Cures Prescribed for Healing the Patuxent’s Ills

by Elaine Friebele

It is an environmentalist’s dream for the Patuxent River: over 100,000 acres of woodland, riparian and aquatic habitat and nearly 500 miles of stream channel restored. These are the estimated outcomes of 100 environmental restoration, flood control, navigation and recreation projects recommended by the U.S. Army Corps of Engineers in a recent reconnaissance study. Most of the projects — from construction of small storm water management ponds to large-scale monitoring programs — are designed to alleviate the worst problem of the Patuxent watershed: erosion.

For now, the array of projects constitutes an intangible vision for the river. Although the Corps has authority for implementing some of the projects, executing the comprehensive watershed plan will require coordination with local, state and federal agencies — not to mention funding of $275 million. In the meantime, the Corps will proceed with four prototypes to demonstrate how some of the watershed’s environmental problems could be treated:

- Restoration of submerged aquatic vegetation (SAVs) at Jug Bay
- Upper Marlboro flood plain habitat restoration and woodland enhancement
- Burtonsville Elementary School Stormwater Management and Stream Restoration
- Jefferson-Patterson Park Shoreline Erosion Protection

SAV Restoration at Jug Bay

To enhance the Jug Bay freshwater tidal wetland, five thousand wild celery plants will be planted in a ten-acre area along the east side of Jug Bay, extending from the Observation Blind off the Railroad Bed Trail south to celery, a valuable waterfowl food, will improve wildlife viewing for Jug Bay visitors.

The results of this study might be applied throughout much of the Patuxent basin to help control the growth of Phragmites (the common reed) in freshwater tidal marshes. Although the Army Corps of Engineers has not yet devised a method for controlling Phragmites, the Corps theorize that with a boost, competing plants like wild celery could crowd out this opportunistic invader.

Three Other Projects Demonstrate Restoration

For the restoration project at Upper Marlboro, the Corps will modify the existing floodway, lower the flood plain elevation and create wetlands, and establish riparian cover. In addition to improving habitat for a variety of

Patuxent River valley looking south from Jug Bay.

beyond Farm Point. The project design is based on a survey of existing aquatic vegetation, selection of appropriate plant species, and location of priority areas for restoration by the Corps and consulting research biologists. The SAV beds should benefit the river by increasing dissolved oxygen levels in the water, slowing the flow rate during storm surges and retaining sediment. The SAV should also provide valuable wildlife habitat for fish, shellfish and turtles. In addition, stands of wild

Five thousand wild celery plants will be planted in a ten-acre area along the east side of Jug Bay.

wildlife species, the project will create more recreational opportunities for hiking, picnicking, bird watching and educational field trips.

Continued on page 4
Interactive Wetlands Education Project Update

Gone are the days of static exhibits and glass cases, carryovers from the past. We were not conveying this sentiment when we used the term “Wetland Exhibit” to denote our innovative plans for the McCann Wetlands Study Center. Our fund-raising for the innovations, now renamed the Interactive Wetlands Education Project, will provide the finances for modern educational tools ranging from custom-designed mechanical devices to Internet-linked computer stations and software designed specifically for Jug Bay applications.

For the spring quarter, FOJB fund raising includes another appeal to members (included with the renewal form - please complete if you have not already done so), as well as an appeal to area businesses and the general public. More on the fun side of fund raising, the Friends will hold an acoustic music festival on June 8 to raise money for the project. Everyone is invited!

We are also planning a photographic exhibition for the summer.

Listed below are those who have made donations to the project. Our sincerest thanks to each and every one of you!

$1,000
Eastern Mountain Sports, Annapolis

$100 - $200
Linda Duvall
Marilyn Fogel and Chris Swarth
Jim Harle
Bob LaPorte
Cora Mason
Robert Mitchell
Lisa Ruthel
Sierra Club; Baltimore Chapter
Marie Tuthill
Joseph and Maryanne Zahn

$50 - $75
Crofton Village Garden Club
George Denny
Joe and Carol Jelich
Jerald M. Jordan
Margaret Neall
Katalin Slezavec
Dennis and Jan Whigham

$10 - $25
Rob and Pam Biddlecomb
Mr. and Mrs. David G. Boak
Marty Chambliss
James Donnelly
Carroll Hughes
David Laughlin
Mike and Liz Shay
Ellen Thayer

County Development Plan

Change may be in the air for Wayson’s Corner and the nearby Route 4 corridor. The county’s land use office is proposing a rezoning in the General Development Plan that would allow a mixture of residential and commercial uses in Wayson’s Corner. The Office is not proposing to rezone the forested land north of Wrighton Road; that land would retain its current zoning as residential-agricultural, or R-A. The county plan will be available in libraries in March. If you have questions, call Rich Josephson at the Office of Land Use at 410-222-7431.
Dear Friends,

Winter has passed incredibly swiftly this year, perhaps because the volume of snow was much less than last year. But this winter was not without its wild temperature swings; January, for example, witnessed temperatures seessawing from 75º to 10ºF and back up again.

