The Patuxent River Project

(Note: The following article is abstracted from a paper presented by Ralph Eshelman, Director, Calvert Marine Museum, at the Second National Conference on Maritime Preservation, Baltimore, Maryland, on June 5, 1981. We hope the CMM membership will be interested in learning more about this fascinating project being undertaken by your museum.)

The Calvert Marine Museum, located at historic Solomons, in Southern Maryland, is ideally situated to carry out its mission of three marine themes: paleontology, estuarine biology, and maritime history of the Patuxent River and Calvert County. It is the purpose of the museum to relate these themes to the public in an interwoven story portraying the complete marine history of the region.

The purpose of this paper is to relate the Calvert Marine Museum's attempt to accomplish the maritime portion of this mission.

First, a few background facts on the Patuxent River and the Calvert Marine Museum are in order to set the proper prospective. The Patuxent River was one of early Maryland's major commercial arteries, and today is still one of the State's few remaining, largely unspoiled, natural waterways. For nearly 350 years it has been the scene of considerable maritime activity, both commercial and military. It served as the colony's major tobacco growing region and, during the American Revolution, as the strategic route into the colony's breadbasket. During the War of 1812 the river played a key role in the defense of the nation's capital city, Washington, D.C. It helped host the beginning of Maryland's steamboat service and furthered the development of the famous Chesapeake Bay oyster boat, the “bugeye.”

The Calvert Marine Museum's article of organization mandates that one of the museum's purposes is to document, preserve, and educate its visitors on the maritime history of the Patuxent River. Yet, as late as 1977 very little had been done; the museum had not documented or analyzed this river in context to its Tidewater society or heritage. Little archival material had been gathered. But, by 1978, we had, in cooperation with Nautical Archaeological Associates, Inc., of Upper Marlboro, Maryland, begun a limited submerged archaeological survey of the Patuxent. A wealth of data was recovered from our preliminary investigations, suggesting that an enormously greater resource potential remained to be examined. However, there was concern for information loss caused by the rapid rate of development along the river due to its close proximity to the metropolitan triangle of Washington, Baltimore, and Annapolis. Concern that pollution of the river has caused an alarming decline in the fisheries of this once rich resource, where “Patuxent” brand oysters were once sold as far west as St. Louis, Missouri, up to the 1930's. Concern that the tranquil waterfront communities catering to the needs of the waterman were being transformed into bedroom communities of the nearby cities with consequent destruction of the very resources we were discovering. Concern that the rich maritime heritage of the region was being rapidly diluted and lost.

To document the maritime history of the river, while vestiges of it still remain, a three-pronged plan was initiated. This plan consisted of (1) a systematic survey of the submerged cultural resources of the river, including shipwrecks, wharves, ferry landings, and inundated shore sites; (2) oral and pictorial history documentation of the maritime heritage of the river; and (3) collection, preservation, and exhibition of the commercial fisheries industry of the Patuxent River estuary.

Discussions of this plan with Peter Bartis, of the American Folklife Center at the Library of Congress, so excited the Center's staff that they volunteered to help. A working conference, focusing on the development of a large scale survey of traditional life along Southern Maryland's Patuxent River, was suggested. In the words of Alan Jabbour, the Center's director, "As host, we hope that representatives from the appropriate interested agencies and organizations on the federal, state, and local levels, can contribute ideas toward the realization of such a challenging and much needed project." The conference was held February 12, 1979, at the Library of Congress. Those present at this important meeting included representatives from the Maryland Historical Trust, the Maryland State Folklorist, American Folklife Center, National Trust for Historic Preservation, National Endowment for the Humanities, Nautical Archaeological Associates, Inc., and Calvert Marine Museum.

The seeds had been sown. Through the auspices of the Maryland Historical Trust, and with funds from the Heritage, Conservation, and Recreation Service, matching funds were awarded in 1979 to Calvert Marine Museum and Nautical Archaeological Association, Inc., for continuation and expansion of the submerged cultural resource survey of the Patuxent River, which had begun in 1978. Part of this project included physical and manuscript data never before assembled. A thorough documentation of the Patuxent River's maritime history was underway.

