From Feast to Famine: The Tidal Cycle of the Mummichog

Patrick Crumrine, State University of New York, Plattsburgh

Jug Bay interns often pine over the question “What am I going to study this summer?” Sometimes an answer to that question lies in the pages of a previous edition of Marsh Notes. Seven years have passed since former Jug Bay intern Bill Rodney (University of Maryland) studied Mummichogs. This fish, three inches long, feeds on insects, crustaceans and detritus. It is an important part of the diet of larger, fish-eating fish and birds. Bill Rodney tried to estimate the size of the Mummichog population in the Observation Blind channel. His article in the fall 1990 edition of Marsh Notes along with suggestions by Director Chris Swarth helped me come up with another question about these “mighty midgets of the marsh.”

While walking on the marsh boardwalk at high tide or anywhere near the marsh during high tide, it is almost impossible to ignore the slurping and splashing of fish on the marsh surface. Take a closer look and you’ll see that those fish you hear feeding are Mummichogs, one of the most abundant species of fish in the marsh. In my first two weeks at Jug Bay I was astonished by how much feeding was going on during high tide on the marsh surface. Suddenly my search for a project was complete. I attempted to answer the question “Are these Mummichogs doing more feeding on the marsh surface at high tide, or are they feeding on all tides equally?”

My study, “The Effect of Tides on the Feeding Patterns of the Mummichog in a Tidal Freshwater Wetland,” may be the first of its kind. As I read scientific journal articles on the feeding patterns of the Mummichog, I could find no studies of this subject in a tidal freshwater marsh such as Jug Bay. Researchers in tidal saltmarshes had concluded that Mummichogs enter the marsh from deeper water with empty stomachs and eat during the high tide when the water allows them to feed on the marsh surface. As the tide ebbs the fish are forced to leave the marsh, and with full stomachs they swim to water that’s deep enough to support them (although it may still be only a few inches deep).

The Mummichog has an unusual digestive tract. It is divided by two 180-degree turns into three sections. Section I lies between the mouth and the first 180-degree turn. It is known as the stomach even though it is not a true stomach. Section II lies between the 180-degree turns. Section III is everything after the second 180-degree turn. Researchers have found food takes two hours to pass to section II and 3.5 hours to reach section III.

I hypothesized that Mummichogs at Jug Bay enter the low marsh with empty stomachs to feed on the flooding tide and that they later join the ebbing tide and swim out to deeper water with full stomachs. In order to test my hypothesis, I captured three schools of fish two hours after high tide and two hours after low tide. I then dissected their guts and placed them into one of four categories:

0, no food items present in any portion of the gut
1, food items present predominantly in section III
2, food items present predominantly in section II
3, food items present predominantly in section I

By capturing fish shortly after dead low or peak high tide, I could determine roughly when they last ate. If there was a predominance of food in section I, I could say that the fish had eaten within two hours. If the material was mostly in section III, I could say that the fish had not eaten in at least 3.5 hours.

After meticulously dissecting 160 fish, I had my results. Seventy-eight percent of the fish captured on the ebbing tide had full stomachs. In comparison, 73 percent of the fish captured on the flooding tide had a predominance of material in section III. A chi square analysis confirmed that my

Continued on page 4
Tracey's Landing PTA Makes Major Donation to Exhibit Project

Doug Kuzmiak

The FOJB gained ground this quarter towards the realization of our Interactive Wetlands Education Project fund-raising goal. First off, a debt of thanks goes to President Carol Moran and the Tracey's Landing Elementary School PTA in Deale for their contribution of $250. It is more than just financially rewarding to know that parents and teachers are with us in our efforts to expand and direct learning materials to children, helping them expand their knowledge of the environment. Board member Susan Barber was very instrumental in targeting area PTAs.

Next, our Jug Bay Music Mix in June was a swinging success, realizing more than $500 but also doing a great deal to kindle interest in musicians and the audience for another one sometime in the future. Board members Susan Barber, Sharon Brewer, Jim Harle and John Taylor did a magnificent job of pulling together four musical groups, taking care of advertising and food—and on the parts of Sharon and John, playing—to really provide a great show. Word seemed to spread among parts of the Patuxent River community that Jug Bay had done something special.

We are continuing our plans to hold a photographic exhibit at Jug Bay with wetland ecology and the Jug Bay environment as our theme. Arranging the right combination of sponsors, exhibitors and time frame is being worked out. We are now hopeful that this could turn into a winter event.

