Three hundred members and special guests celebrated the opening on November 3 of Maritime Patuxent: A River and its People, the museum’s first permanent exhibition in the new building. Featuring some five hundred artifacts and covering 5,500 square feet of space, the exhibit, as its name implies, explores the history of human interaction with the river.

*Maritime Patuxent* is divided into five sections which correspond to major changes in how people have used the river through time. Changes on the river generally paralleled the principal economic, social, and political changes in the nation. Thus, *Maritime Patuxent* traces the region’s development from a colonial society dependent on the river for shipping tobacco to European markets; to an economy still grounded in agriculture but augmented by the production of vessels and the exploitation of seafood resources in the nineteenth century; to a brief period of economic and social upheaval during World War II; to the present economy, in which the key river-related industry provides goods and services for recreational pursuits.

The artifacts that help tell this story are many and varied. For example, a dugout canoe made by Pamunkey River Indians (and on loan from the National Museum of Natural History), illustrates how Indians who lived in the region prior to European settlement made vessels for traveling on and fishing local waters. A reproduction of an eighteenth-century tobacco hogshead (or cask) gives visitors an idea of how Patuxent planters packed tobacco for transport by water during the colonial period. Scale models of sail and steam-powered vessels speak to the diversity of vessel types developed in the nineteenth century to haul cargoes and passengers during America’s industrial age. Shipyard work, an important part of life in Solomons, is displayed in recreated settings, where visitors can view the tools of shipwrights, carpenters, blacksmith, and sailmaker. The tremendous changes Patuxent River people experienced during
MUSEUM STAFF AND BOARD NEWS

Several changes have taken place in the museum staff during the past few months. Late in the spring Bette Bumgarner, curator of exhibits for a number of years, resigned from CMM to enjoy her responsibilities as a new mother. Her place was filled in September by S. Curtis Bowman, who came to CMM from the National Archives. He was immediately involved in aspects of the work on the maritime history exhibit, but has also had other responsibilities to fulfill in the exhibits program. Denise Weller, who acted during Bette's absence, remains the Exhibits Department as exhibits technician. The Exhibits Department is temporarily located in the North Annex building.

The museum board changes membership each year, since the maximum years of service are six. Two board members have left at the end of 1989: Clarence D. Bare, treasurer for the past six years, and Sally V. McGrath, a member for the same period. Their places will be filled by new members C. R. Bailey, president of CRJ Associates, Inc., of Camp Springs, and L. G. Raley owner and president of Raley's Home Furnishings of Lexington Park.

MUSEUM OFFERS NEW CLASSES AND ACTIVITIES FOR EARLY 1990

CMM is offering several special classes, programs, and activities for the first quarter of 1990. Please call the museum on 326-2042 for further information or to register as indicated in the individual items below.

JUNIOR FOSSIL CLUB FORMING

The museum is trying to organize a Junior Fossil Club for ages eight through fourteen as a section of the present Fossil Club. Two events have already been held this past fall: (1) a fossil identification day followed by a visit to a nearby fossil site.

CMM will repeat the program on local fossils on Saturday, January 27, at 1:00 p.m. All those interested should come to the museum on that day. Those interested in a junior fossil club who cannot make this program should call the museum to leave their name, telephone number, address, and age of member so that they may be placed on a mailing list.

CLASS FOR CAPTAIN'S LICENSE

A class will be offered to help interested boaters prepare for the United States Coast Guard test for a captain's license. This program will cover the sections of the test that deal with rules of the road, general knowledge, and navigation and chart plotting. There will be ten consecutive sessions from January 22 through 26, and January 29 through February 2, from 7:30 p.m. to 10:30 p.m., all held in the museum's exhibition building. The cost is $280 for CMS members and $300 for non-members. Enrollment is limited to thirty students.

Initial registration will be by phone prior to January 13, 1990, and a non-refundable deposit of $30 is required by January 19. Please note that this class does not issue the student the license, but only prepares for the Coast Guard test. The museum does not guarantee that the student will pass the test, nor will it allow the student to retake the classes without charge if they fail the test.