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A second grant from the same source in 1980, resulted in the "hands on" survey of six selected maritime sites culminating in the first holistic approach to an underwater archaeological survey, and the first predictive model for cultural resources in a riverine system in the United States.

One of the sites surveyed proved to be an intact warship from the ill-fated United States Chesapeake Flotilla. This vessel was one of seventeen military ships, and thirteen merchantmen, scuttled in the river after heroic efforts in trying to stem the British march on, and destruction of, Washington, D.C., during the War of 1812. The remarkable artifacts recovered from this momentous underwater archaeological discovery form the focal point of the museum's newest exhibit, "War on the Patuxent: 1814," which was funded with a matching grant from the Maryland Committee for the Humanities, and opened June 27, 1981. Discussions with the Humanities Committee indicated our exhibit grant received favorable response, in part due to the publicity and success the survey had generated. The culmination of this four-year project has also culminated in the publication of an artifact catalog for the exhibit, and a scholarly book on the history of the War of 1812 on the Patuxent. Both books were published by the Calvert Marine Museum Press.

An equally important maritime aspect of the Patuxent is the commercial fisheries history. The museum began a meager collection of commercial fisheries paraphernalis as early as 1977. When the oldest surviving oyster house on the river, the J. C. Lore Seafood Packing House, established in 1888, and the present building erected in 1935, became available, the museum approached the National Trust for Historic Preservation for assistance. Our final grant application to them represented at least two months' work, numerous negotiations with the owner, appraisers, and lawyers, and a grant package looking more like a thesis. The owner was especially interested in our idea of preserving this old packing house for a commercial fisheries exhibit. He repeatedly told us how he would rather deal with the museum than several other interested parties, wanting the land for development purposes only. Armed with this, and the need for a match on our part of the requested grant, the owner agreed to accept less than the appraised value of the property, and threw in all the equipment and building contents as an "in-kind match." In addition, the packing company owned a converted barge oyster buying boat, the WM. B. TENNISON, built in 1899, with nine logs forming its hull. The owner sold the buying boat to us at a price also below appraisal value. In the end, two-thirds of the museum's match share were "in-kind" contributions requiring no cash on the part of the museum, while the former owner received a substantial tax break. When the museum received its grant from the Trust, the sense of accomplishment was beyond words. Today the TENNISON enters its third year of operation as the oldest licensed passenger vessel on the Chesapeake. Running charters and scheduled cruises, the TENNISON also serves as our am-

CMM ACQUIRES

SKIPJACK TRAILBOARDS

The museum has traditionally attempted to help the dwindling skipjack feet of Chesapeake Bay. This past winter CMM loaned the oyster dredge winders from the WM. B. TENNISON for use on the skipjack MAGGIE LEE. We plan to continue the loan in exchange for displaying the MAGGIE LEE at the museum this coming summer.

Chandler's Wharf Museum, in Wilmington, North Carolina, donated the beautiful trailboards from the 1908 built skipjack GENEVA MAY this past summer. They say everything comes in threes, and for trailboards it must be true. Within the last few months CMM has also received the original trailboards from the skipjack KATHRYN, built 1901, and possessing an unusually fine leaf and vine design. Finally, the trailboards from the WILMA LEE, built 1940, were also obtained. This set is unique in that the original carver, believed to be Dewey Webster, misspelt Wilma as Wilmer. A block of wood was fitted over the "er" and the spelling corrected.

Pepper Langley, master carver at CMM, is presently carving new sets of trailboards for the KATHRYN and WILMA LEE. These will be finished in time to adorn these two skipjacks for the opening of the oyster season this winter. Trailboards, in case you are not aware, are usually decorated, carved, boards which fasten below the bowsprit of a vessel, which formerly helped to support the figurehead.