We are continuing to submit proposals to foundations but as of yet have not been successful. Dr. Humaira Khan and Dr. Kathy Szlavecz of the Jug Bay Scientific Advisory Committee have agreed to work closely with me and Chris Swarth to continue to find and approach grant agencies. We want to approach ten foundations by the end of the year.

Board Member Tom Petska has offered to access his data-base resources in Washington to help find other grant foundations and businesses that may be willing to help, and he has also been very assiduous in seeing if the Friends of Jug Bay could become a part of the United Way Campaign, an option we are continuing to pursue. Meanwhile, Gene Douthit made a perfect collection box, simple and elegant, to accompany our IWEP display. Thanks!

Eastern Mountain Sports in Annapolis, which has been a good friend to the Friends and helped us launch this fund-raiser with $1,000, has a new manager, Andrea Greer. Andrea, who was promoted to Annapolis from EMS in Towson, is a keen canoeist and ecologist and hopes to continue the close relationship we have enjoyed in the past.

Finally, we decided at the board meeting in July to eliminate the categories of giving and just list all those who have made donations to the Interactive Wetlands Education Project by alphabetical order. However, larger amounts, special donations, grants and corporate sponsorships will be acknowledged either through special mention in this column or in conjunction with the exhibits. It was felt that because even children make donations, some of which are very small but represent a great deal to the child, there should be no categorization. We felt that contributing grown-ups would understand.

Fund raising is a multi-facted task. We can use your help. If you know of potential contacts or have fund-raising ideas of your own be sure to let me know.

Thanks to the following for their recent donations to the Wetland Project:
Rob and Stacy Allen
Betty Chaney
Ginger Chaney
Midge Coppersmith
Hannah, Julia & Monica Knight
Dave Perry
Barbara, Ryan and Tom Petska
Potomac School
Katharine E. Rowe
Keith Rutter
Silver Triangle Club

Marsh Notes is produced quarterly by Jug Bay Wetlands Sanctuary. Comments, ideas and suggestions are welcome.

Editor: Judy Burke
Graphic Design: Liz Fisher,
Grafix Galore, 410-822-6305
Printing: Acorn Inkworks

This newsletter is printed on recycled paper.
Dear Friends,

Where has this summer gone? It seems as if many of us were just realizing that was here, and now it’s gone!

I am ashamed to confess that non-Jug Bay-related responsibilities prevented me from becoming as involved as I would have liked this summer. My biggest regret is that I never got to know our two interns, Steve Bartimo and Patrick Crumrine, who were hard at work pursuing their individual research on turtles and Mummichogs, respectively, while doing a terrific job of pitching in and helping with more general Jug Bay eco-tasks. My heartfelt thanks, however, go out to everyone who helped make their stay professionally successful, and socially rewarding.

We tried something new in June in connection with the IWEF fund raising, something that could become a Jug Bay “institution.” I am speaking about the Music Mix, which attracted musical talent from around the area and the Jug Bay area, but more about this and other fund-raising news in my adjacent Exhibit Project update.

Other new things are going to be tried at Jug Bay this fall as well. In addition to the annual Spring marsh cleanup, this year there will also be a Fall cleanup. It will be on Sunday, September 21, from noon to 3 p.m.

On October 17, the Sands Road Wetlands Park in Harwood, which will be managed by the Jug Bay staff, will be dedicated by County Executive John Gary and Governor Parris N. Glendenning. The Friends of Jug are invited to attend (see article on page 8). Then, on October 25, the Sanctuary will host a conference, “Conservation Ecology of the Amphibians of the Mid-Atlantic Region,” sponsored by the Jug Bay Wetlands Sanctuary, Audubon Naturalist Society and Calvert County Natural Resources Division. Much time, effort and preparation by the Jug Bay staff have gone into these activities. The roster of notables speaking at the conference (see notice on page 6) will help showcase the Sanctuary’s attributes as a site for both herpetological research and academic forums.

Finally, I have not forgotten about the suggestion made by some Friends for a synopsis of our board meetings to be included in Marsh Notes. While I still agree with this idea, space is limited, and I determined that what is being allocated to us could better be used, for the time being, for information about the Interactive Wetlands Education Project fund-raiser update and list of contributors. Once our goal is accomplished, then I am sure that this space could be devoted to other Friends-related activities, including a report from the board.

The board meets in the evening on the third Tuesday of every other month at the Wetlands Center. The next two meetings will be September 16 and November 18. All those interested are invited to attend.