BUILD YOUR OWN CHESAPEAKE-STYLE SAILING SKIFF

The Patuxent Small Craft Guild is offering CMS members and others the opportunity to build their own traditional, Chesapeake-style sailing skiff. Four such skiffs will be built by teams composed of family or friends, with construction starting on March 31, 1990. There will be four, six-hour classes which will meet on consecutive weekends, weather permitting. These charming and versatile twelve-foot boats will be built with simple hand tools, using techniques developed by generations of local boatbuilders. The cost of $800 for CMS members and $850 for non-members will apply to each boatbuilding team and will cover everything except for paint.

If you have trouble finding a partner, the museum may be able to assist you. The class is limited to eight students, and each team must include one adult at least nineteen years of age, with no student younger than age fourteen.

AND LOOKING FORWARD TO SUMMER

Several new programs are being considered for the coming summer months. The museum would like to gauge members' interests in the following possible offerings:

- Nameboard and trailboard carving
- Basic canoeing
- Basic sailing
- Regional paleontology
- If you might enjoy any of these programs, please call the museum and place your name on a mailing list. Please give names, ages, and preferred time for a program, including the month. It is likely there would be a fee for these programs.
LANDSLIDING AND EROSION ALONG THE CALVERT CLIFFS: A Report on Recent Observations in the Southern Part of the Cliffs

By Jack Pomeroy

It is noticeable that the southern part of the Calvert Cliffs has been subjected to considerably more erosional shoreline changes during the late 1980s than the northern section. The stretch of coastline that is the subject of this article lies south of the northern edge of the Calvert Cliffs State Park (at Rocky Point) and extends to Drum Point. Landsliding is the dominant process in producing cliffline erosion.

Lithologic factors play a major role in influencing where landsliding takes place. The St. Marys Formation (which is the youngest stratigraphic unit in the Chesapeake Group along the Calvert Cliffs) contains several plastic clays that occur through this part of the shoreline as thin, discrete bands ranging in thickness from paper-thin laminae to five-foot beds. Plastic clays serve as slippage surfaces for overlying sands and also provide an impermeable horizon above which water seeps from a more permeable lithology.

Ground water discharging along a cliff face undermines the generally non-cohesive sand above the seep in a process called “sapping.”

Water moves downward to the ubiquitous subvertical tension joints that are especially conspicuous in the underlying silty clays or fine-grained clayey sands. These joints are the result of lateral stress relief accompanying valley erosion and concurrent cliff development. Increased weathering enhances the erosion potential of the host rocks. Spalling of sections of the cliff face is commonplace, not only in the St. Marys Formation, but in the older outcropping units in the Chesapeake Group to the north.

The spalling process is clearly evident at the Calvert Cliffs State Park where a thousand-foot-wide section of shoreline was closed off in late June 1987 after a slope failure during that month. Failure along nearly vertical joint planes resulted in a fall of a seventy-foot-wide zone of rock. Four seepage horizons are apparent at the cliff scar. In early April 1987, about two months before the slope failure, I had noted an intense spalling of the basal silty clay resulting in broken masses blocking the shoreline. Earlier this year (1989) a 275-foot-wide section failed just slightly north of the June 1987 locality. A 115-foot-wide zone of bluff south of Rocky Point and opposite a campground failed in early 1988. Closure of the shoreline in the southern part of the park went into effect in mid-1988 because of lower-slope spalling.

Although the spalling process is continuous throughout the year, it accelerates during the cooler months when freezing and thawing occur along the joints. Observations at various time intervals elsewhere along the Calvert Cliffs have led to the conclusion that a series of closely spaced spalls above the beach is a prelude to intense failure of the overlying slope units. Such support removal can be further enhanced by wave action, but I believe that the ground water process is a more effective agent, especially in the absence of high waves induced by “northeasters” or tropical storms.