One thing that has remained constant, however, has been our efforts to make the wetlands exhibit fund raiser a success.

[See the cattail thermometer on page 2 of Marsh Notes for an update on our efforts.] The lower casing of wetlands exhibit is not an oversight - the board decided that this description did not convey the program's true import and innovations. The new name, the Interactive Wetlands Education Project, better describes this project.

Karyn Molines informed me recently of volunteers and Friends who are interested in learning about what takes place at our board meetings. You can find out in person by attending a meeting; they're open to all FOJB members, and we welcome visitors. A typical agenda includes approval of previous minutes, treasurer's report, followed by committee reports (education, fund raising, sales, etc.) and a Sanctuary staff report. Minutes of the meetings, expertly prepared by secretary Betty Chaney, are kept on file in the Sanctuary office. In the future I hope to create a regular column outlining the quarterly progress of the Friends. Our meetings are held in the evening of the third Tuesday of every other month. Meetings in 1997 are set for March 18, May 20, July 22, September 23 and November 25.

One aspect of our January board meeting I'd like to highlight was a concern expressed by area resident Mrs. Dotty Chaney (no relation to Betty). She spoke to us about a proposal to rezone much of the Jug Bay area for development in the county's General Development Plan. As a result of Ms. Chaney's concern we invited County Council member John Klocko III to speak on this issue at our annual meeting on March 23. (See announcement on the Development Plan on page 2 of this issue.)

I am really pleased to announce that this spring, Dr. Dennis Whigham of the Smithsonian Environmental Research Center in Edgewater will receive the 1997 Jug Bay Award. This award is presented to recognize his years of dedicated scientific guidance, advice and teaching. Dr. Whigham is a highly published, internationally recognized wetlands scientist, and we are very fortunate that he was present at the Sanctuary's creation and has devoted more than a decade of work towards making the Sanctuary and FOJB a success.

While on the subject of science, we were very pleased to receive a grant of almost $500 from the Chesapeake Bay Trust for Karyn Molines to teach a course on wetlands ecology to educators.

With Children's Day in May spring has sprung, the Nuphar's "riz," and Jug Bay is where the action is.

Doug Kuzniak
Near the Burtonsville Elementary School in Montgomery County, a channel has been eroded by stormwater runoff from parking lots at the Burtons ville shopping center. A stormwater detention pond holding the drainage from an 11-acre area will improve stream and riparian habitat and create a wetland. Stormwater detention will also improve water quality and clarity in the stream and slow velocity of storm surges.

Valuable archaeological sites at the Jefferson-Patterson Park in Calvert County are threatened by the eroding shoreline of the Patuxent River. The Corps has designed structures to protect the shoreline from erosion and to restore habitat.

The State of the Patuxent

The proposed restoration projects grew from the Corps' assessment of the Patuxent watershed, which, like many river systems in the United States, has undergone degradation of water and habitat quality in the past 50 years. The population within the watershed has more than doubled in that period. Growing development along the river has caused increased flooding, severe erosion, sedimentation and degradation of habitat, as well as water supply and treatment problems, the report said. The Patuxent's most prevalent problem, erosion, stems from improperly managed stormwater flow from impervious surfaces such as roads and parking lots — rather than from construction or agricultural practices. Stormwater runoff that erodes stream banks loads the river and its tributaries with suspended sediments. Increased turbidity harms SAVs by blocking the sunlight they need for growth. As SAVs die off, animal species lose habitat and food sources. Development has added other assaults such as loss of woodland and wetland habitat and leaking septic systems. The growing population also demands more recreational opportunities near and on the river.

Watershed Plan

The watershed plan is a presentation of small-scale solutions that "when taken as a whole, would achieve the greatest overall benefit for the watershed." The 100 or so projects could be implemented by various local, state and federal agencies.