Daryl Larrimore donated the original bowsprit off the skipjack ELSWORTH, built 1901. We hope to reconstruct the bow assembly of a skipjack and illustrate to our visitors just how trailboards are used to decorate our Bay workboats.

Interestingly, the Chesapeake is virtually the only body of water in the United States where trailboards and figurehead tradition still exists. The skills and tradition of this disappearing art are being preserved by "Pepper" Langley and perpetuated through his classes taught at the museum. Anyone interested in this trade is encouraged to join the John Olsen Chapter of the American Shipcarvers Guild sponsored by the museum. See the Winter Calendar for meeting dates.
The final aspect of the Patuxent Project is also important to the completion of this fisheries exhibit. This is the oral and pictorial history of the Patuxent River. A strong grant application was forwarded to the National Endowment for the Humanities in 1980. It sure didn’t hurt our application when the person co-ordinating our submittal was also one of the persons present at the Folklife Center’s conference held at the Library of Congress back in 1979. We were awarded our grant earlier this year and the project just began this August. The granting agency was particularly impressed with our idea of using oral tapes and photos as a primary means of relating the fisheries industry to the river through the eyes of the watermen themselves. Most exhibits use the artifacts as the focal point, but our idea was to make the artifacts secondary to the humanities aspect. Essentially, this grant’s success was predicted by our earlier grants, as they formed the ground work. Without the oyster house and buy boat, our grant application wouldn’t have been nearly as strong.

The museum has attempted not only to commemorate the Patuxent’s past but also to raise support and awareness of the river’s future plight. To accomplish this, the museum helped organize a two-day annual festival celebrating the Patuxent River. Now in its fourth year, funds for craftsmen and artisans demonstrating nautical skills such as crab net making, seafood cookery, and boatbuilding, come from the Maryland Arts Council, where the Maryland Folklorist first heard of the museum through that same Library of Congress conference. Perhaps no other example illustrates the museum’s community involvement. Churches and fraternal organizations take care of the food; the Optimist Club oversees games and entertainment for the kids, and corporations put up funds or donate services. El Paso Marine Company, for example, in the past operated two tugboats as ferries between the museum and the Chesapeake Biological Laboratory where an open house welcomes visitors. Best of all, everything but food is free. The community does much of the work yet the museum receives most of the public exposure and recognition.

FOSSIL FACTS

Starting with this issue, we plan to provide a brief sketch on one of the hundreds of fossils frequently recovered along Calvert Cliffs. Eventually, these will all be gathered into an index of Miocene fossils of Southern Maryland. Sandy Roberts, an active fossil club member, is author and artist for this first “Fossil Facts.”

CARCHARODON MEGALODON

The Great White Shark

Carcharodon megalodon, the gigantic ancestor of the modern white shark, has left behind only its teeth, and an occasional bobbinline vertebra to prove that it once swam in the Miocene seas of Southern Maryland. The great white shark is believed to have been the largest carnivorous fish to ever live in the sea.

The name Carcharodon megalodon is formed by a combination of three Greek words meaning “great jagged, or sharp pointed tooth.” It is an apt name. Found on the beach or protruding from the sandy clay of Calvert Cliffs, a fossilized Carcharodon tooth may weigh over three-quarters of a pound, and exceed six inches in length. The blade is triangular in shape, and marked by striations. It is finely serrated on the cutting edges with some fifty serrations to the inch. The root is rough and stonelike. Color varies greatly, depending on the mineral composition of the deposit in which the tooth was embedded. The face of the blade is flat or slightly concave in appearance. The back has a curved or convex surface. It is marked, between the root and the enamel, by a dark brown or gray chevron or inverted “V” area. The teeth of present day great white sharks bear the same characteristic “scar.”