Coastline changes that have been
Some scenes from the opening of Maritime Patuxent:

Cutting the ribbon to officially open Maritime Patuxent: A River and Its People were (left to right): Mrs. Anna Weems Ewalt, Dr. George Weems, and Mrs. Alice Forbes Bowie.

Photo by Jim Houser

Maritime Patuxent (Cont. from page 1)

World War II are illustrated through objects and photographs from the three navy bases established at the mouth of the river in the 1940s. “The Patuxent and World War II” features navy uniforms, an underwater mine and torpedo, a hard-hat diving uniform, models of U.S. Navy landing craft (on loan from Naval Sea Systems Command), and photo murals of training maneuvers. Finally, the post-war era when recreation has become the major maritime activity is represented by such artifacts as a 1956 Cruis-Along power boat, built at the M. M. Davis Shipyard in Solomons, scale models of hydroplanes, racing flags and jumpsuits, and sportfishing gear.

Other highlights of Maritime Patuxent include a 10-minute video introducing the exhibit, the steam engine used to run machinery at the tomato cannery in Solomons, and the 1896 launching flag from the James T. Marsh Shipyard. A favorite with visitors has been the scale model of Solomons, ca. 1890-1900. Built by the museum’s modelmaker Jimmy Langley, the model includes all houses, churches, shipyard buildings, and other structures known to have existed at the time. The harbor is filled with vessels—bugeyes, brogans, schooners, skiffs, and a steamboat—depicting the vibrance of the commercial harbor at the time.

At the formal opening on November 3, the ribbon was cut by three members of Maryland’s Weems family, recognizing the importance of the Weems Steamboat Company to the history of the Patuxent River. Anna Weems Ewalt, known to many museum members for her furnishing of the Drum Point Lighthouse in which she was born, was recognized for her contributions to the museum and its programs. Also cutting the ribbon were Mrs. Alice Forbes Bowie, a direct descendant of George Weems, founder of the Weems Steamboat Company, and Dr. George Weems, the prominent local physician and former Calvert County Commissioner.

Maritime Patuxent was made possible by support from a number of sources. Grants from the National Endowment for the Humanities funded both planning and implementation phases of the project. Matching funds were provided by grants from Philip Morris, Inc., and the Marpat Foundation, as well as from contributions from museum members and friends through the “Sitting in on the Future” campaign.

We invite members to take a journey through Patuxent River history by visiting the new exhibit. Maritime Patuxent is open during regular museum hours (see calendar).

(By Paula Johnson)
The section of Maritime Patuxent pertaining to the "Pawtuxent" Indians and early European explorers.

A section of Maritime Patuxent devoted to the Weems Steamboat Company.
Landsliding (Cont. from page 3)

Observed during the past three years seem to correlate generally with erosion rates during the past hundred years. Maps compiled by the Maryland Geological Survey showing rates of erosion and historic shorelines along the Calvert Cliffs indicate that some parts of the coast have a rate of recession that is higher than average. Whereas most of the Calvert Cliffs shoreline shows slight (less than two feet) to low (two to four feet) annual erosion rates*, the coast south of the state park to Little Cove Point contains several areas with moderate to high erosion rates (four to eight feet or more per year). Major cliff changes that have been observed during the past three years at the state park and in the southern part of Cove Point Hollow would seem to indicate that these shorelines are vulnerable to greater-than-normal rates of recession.

What has been observed since 1985 along the 100-foot-high cliffs nearly a half mile northeast of Driftwood Beach (Chesapeake Ranch Estates), however, would seem to indicate a possible acceleration of shoreline retreat. Significant slope failures took place between October 1985, when I first observed that shoreline, and August 1986. About fourteen feet of the surface behind a residential lot fell one night in the summer of 1986, leaving only twenty-four feet between the rear foundation of the house and the top of the cliff. New movement along a 200-foot-wide section of the lower part of the slope occurred on September 11, 1987. Less than two weeks later, just to the north, a vertical slab of the cliff 140 feet wide failed. Events of this nature within a period of fourteen months might seem to indicate a relatively high annual rate of erosion. Adjacent areas will be subject to similar retreat in a process that has tended to maintain a relatively straight shoreline for the past hundred years. Investigations along other shorelines indicate that the cliff retreats in tandem with the beach.