The Upper Patuxent

Draining an area that lies between Washington and Baltimore and northwest to Carroll County, the upper portion of the Patuxent River is the most densely populated. Uncontrolled stormwater structures will be retrofitted.

stormwater flowing from parking lots, roads and buildings erodes stream banks and tributaries such as the Little Patuxent River and Dorsey Run. The tributaries have also been degraded by sedimentation. The plan recommends projects for stream bank restoration, stabilization and protection; inadequate stormwater structures will be retrofitted and new facilities designed to handle stormwater flows. Local communities would be educated about urban and rural best management practices to protect reservoirs from high sediment and nutrient loading.

The Middle Patuxent

Much of the sediment and nutrient content washed into upper basin streams is transported to the middle reach of the river. Sediment from the upper basin and from the middle Patuxent, where more poorly managed stormwater erodes stream banks, causes eutrophication and degradation of aquatic habitat. In several areas, obstructions in the mainstem of the Patuxent block the passage of anadromous fish. The Corps has identified opportunities to restore fish habitat and range by removing blockages. At Upper Marlboro — where the endangered striped bass and glassy darters are found — this prototype project will restore habitat where the stream has been channeled for a previous flood control project.

Lower Patuxent

Like the upper portions of the watershed, the lower Patuxent is afflicted with high sediment loads that degrade the environment for SAVs, waterfowl, fish and oysters. Fish habitat could be improved by removing blockages. Uncontrolled stormwater has caused severe shoreline and stream bank erosion. The Corps recommended upgrading stormwater management systems and restoring, stabilizing and protecting stream banks. To rectify the problem of failing septic systems that pollute ground water and surface water, the Corps proposes public outreach and education to improve land stewardship, building small treatment plants and developing pump-out schedules for private septic tanks.

The Next Step

The Corps of Engineers now moves from the "reconnaissance" phase of the planning process to the "feasibility" phase. Though these terms have a bureaucratic ring, it could mean that the Corps takes the lead in seeing that the projects are accomplished and helps local governments with planning and implementing them in Anne Arundel, Howard, Montgomery, Prince George's and Calvert counties.

More than a nice dream, the recommendations of the reconnaissance study suggest that our continued attention and care are needed to heal the Patuxent. "The problems plaguing the Patuxent River and its tributaries will continue to worsen if left unaddressed, adversely affecting not only the quality of life in the Patuxent River watershed, but ultimately the quality of life down river in the Chesapeake Bay," the report concludes.

[Elaine Friebele is a biologist and environmental writer. She teaches a course on freshwater ecology for the USDA Graduate School and lives with her family in Cheverly. She's been a volunteer at the Sanctuary since 1992 and last December achieved the rank of Jug Bay Mud Mucker. The Patuxent Watershed Study report is available for review at the library at the Sanctuary.]
Conservation Ecology of the Amphibians of the Mid-Atlantic Region

Sponsored by the Jug Bay Wetlands Sanctuary, Audubon Naturalist Society, Calvert County Natural Resources Division

Saturday, October 25
9:00 a.m. - 5:00 p.m.
McCann Wetlands Study Center

Registration Fee: $25, includes refreshments and lunch

There is an increasing concern nationally among scientists and conservationists about the health and status of amphibian populations. Several species are suffering severe population declines. What is the status of the frogs, toads and salamanders on Maryland’s threatened and endangered species list? How healthy are our amphibians? All those with an interest in amphibian conservation and ecology are invited to attend. This one-day conference will address some of the following issues that are important to us on a local level:

Monitoring Methods and Assessment
Abundance and Distribution
Habitat Requirements
Conservation Efforts
Population Status
Larval Biology
Identification
Natural History
Behavioral Ecology
Reproductive Biology

For those wishing to make a research presentation, the deadline for abstracts is May 1. For more information about the conference, call organizer Karyn Molines at 410-741-9330.

Staff Transitions

Ben Dove, who joined the staff as maintenance supervisor soon after the Sanctuary opened in 1985, retired in December. He and his wife, Virginia, have moved to a farm outside St. Louis, Missouri, where they will raise and train sheep dogs. We sorely miss Ben’s dedication, warm personality, willingness to tackle all sorts of jobs and experience with tractors, chain saws and trucks. Ben and Virginia will be joined by Virginia’s mother, Gretchen Seielstad, and her granddaughter Narissa in June. We also bid farewell to Gretchen, who has been a dedicated volunteer, taking water samplings weekly at the River Pier, as well as a board member of the Friends of Jug Bay. The new Maintenance Supervisor will also be a caretaker and will live in the Red House at the Farm.