By comparing living Carcharodon teeth to fossil teeth, it is possible to estimate the approximate length of the extinct shark. With this information, and by plotting a known weight-length ratio of a large white shark, the probable size of the largest Carcharodon megalodon has been calculated at about forty-three feet, and weighed 23,000 pounds with a tail fifteen feet high. The pectoral fins would have stretched eight feet on either side of the body, and the dorsal fin would have extended over six feet above the animal’s back. The largest great white tooth from this area is over six inches.

Carcharodon megalodon was never common in the Maryland Miocene. Its spectacular teeth have long been prized by professional collectors, and amateurs alive. All dream that some day they will find “The Great Tooth.”
Sea Turtles In The Chesapeake

Some interesting, but rare, members of the Chesapeake Bay fauna are the giant sea turtles. Of the seven species worldwide, five occur in the North Atlantic, and all but one of the five occur in the Chesapeake Bay. Sea turtle numbers are dwindling rapidly the world over, and the Chesapeake is no exception. Greater awareness of their plight by those of us concerned with the Bay and its inhabitants may enable a few more to survive within our waters. In addition to their gentle and graceful nature, sea turtles should endear themselves to us with their habit of eating jellyfish.

Leatherback sea turtles, classified in a separate family from other sea turtles, are the largest, with weights of up to 1,900 pounds, and shell lengths of seven feet. Unlike all other turtles, the leatherback lacks a horny shell over its bony inner shell, having instead a thick leathery skin. Leatherbacks eat nothing but jellyfish; one juvenile in captivity gained twenty-two pounds in two weeks on a diet solely of jellyfish. Most leatherbacks recovered in the Bay have weighed under 1,000 pounds. In the Bay their normal range extends as far north as Governor's Run, Calvert County, with other Calvert sightings near Little Cove Point.

The most common sea turtle worldwide, and in the Chesapeake Bay, is the loggerhead turtle. Known to reach a weight of 1,000 pounds and a length of seven feet, most (including those in the Bay) are 300 pounds or less, and three feet long. Although none of the sea turtles nest in Chesapeake Bay, the loggerhead comes closest, with nests on the Atlantic beaches of Virginia. Its diet includes a variety of both plants (seagrasses) and animals (crabs, shellfish, squid, shrimp, sponges, barnacles, and jellyfish). Found as far north as the Bay Bridge, Calvert County records include Plum Point, Governor's Run, Calvert Beach, Cove Point, and Little Cove Point, with Patuxent River records near Solomons Island, and surprisingly, Battle Creek, over ten miles up river.

Similar in shell pattern to the loggerhead, but smaller (maximum 110 pounds), and grey instead of reddish brown, is the Ridley, rarest of all sea turtles. There are only 400 known breeding pairs worldwide, with an estimated total population of 4,000 (as compared to 120,000 for the loggerhead). The Ridley is more restricted in its diet, eating only crabs or shrimp. Those in the Bay are small, usually, under forty pounds. One was found in Baltimore Harbor; Calvert County records include Governor's Run, Calvert Beach, and Cove Point. The museum has the shell of the Calvert Beach specimen in its collection.

The tropical green turtle is the marine turtle most highly regarded for food; hence it has been depleted in number. In the tropics it reaches a weight of 850 pounds. Chesapeake Bay specimens are mainly wandering juveniles of 100 pounds or less. The young primarily eat jellyfish, shellfish, crab, and shrimp; the adults prefer submerged aquatic vegetation. The Bay is probably outside their normal range, their reduction in numbers makes this hard to confirm. Several individuals were found near Drum Point, the northern most record in the Bay.

The hawksbill is known for its beautiful shell, providing the 'tortise shell' of comb fame. It is the most tropical of the sea turtles. One shell is known with a cryptic label 'Chesapeake Bay.' No other information or occurrences are recorded.

Sea turtles have been in Calvert County for a long time, at least since the middle Miocene (12-15 million years ago). One species of leatherback and two species of "hard shell" sea turtles have been found as fossils at Calvert Cliffs. One of the hard shell sea turtles has a serrated, pseudo-toothed beak. A similar beak occurs on the jellyfish-eating modern leatherback, suggesting this fossil turtle had a similar diet.