*Updated data at several Maryland Geological Survey benchmarks north of the state park. At Kenwood Beach, Scientists Cliff, and Randle Cliff Beach an average recession rate of slightly less or slightly more than a foot per year has been documented during the past ten years. In each case, the results are in agreement with those shown on the historic shoreline maps.

Interestingly, data from both the top and the base of the shoreline bluff a few hundred feet to the north of the recently active area reveal a slight erosion rate. The cliff here is slightly less than one-half its height to the south. The homeowner told me that the recession of the cliff rim adjacent to his backyard averages about one foot per year. Dave Bohaska (Calvert Marine Museum, written communication, 1987) mentioned a fossil locality at the base of this section of the cliff where a four-year old hole dug into the bluff is still visible. The historic shoreline map indicates a slight erosion rate, whereas the higher and more active part to the south shows a low erosion rate.

Unfortunately, the two Maryland Geological Survey reference points along the coast between the state park and Drum Point have been eroded away. More reference (control) points should be established along the shoreline in the southern part of Calvert Cliffs. I have made several measurements from residences and other man-made features to the cliff rim along this part of the shoreline. Such data will be useful in future years in the determination of present-day erosion rates.

This discussion illustrates the problem of relating observational data from a three-year period to longer-term data from historical sources. Predictions concerning the frequency of major events, such as those northeast of Driftwood Beach, are difficult to make at the present time without more data.

Mr. Pomeroy is a geologist with the U. S. Geological Survey in Reston. He has been studying landslide susceptibility in Maryland during the last few years.
**HOLIDAY THANKS**

The traditions of holiday decorations tied in again this year with the Solomons Christmas Walk. A live Christmas tree was in place in the lobby of the exhibition building. Judy Warner provided the Victorian ornaments and tree garden and other decorations were handled by staff and volunteers. Unfortunately, because of snow on December 8, the members' Yule Party could not be held.

The Drum Point Lighthouse, open on several weekends in December, was decorated with the help of Anna Weems Ewalt, Mr. and Mrs. Philip Lines, and other volunteers using a cedar tree and other decorations appropriate to the turn of the century. At the J. C. Lore Oyster House, Santa Claus — portrayed in turn by Skip Zahniser, Jeff Wood, and Bruce Wagoner — entertained young visitors during the December 8 weekend. Our thanks to all of you who helped make this a most pleasant season.

**FIJI EXPEDITION**

The third Calvert Marine Museum members' expedition returned in early September from a spectacular diving trip to Fiji. Trip leader, Joan Koven, long-term associate and supporter of the museum, organized the expedition. The entire group helped shop for food in the local markets of Suva before departing by boat to our island paradise of Dravuni within the Great Astrolabe Reef where we were the guests of the village of Dravuni and the University of the South Pacific and their marine biological station. The villagers on the island were the friendliest, kindest group of people you could even want to associate yourself with. Waking up to the village drum each morning, the shell horn calling parishioners to worship, gorgeous beaches with palm trees, and outstanding diving on seamounts, reefs, and shallow coral gardens — all made for a memorable experience. For those who missed the trip, Ralph Eshelman will give an illustrated lecture on the expedition on Friday, February 23, at 7:30 p.m., at CMM.

**VOLUNTEERS SOUGHT**

The museum is looking for volunteers who are familiar with the history of Solomons and the surrounding waters of the bay and river. These volunteers would go on cruises aboard the Wm. B. Tennison in the summer, principally on weekends, to explain to the museum visitors the passing sites and some of their history. We wish at this time to establish a list of prospective volunteers. If you were interested in helping, please call CMM and leave name and number so that an interview may be arranged.