Donations

We thank the following people for donations.

Gretchen Seielstad gave a large collection of natural history books to the Jug Bay library.
Dotty Mumford donated soup bowls to the Wetlands Center kitchen.
Tom McCarter of McCarter’s Welding and Fabrication in Mayo provided a pile driver, at a greatly reduced cost, for building boardwalks. The Friends of Jug Bay gave the money to pay the discounted price.
Dr. William Choate donated a large amount of lumber for the new boardwalk.
Tait Saderholm and Robert Corletta of Maryland Environmental Service donated six truckloads of leaf compost (Leaf Gro) for the community vegetable garden.

Spring Beauties are blooming in the woods.

Wood Frogs have laid eggs in the Sanctuary’s ponds.
Volunteer Activities

Volunteering at Jug Bay is a fun, exciting and rewarding way to learn about wetland ecology. No experience is necessary, only enthusiasm for working outdoors. Call the Sanctuary at 410-741-9330 to register for these workshops or to learn about ongoing projects. Most activities are not suitable for children under 10. Scouts, schools and other youth groups should call to arrange for programs designed for their special needs.

Canoe Guide Training (2nd Session)
Saturday, March 29; 9 a.m. - 2 p.m.
Become a Jug Bay canoe guide! Canoeing the marshes is an exciting way to learn about wetland ecology. (Read observations from canoe guide Bill Steiner on this page.) This workshop, for new and experienced guides, covers basic marsh ecology, canoe safety, paddling techniques and canoe routes and provides an overview of Sanctuary policies. New volunteers are required to attend. Much of the training takes place in canoes on the river. Organized group canoe explorations take place at least twice a month between April and October, and two guides are needed for each trip. Volunteers make it possible for us to offer this popular program.

Naturalist Training
Saturday, April 12; 11:30 a.m. - 3 p.m.
If you've ever wanted to lead a nature walk, here's your chance to learn some tricks of the trade. After our normally scheduled boardwalk tour (10 - 11), Karyn Molines will lead a training session for those who would like to become volunteer naturalists on the weekends. How do you plan a nature walk? What basic equipment should you have? How do you lead a trip that is meaningful to all the participants, no matter what their knowledge level? Plant and animal identification, historical overview of the Sanctuary and activities to make a nature walk fun and educational will be part of the workshop. If you're not already familiar with the boardwalk habitats, please try to attend one of the monthly marsh boardwalk tours.

Volunteer Orientation: Songbird Population Studies
Wednesday, May 14; 7:30 - 9 p.m.
In May we begin our annual bird banding study, known as Monitoring Avian Productivity and Survivorship (MAPS). The study involves capturing and banding breeding birds (schedule to be announced later) in order to assess the health of bird populations. Banding begins at 6 a.m. and continues until 11. Volunteers and observers can join at any hour and benefit from the experience. We'll discuss the study results and methods. If you'd like to participate but are unable to attend this orientation, please call the office to request a banding schedule.

Fish Ecology and Identification Techniques
Saturday, June 28; 10 a.m. - 2 p.m.
New and experienced volunteers are welcome to come learn more about the fish that live in the waters of Jug Bay. Participants will learn about fish ecology as well as techniques for identifying the different species. We will use seines to catch the fish, so be prepared to get into waist-deep water. Bring a lunch, towel and a change of clothes. Old sneakers that tie tightly are the recommended footwear for seining.

Research Projects:
Please call the office for more details and about other projects that are taking place.

Amphibian Trapping:
every morning through mid-May

Fish Survey:
Sat., April 19; 2 - 5 p.m., Sat., May 3; 12 - 4 p.m., Sat., June 14; 11 a.m. - 4 p.m.

Aquatic Insects:
Fri., May 2; 12 - 4 p.m.

Waterbird Census:
Tuesdays, March 18, April 1, April 15, April 29 beginning at 7:30 a.m.

Wetland Plant Transects
beginning Sat., May 31.