All of the marine turtles are rare and protected by Federal law. The leatherback, Ridley, and hawksbill are classified as "endangered," meaning they are in immediate danger of extinction. Some authorities have predicted the extinction of the Ridley within five years, despite efforts to protect it. The loggerhead and green turtle are listed as "threatened,"

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Sea Turtles

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not in immediate danger of extinction, but whose status could become endangered with a further drop in numbers.

Several factors have adversely affected the numbers of sea turtles. Outside the Chesapeake Bay region turtles are killed by drowning in shrimp trawls (although efforts by the trawlers and improved equipment have reduced this), capture of females on nesting beaches, the robbing of eggs from nests, and commercial development of nesting beaches. In the Bay, as elsewhere, turtles are killed by power boat props. Some drown in pound nets, although the majority are able to surface periodically while in the net and breathe until released by watermen. Occasionally turtles are shot by thoughtless humans.

Most live turtles are seen in the Bay by boaters. Dead turtles usually wash ashore, rapidly decompose; their bones are quickly scattered along the beach. (With the exception of a few green turtles, which come ashore to bask, only the females come ashore, and these only to lay eggs.) Molesting live sea turtles is illegal, as is the collection of parts of dead turtles.

Persons finding dead sea turtles should report them to the Virginia Institute of Marine Sciences, which is studying the turtles of this area. Reporting forms, which include a guide to identifying the five species, are available at the Calvert Marine Museum. The majority of reports are coming from the Virginia Chesapeake and Atlantic Coast; reports from Maryland would be very welcome.

Calvert Marine Museum has a permit to salvage dead turtles and has recovered several, thanks to the cooperation of people in the area. Most turtles recovered are broken and incomplete, and useful only as study specimens. One complete Ridley upper shell has been received and we hope to find others for possible mounting and exhibit.

Much of the information in this article was obtained from Frank Schwartz’s lecture on sea turtles recently given at the Museum. For additional information the following articles in the museum library are helpful: Maryland Turtles by J. F. Schwartz; The Marine Turtles of Virginia by J. A. Musick.

CMM’s Newest Club Is Geared To The Fossil Enthusiast

The Calvert Marine Museum’s fifth, and most recently sponsored club, has been meeting the fourth Wednesday of each month since April, 1981. Meetings have been highlighted by lectures delivered by members and outside guests covering such topics as Miocene land mammals from Calvert Cliffs. Members are also encouraged to bring in prized finds to the meetings for identification and just “show and tell.” Field trips have been made to Pope’s Creek, Plum Point, The Willows, Chesapeake Beach, and Calvert Beach.

The club will operate a fossil identification booth during Patuxent River Appreciation Days (see calendar). Anyone having fossils to be identified may bring them. There will also be a fossil cleaning and preparation demonstration, and a “hands on” fossil exhibit.

Field trips in the planning stages include Miocene fossils of the Lee Creek Mine, North Carolina in November; and Paleocene and Miocene localities near Washington, D.C., in December. Indoor trips are planned to the Smithsonian labs, Naturalist center and exhibit in January, and the Baltimore Aquarium in February. A field trip might be called on short notice to take advantage of extremely low tides common in winter.

Persons interested in the club should attend the regular meetings or contact the museum. Check the program schedule for the next meeting dates.

NEW FACES AT CMM

As mentioned elsewhere in this newsletter, the museum has begun a ten-month project documenting the commercial fisheries history of the Patuxent River. This documentation will be accomplished via oral tapings and pictorial recordings of the watermen still working the river. The museum is very fortunate to have Paula Johnson join the staff to direct this project. Paula is a folklorist who has worked at the American Folklife Center at the Library of Congress and conducted field research in various parts of the United States.