**YEAR-END APPEAL UPDATE**

The annual Year-End Appeal is moving well this year. Through mid-December 210 members and friends have contributed just over $13,000 to the fund that helps keep the Calvert Marine Museum a center for enjoyment and enrichment. The opening of the new building has provided the means for even more programs and activities, but they require support beyond that available through normal budgetary planning. Your added assistance through the Year-End Appeal will help expand museum programs.

The Year-End Appeal will close on February 15, 1990. A roster of donors will appear in the spring issue of the Bugeye Times. You may charge your contribution through your VISA or MASTERCARD account, as indicated on the Year-End Appeal envelope. Should you need an envelope, please call the museum.

**ALL HANDS ON DECK!**

Saturday, April 7, 1990, 10:00 a.m. to 4:00 p.m. for Spring Lighthouse Cleanup

Join staff for a much-needed sprucing up of the Drum Point Lighthouse, from sweeping and polishing to painting and swabbing. Come at 10 and stay as long as you can. Members, families, and friends are all welcome. Old warm clothes and rubber soled shoes are recommended. If you can come, contact volunteer coordinator Layne Bergin for assignments.

**“SITTING IN ON THE FUTURE” CAMPAIGN STILL CONTINUES**

Some eighteen months ago the Calvert Marine Society announced its campaign to "sell" seats in the museum's new auditorium. The "Sitting in on the Future" campaign was intended to provide funds to match part of a grant from the National Endowment for the Humanities to be used for the installation of the new maritime history exhibit. Within a few short months the match was completed through contributions of $250 for a seat plate or $100 for a name plate in connection with the campaign. The brass plates are in place on 150 of the seats in the auditorium, and the carved wall plaque with all names is displayed in the hall of the new building near the information desk.

Members or others interested in obtaining a seat plate may still do so for a donation of $250 each until the remaining forty seats are "sold." The small brass plate on the back of the seat identifies the donor or honors or memorializes a friend or relative. The names of seat donors will be added to the carved wall plaque, but we will no longer accept the $100 for a name plate alone. Funds received from the remaining seats will be used to support the installation of the exhibit "Estuarine Patuxent: A River and Its Life," planned for opening late in 1990. Further information about the program may be obtained by calling the museum.
VOLUNTEER SPOTLIGHT
Zelma and Peter Margelos, Museum Store

Mix a retired government employee and her real estate broker husband with a store full of merchandise, and you have a combination that works — hard!

Zelma Margelos, recruited in 1985 for the first store inventory, was quickly persuaded by manager Dee Danzig to become an active volunteer. "The lady with the top knot," as many people know Zelma, became the regular Sunday salesperson in the old schoolhouse store, three to four days each month.

With the move to the new building, Zelma willingly began a five-day-a-week schedule to help prepare for the new store set-up. Husband Peter Margelos, tired of being left at home, was promptly invited down and put to work. Long after the move, the Margeloses are still here, the Tuesday team. While Zelma handles customers and store displays, Pete is in the back storage room/office pricing stock and putting out merchandise. They both also help out in the store during after-hours events. "The people you meet and work with" make the job worthwhile for Zelma who also "likes what the museum stands for." For his part, Pete continued volunteering once he learned the value of volunteer hours in obtaining grant requests: "that made it important to come down."

The Margeloses, who have a home at Drum Point, easily combine volunteering with frequent travel plans to the Caribbean, Europe, and Greece, where Pete has relatives. Zelma occasionally favors the museum crew with baklava, and if ever needed, Pete speaks fluent Greek. "The shop couldn't function without them," says Dee Danzig. "With the help of Zelma and Pete and all the volunteers, we've had a successful 1989."

The CMM volunteer program needs people from all fields to help in a variety of museum functions. If you can spare some time, contact volunteer coordinator Layne Bergin for an interest form. We need you to join the crew!