Join the low-cal crowd: Be a canoe guide

Do you know that:
—Red-winged Blackbirds have green “lips” in the summer! It’s because they eat wild rice seeds in the milky, green stage; other birds wait for the seeds to ripen.
—turn reservoirs on the Patuxent, Tridelphia and Rocky Gorge, hold 12.5 billion gallons of water for use by the residents of Washington’s northern suburbs?
—cattails make a low-calorie meal? You can cook up dishes from seven parts of the plant, including the pollen, the green flower spike (“wild corn”) and the new stem (“Cossack asparagus”).
—two-thirds of wave energy will dissipate in 2 meters of cattail beds, thereby reducing erosion and turbidity?
—Billingsley Manor, the 17th-century mansion across the river from the Observation Deck, is now open for visitors on the third Sunday of each month, from noon to 4 p.m.? (Call 301-627-0730 for more information.)
—muskrats on land have been known to rear up on their hind legs and attack horses?

These tidbits can be yours to pass on if you take our canoe guide training on March 29 (see listing under Volunteer Activities). They come from the busy fact-finding brain of volunteer Bill Steiner. Bill spends a good portion of his “free” time researching the Patuxent River and its plants and animals and he is putting together a packet of information to share with other canoe guides to make everybody’s trip more fun.

Ospreys have been seen at Jug Bay since February 24, about two weeks earlier than usual.
Volunteers Set Record in 1996

Our volunteers outdid themselves in 1996, with 173 people donating a total of 4,655 hours to the Sanctuary. What does this huge number mean? Translated into dollars, it means that we received about $57,667 worth of help last year. Translated into a weekly average, it means that we had 90 hours of unpaid assistance every week throughout the 52 weeks of 1996. Translated into projects, it means that we now have a new boardwalk in the scrub-shrub wetland; that we have new funnel traps for our amphibian research; that schoolchildren got individualized instruction in the field; that hundreds of visitors enjoyed a friendly orientation at the Wetlands Center and an educational canoe trip on the Patuxent; that we quantified a decline in wild rice in our marshes; that we observed successful reproduction of Scarlet and Summer Tanagers; that scores of families saw good farming techniques while enjoying a hayride near the river on our fall Children’s Day; that we have identified 75 painted turtles that live in the channel near the Observation Blind in April.

The people who gave the most hours last year were Susan Blackstone, Dotty Mumford, Bob LaPorte, Doug Kuzmiak, Liz Clickner, Danny Bystrak, Tom Wright, Dave Perry, Mike Quinlan and Lloyd Lewis. We thank them and all of our many volunteers, including the following people who worked for the Sanctuary in the most recent winter quarter of 1996-1997:

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<th>Cheryl Adams</th>
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<th>Gretchen Seielstad</th>
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Call for Volunteers: Children’s Day to be held in May!

Volunteers are the backbone to a successful Children’s Day (with sunny, warm weather being a close second!) Assisting with the children’s crafts and games, riding on the Hay Wagon, demonstrating water testing equipment and introducing visitors to animals and plants are a few of the jobs available. We also need volunteers to help with advance planning, publicity, setting up and cleaning up. Call Judy or Karyn to volunteer.

Planning Meeting:

If you are interested in helping to plan and prepare the activities and publicity, join Karyn on Sunday, April 27; 1:00 - 3:00 p.m.

Orientation:

Saturday, May 3; 9:00 - 11:00 a.m. is set aside for new and experienced volunteers to see firsthand the activities we’ve planned for Children’s Day. Volunteers will learn how to prepare craft materials and will experiment with the research equipment they’ll be using on the day.

White Farmhouse Update:

We are getting the 100-year old white farm house in order for summer interns and visiting scientists. Here’s what we need to furnish the house:

- 2 twin bed frames, 2 twin mattress and box springs, linens, pillows, blankets, small kitchen table and chairs, dining room table and chairs, sleep sofa, recliner chair, phone message machine, television, stereo, clock radio, curtains (call the office for sizes), bath towels, bath throw mat, tub mat, waste baskets, book shelves, art work for walls, porch furniture.

We will gladly pick up items at your convenience; please call the office before delivering any of these items.

New Poster Available

Artist Bud Taylor has donated 100 beautiful prints of his painting of Ospreys looking out over Jug Bay. These prints are available for $20. Proceeds support the Friends of Jug Bay. Thanks Bud!

