director, Vanessa Gill, at 410-326-2042, ext. 18.
Volunteer Spotlight

By: Sherry Reid, Volunteer/Event Coordinator

The volunteer family has been extremely busy over the past few months. October was full of activities such as the Lighthouse Challenge, PRAD, and the Bugeye Ball. November was just as hectic, with the Point Lookout open house, Pirate Day, the Calvert Cliffs Paleontology Symposium, and the Basket Bingo. Through it all the volunteers were on hand to help make the events run smoothly and to make the experience memorable for the visitors.

December will bring the hustle and bustle of the holidays, and again the volunteers will be called upon to do their magic. We should all take the time to reflect on the past year and give thanks for the many blessings we enjoy. The volunteer family is one of the many blessings we should give thanks for each and every day. Without the volunteers the museum would not be able to have such a flurry of successful activities month after month.

Take the time to spread holiday cheer and goodwill at every opportunity. Happy Holidays!

---

KAYAK SAFETY CLASSES

The Calvert Marine Museum Canoe and Kayak Club is sponsoring kayak safety classes in the Great Mills Swimming Pool this winter, beginning at 6 p.m., December 3, 2006. You need not be a club member to participate, although we hope to increase interest in this sport and our club through the classes. Classes will run every other Sunday through February 25. There will be two levels offered: basic instruction and advanced skill practice. This is also a great opportunity to receive ACA certified instruction in the water during the winter — with no nettles to deal with. Sessions run from 6:00 to 9:00 p.m., which allows 30 minutes before and after to move kayaks in and out of the pressurized dome over the pool.

Space in the classes is very limited and reservations are required; there is a registration fee of $0.00. For additional information, a schedule of classes, directions to the pool, or to reserve a class, contact Bill Gallagher (301-373-5297) or e-mail bilgal@md.metrocast.net.