Most members do not realize it, but the myriad of educational programs offered by the museum are the direct result of one key volunteer, Dorothy Orduwein. Typical of Dot, who started the museum’s gift shop, she built the programs from scratch with no finances and limited assistance. For several years now the educational programs have taken more time than any volunteer should be asked to give. Dot has built up the department to where it really required a full time paid professional. Uz Gilbert admirably fits this need. As Liz indicates, this doesn’t mean Dot won’t continue her needed work.

“Working with Dot Orduwein, and volunteer educators at CMM, has been a pleasure; museum education is my field. As Director of Education here, I will continue to develop close relationships with county schools, and address the interests of CMM’s members and visitors. I will be spending most weekdays in the office or North Annex, and Thursdays and Fridays in Drum Point Lighthouse, so please come by and let me know your ideas for programs at CMM.”

Liz comes to us with a master’s in Museum Education from George Washington University. A review of the museum’s past, present, and anticipated programs will be presented in the winter issue of Bugeye Times.
# FALL CALENDAR AND PROGRAM SCHEDULE

All programs begin at the Museum at 7:45 p.m. unless otherwise noted. Programs are free to members; $1.00 to non-members unless otherwise noted. For additional information call Liz Gilbert, 326-3719.

### John Olsen Chapter, American Shipcarvers Guild:
First and third Tuesday of each month.

### Solomons Island Model Boat Club:
First Wednesday of each month, 7:30 p.m.

### Patuxent Small Craft Guild:
Every Saturday, 10:00 a.m.

### Fossil Club:
Fourth Wednesday of each month, 7:45 p.m.

### CMM Canoe Club:
First Saturday of each month, 10:00 a.m. to 2:00 p.m. (Call 586-0767 for specific locations.)

### OCTOBER

**1** THE CHESAPEAKE COLONISTS: lecture by Thad W. Tate, Director, Institute of Early American History and Culture, College of William and Mary.

**10-11** PATUXENT RIVER APPRECIATION DAYS: Open house at CMM and Chesapeake Biological Laboratory; free boat rides, nautical skills and demonstrations, seafood. Model Club, Fossil Club, Shipcarving Guild, and Small Craft Guild will have displays.

**17** FOSSIL CLUB FIELD TRIP: Calvert Cliffs Choptank formation. Meet at Lusby Post Office at 7:00 a.m.

**24** CHRISTMAS GIFT WORKSHOP: 10 - 11 a.m. Preview of gift ideas and planning for items participants may make. Attendance at this session necessary for securing supplies. See November 7 and 14 below for workshops. $5.00 for members and $10.00 for non-members.


**31** IN SEARCH OF THE LOST FOLKSONG: An evening of folk music by Ginger Haupt and David Hilderbrand of Annapolis. This program will emphasize CMM's search for folksongs of the Southern Maryland waterman, highlighted by song and folk instruments.

### NOVEMBER

**7** WOODCARVING FOR BEGINNERS: 9:30 a.m. to 12 noon. Learn basic techniques, selection and care of tools, and complete a simple project. Successful completion of this six (6) week course may qualify one for membership in John Olsen Chapter of American Shipcarvers Guild. Additional sessions Saturdays through December 12. $10.00 for members and $15.00 for non-members, plus cost of tools and supplies.

**7** CHRISTMAS GIFT WORKSHOP: 9:30 a.m. to 12 noon. Make candles, wind chimes, knick-knacks, bookends, or jewelry from beach gleanings and nautical materials.


**18** TOBAGAN CAVES AND FOSSILS: Slide lecture by Ralph Eshelman, CMM director, on his recent National Geographic expedition to the island of Tobago in search of vertebrate fossils.

**21-28** WOODCARVING FOR BEGINNERS: (see Nov. 7).

### DECEMBER

**4** DIVE TO THE EDGE OF CREATION: lecture by Peter Vogt with a National Geographic Society film of life around thermal vents on the ocean's floor.

**5** FOSSIL CLUB FIELD TRIP: Paleocene localities near Washington Beltway; Miocene locality near Aquasco.

**5-12** WOODCARVING FOR BEGINNERS: see Nov. 7.