Become a Jug Bay Volunteer

Learn about wetlands, meet interesting people and have fun

For more information call 410-741-9330
The 9th Annual Great Herp Search
Saturday, June 7; 10 a.m. - 3 p.m.
Come out and search the forest leaf litter, stream banks and marsh edges for turtles, frogs, toads, salamanders, lizards and snakes (a.k.a. herps.) Participants will be assigned to teams to gather information and document herp population changes. Box turtles will be notched, salamanders will be weighed, and Six-lined Race Runners will be watched running away! Special teams for families led by volunteer naturalists will get a chance to learn more about reptile and amphibian biology. Please make advance reservations for the Family Teams. Free admission to the Sanctuary for all who help.

**DISCOVERY PROGRAMS**

Discovery Programs allow families to explore the natural world at Jug Bay. Children under 13 must be accompanied by an adult. Led by staff naturalists Marcy Damon and Liz Clickner or trained volunteers. Scouts, schools and other youth groups should call to arrange for programs designed for their special needs.

**Marsh Boardwalk Tour**
Scheduled for the second Saturday of every month from 10-11 a.m. March 8, April 12, May 10, June 14, July 12
Join a naturalist for an informal introduction to the ecology of the amazing freshwater tidal wetlands of Jug Bay. The tour takes place on a boardwalk along the edge of the marsh. Participants will learn about the plants, animals and environment of the Patuxent River marshes.

**Signs of Spring**
Saturday, April 26; 1 - 3 p.m.
Spring is bursting out all over! Come explore the marsh, fields and forests of Jug Bay for signs of animals and plants awakening from the long winter. Dress for the weather, and wear waterproof boots or shoes.

**Pond Exploration**
Saturday, June 21; 10 a.m. - noon
Come walk through shady woods to explore a pond brimming with life. We'll search out and learn to identify frogs, turtles, tadpoles, dragonflies and aquatic insects. Dip nets, buckets and field guides provided. Wear boots or tie shoes that can get wet.

**Wild Uses of Plants**
Sunday, July 20; 12:30 - 2 p.m.
Discover the secret world of plants. Come learn how to dye wool, make rope and create your own writing paper using several plants that grow in the Sanctuary.

**SUMMER SCIENCE CAMP 1997**

"Wetlands Are Wonderful" Camp Session I
(for children entering 5th or 6th grade in Fall 1997)
Monday, June 23 - Friday, June 27; 9:30 a.m. - 3:30 p.m. Camp Fee: $95.00
Join us for a "natural adventure" as we explore Jug Bay marshes. Children will be actively involved in seining for fish, testing the river and the marshes' water quality, canoeing, and camping out under the stars. Each day we'll explore wetlands, learning what makes a wetland work and understanding how important they are for wildlife and people. There is an overnight camp-out on Thursday. Members of the "Friends of Jug Bay" pay only $85.00.

"Down by the Bay" Camp Session II
(for children entering 7th or 8th grade in Fall 1997)
Monday, July 7 - Friday, July 11; 9:30 a.m. - 3:30 p.m. Camp Fee: $95.00
Down by the Bay... Jug Bay, that is. We'll explore marshes, streams and forests to learn more about the ecology of the whole Chesapeake Bay. Come catch and identify fish that depend on both Jug Bay and the Chesapeake. Study the salamanders, frogs and toads that live in the Bay's wetlands. In learning about the watershed of the Patuxent River, we'll gain a greater understanding of the important role wetlands and forests play in maintaining the health of the Chesapeake Bay. Seining for fish, hiking, nature games and projects, and an all-day canoe trip are part of the fun. There is an overnight camp-out on Thursday. Members of the "Friends of Jug Bay" pay only $85.00.

To register your child for camp, a completed registration form and payment should be mailed or delivered to the Sanctuary. Registration forms are available by calling 410-741-9330, Monday - Friday, 9 a.m. - 5 p.m.

**Children's Day**
Saturday, May 17;
11:00 a.m. - 3:00 p.m.

Children of all ages are invited to join us for a day of canoeing, hiking along the wetlands, playing nature games and activities, making arts and crafts, and observing live animals. Come learn about the many research projects conducted at the Sanctuary by participating in fish seining, water testing and aquatic insect sampling. Purchase a delicious lunch to benefit the Friends of Jug Bay or bring a picnic lunch. Free admission to the Sanctuary. Reservations are not required.
Jug Bay Wetlands Sanctuary
Spring/Summer 1997 Events

Reservations are required for all events. Call 410-741-9330. Space is limited for all programs.
Open Wednesdays, Saturdays and Sundays March - November.
Admission: $2.50 for adults, $2.00 for senior citizens, and $1.50 for children under 18

Lectures in the Field

Lectures in the Field offer a chance for adults and older children to learn firsthand about wetlands and ecology. Plan to spend the time outdoors, dress appropriately for the weather, and bring a lunch, drink and a sense of wonder about the natural world.

Northern Cricket Frog

Identification of Frogs and Toads by Sight and Sound
Saturday, April 5; 6 - 9 p.m.
April showers bring May flowers, as well as initiate an annual mating ritual: male frogs and toads sing to females in peeps, snores, trills and quacks. Forget the "ribbit, ribbit" and learn why "could drown, better go 'round" is a more appropriate onomatopoeia for frog calls. Karyn Molines, Education Coordinator for the Sanctuary, will review both visual and vocal amphibian identification techniques and discuss amphibian biology. We’ll head out to the ponds to test our newly learned identification skills as we search for spring peepers, pickerel frogs, wood frogs, American and Fowler’s toads, and spotted salamanders.

Spring Woodland Wildflowers
Saturday, May 3, 9 a.m. - 12 noon
Woodland wildflowers bloom in the spring before the trees leaf out and block sunlight from reaching the forest floor. These wildflowers possess a variety of interesting adaptations and survival mechanisms. Learn about flower ecology and evolution with Smithsonian scientist Dr. Dennis Whigham while exploring the forests and stream valleys at Jug Bay.

Marsh Ecology by Canoe
Saturday, April 5; 12:30 - 4:30 p.m.
Sunday, April 13; 9:30 a.m. - 1:30 p.m.
Sunday, April 20; 12:30 - 4:30 p.m.
Saturday, May 3; 12:30 - 4:30 p.m.
Sunday, May 11; 9:30 a.m. - 1:30 p.m.
Saturday, May 18; 11:30 a.m. - 3:30 p.m.
Saturday, June 15; 11:30 a.m. - 3:30 p.m.
Saturday, June 28; 10 a.m. - 2 p.m.
Sunday, July 13; 9:30 a.m. - 1:30 p.m.
Saturday, July 26; 9:30 a.m. - 1:30 p.m.
Come learn about wetland ecology through our popular canoe explorations of the wetlands along the Patuxent River. In early spring you can glimpse waterfowl in the distance, watch muskrats and banded killifish along the edges of the water, and keep an eye out for northward-bound waterfowl. Trips are led by experienced volunteers or staff naturalists. Canoe instruction and all equipment are provided. To reserve a space, mail your payment of $5 per person in advance to the Sanctuary. Please include your name, address, daytime phone number, the number in your party, ages of children as well as a first and second choice of dates. FOJB members must also pay the $5 per person fee.

Excursion: London Town Archeology
Saturday, April 19; 9:30 a.m. - 3 p.m.
Volunteers and FOJB members are invited to spend the day learning about archeology and the colonial history of Anne Arundel County. London Town House and Gardens in Edge-water is the site of an exciting archeological dig. Archeologist Liz West will describe London Town’s history and demonstrate the techniques she uses to uncover the lives of early Maryland. We’ll have an opportunity to help in the dig, as well as time to explore the Gardens and Public House. Dress for the weather in clothes that can get dirty, and bring a lunch and drink. Please make a reservation by calling the Sanctuary. Meet at London Town at 9:30.

Introduction to Wetland Ecology
Thursdays, May 1, 8, 15, 22; 4:15 - 7 p.m.
Saturday May 10, 9 a.m. - 5 p.m. (Field Trip)
Instructor: Karyn Molines Class Fee: $35
Investigate a wetland and incorporate the study of ecology, food webs, water chemistry and nutrient cycling into the classroom. Teachers, environmental educators, parents, scout leaders and Jug Bay volunteers are invited to participate in this workshop to learn more about wetland ecology, the functions and values of wetlands and how to introduce ecology to audiences of all levels. Through lecture and active participation in experiments, demonstrations and field investigations, we’ll learn about wetland characteristics, wetland plants and animals, tides, watersheds and the water cycle. Teachers can apply for MSDE credit. Teacher resources are provided free of charge thanks to a grant from the Chesapeake Bay Trust.

Special Events

Marsh Clean-up
Saturday, March 22; 10 a.m. - 2 p.m.
Learn while helping! Volunteers will pick up tires, Styrofoam, bottles and other flotsam and jetsam that has floated into the marsh. This is an opportunity to learn about our wetlands while helping the wildlife and plants that depend on them. Please dress in work clothes, including boots or shoes (with shoelaces) that can get wet and muddy. Bring a bag lunch and a change of clothes. Free admission to the Sanctuary for all who help.
Jug Bay Wetlands Sanctuary

Spring/Summer 1997 Events (Continued)

The 9th Annual Great Herp Search
Saturday, June 7; 10 a.m. - 3 p.m.
Come out and search the forest leaf litter, stream banks and marsh edges for turtles, frogs, toads, salamanders, lizards and snakes (a.k.a. herps.) Participants will be assigned to teams to gather information and document herp population changes. Box turtles will be notched, salamanders will be weighed, and Six-lined Race Runners will be watched running away! Special teams for families led by volunteer naturalists will get a chance to learn more about reptile and amphibian biology. Please make advance reservations for the Family Teams. Free admission to the Sanctuary for all who help.

Discovery Programs
Discovery Programs allow families to explore the natural world at Jug Bay. Children under 13 must be accompanied by an adult. Led by staff naturalists Marcy Damon and Liz Clickner or trained volunteers. Scouts, schools and other youth groups should call to arrange for programs designed for their special needs.

Marsh Boardwalk Tour
Scheduled for the second Saturday of every month from 10-11 a.m. March 8, April 12, May 10, June 14, July 12
Join a naturalist for an informal introduction to the ecology of the amazing freshwater tidal wetlands of Jug Bay. The tour takes place on a boardwalk along the edge of the marsh. Participants will learn about the plants, animals and environment of the Patuxent River marshes.

Signs of Spring
Saturday, April 26; 1-3 p.m.
Spring is bursting out all over! Come explore the marsh, fields and forests of Jug Bay for signs of animals and plants awakening from the long winter. Dress for the weather, and wear waterproof boots or shoes.

Pond Exploration
Saturday, June 21; 10 a.m. - noon
Come walk through shady woods to explore a pond brimming with life. We’ll search out and learn to identify frogs, turtles, tadpoles, dragonflies and aquatic insects. Dip nets, buckets and field guides provided. Wear boots or tie shoes that can get wet.

Wild Uses of Plants
Sunday, July 20; 12:30 - 2 p.m.
Discover the secret world of plants. Come learn how to dye wool, make rope and create your own writing paper using several plants that grow in the Sanctuary.

Summer Science Camp 1997

“Wetlands Are Wonderful” Camp Session I
(for children entering 5th or 6th grade in Fall 1997)
Monday, June 23 - Friday, June 27; 9:30 a.m. - 3:30 p.m. Camp Fee: $95.00
Join us for a “natural adventure” as we explore Jug Bay marshes. Children will be actively involved in seining for fish, testing the river and the marshes’ water quality, canoeing, and camping out under the stars. Each day we’ll explore wetlands, learning what makes a wetland work and understanding how important they are for wildlife and people. There is an overnight camp-out on Thursday. Members of the “Friends of Jug Bay” pay only $85.00.

“Down by the Bay” Camp Session II
(for children entering 7th or 8th grade in Fall 1997)
Monday, July 7 - Friday, July 11; 9:30 a.m. - 3:30 p.m. Camp Fee: $95.00
Down by the Bay...Jug Bay, that is. We’ll explore marshes, streams and forests to learn more about the ecology of the whole Chesapeake Bay. Come catch and identify fish that depend on both Jug Bay and the Chesapeake. Study the salamanders, frogs and toads that live in the Bay’s wetlands. In learning about the watershed of the Patuxent River, we’ll gain a greater understanding of the important role wetlands and forests play in maintaining the health of the Chesapeake Bay. Seining for fish, hiking, nature games and projects, and an all-day canoe trip are part of the fun. There is an overnight camp-out on Thursday. Members of the “Friends of Jug Bay” pay only $85.00.

To register your child for camp, a completed registration form and payment should be mailed or delivered to the Sanctuary. Registration forms are available by calling 410-741-9330, Monday-Friday, 9 a.m. - 5 p.m.

Children's Day
Saturday, May 17;
11:00 a.m. - 3:00 p.m.
Children of all ages are invited to join us for a day of canoeing, hiking along the wetlands, playing nature games and activities, making arts and crafts, and observing live animals. Come learn about the many research projects conducted at the Sanctuary by participating in fish seining, water testing and aquatic insect sampling. Purchase a delicious lunch to benefit the Friends of Jug Bay or bring a picnic lunch. Free admission to the Sanctuary. Reservations are not required.