Doug Kuzmiak

---

Dr. Szlawecz Joins Advisory Committee

Dr. Kathy Szlawecz, a professor in the Environmental Sciences Department at Johns Hopkins University, has joined the 12-member Jug Bay Scientific Advisory Committee. Kathy regularly brings her graduate students to Jug Bay to teach concepts and techniques in ecology, and in recent years she’s been a tremendous source of advice on data analysis for Jug Bay college interns. One of her areas of expertise is the study of soil invertebrate communities, and in July she traveled to England to deliver a paper on her research. For the past several summers she and Chris Swarth have studied the snails that dwell among wetland plants along the edge of the river. We are very pleased that Kathy is able to provide her knowledge and enthusiasm on the Committee. Kathy lives in Baltimore with her husband, Alex Salay, and son, Tamas.

New Caretakers Take up Residence

In August, Judy Burke and Rick Malmgren moved into the log house (the director’s old house) near the Wetlands Center. Judy has been a staff naturalist and the volunteer coordinator since July 1995. Her husband, Rick, is a ceramic artist and teaches at St. John’s College and Anne Arundel Community College. They will act as caretakers for this portion of the Sanctuary. Rick and Judy are very excited to make the Sanctuary their new home.

Dave McNally and Julianna White have taken up residence at the Red House at the Farm, where they’ve assumed caretaker duties. Dave recently completed his master’s degree in Oceanography and Coastal Sciences at Louisiana State University in Baton Rouge and is employed at the Smithsonian Environmental Research Center, where he assists with studies of wetland biogeochemistry. Julie will be teaching at Anacostia High School in Washington this fall. Welcome to all!
Two Dozen Painted Turtles in One Little Pond

State University of Pittsburgh, St. Mary’s College

Run Creek on the Run Bed Trail lies a low-moving, gurgling brook. As Mark’s Pond, it has been constructed in the Chesapeake Bay region of the state. A raised bed for earthen fill, leaving only the railroad tracks visible, and the processes of over 60 years rainwater collecting in the largest depression. Hundreds of frogs, dragonflies, butterflies and turtles thrive here.

Life is sustained by oxygen concentration, but this low count did not discourage us. For the next month and a half, we set turtle traps in the pond. Some days were warm and sunny, while others were cold and rainy. We tried several baits, including canned sardines as suggested by another turtle researcher, but fresh-cut white perch and pumpkinseed were far more productive baits. When the trapping was completed on July 24, we had captured and marked a total of 19 Painted Turtles. On our final day of trapping, we captured a whopping 13 turtles (seven previously-marked turtles and six unmarked). We also captured three Snapping Turtles during the month of June. The snappers were bruisers and not the least bit happy about being caught in our traps, but they were released, with extreme caution that we might add, back into the pond immediately.

We estimated the population of turtles by using a mathematical calculation called the Lincoln Index.

This index is used for estimating population sizes by marking a sample population and seeing how many of the marked animals are recaught at a later time. Using this method, we estimated that 24 Painted Turtles inhabit Mark’s Pond. We felt comfortable with this estimate, considering that on the final day of trapping, six unmarked turtles were captured. Most likely, there are more turtles in the pond that have not been captured. One of the reasons we marked these turtles was to try and determine whether they also use the tidal freshwater wetlands. Now that there are 19 Painted Turtles marked in the pond, if one of them turns up in a trap from the wetland, we will be able to tell that it came from the pond.

So, the next time you pass by Mark’s Pond, quietly ease your way down to the shoreline, and take a minute or two to scan the logs bordering the pond to see if one of the turtles is basking in the sun. You might just see one of the famous turtles of the 1997 Mark’s Pond Painted Turtle population study.

We would like to thank Chris Swarth, Dr. Erik Kiviat, Karyn Molines, Mike Quinlan and Dr. Kathy Szlavecz for their help on this project. We would also like to thank the Friends of Jug Bay for the stipend that makes this fellowship possible.

_*Continued from page 1_

Mummichogs are small fish that exhibit the same feeding patterns as Mummichogs in Jug Bay. They swim at the surface and catch fish, and also eat insects. They have a unique habit of becoming familiar with the insides of a hollow log, and these are not big fish! In the end, I was quite pleased that I had done some work to get off the ground. After failing several times, I managed to catch these fish, I got down and dirty and seized fish from the channel. I also had to become familiar with the insides of a log. The Mummichog is probably a critical link in wetland food chains. It serves both the marsh and deeper waters. With this information, I know it has earned mine! I also like to thank Chris Swarth and Kathy Szlavecz for their help on this fellowship possible.
Jug Bay Wetlands Sanctuary
FALL 1997 EVENTS

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

**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. Most activities are not suitable for children under 10. Scouts and other youth groups should call to arrange for programs designed for their special needs. Call Judy Burke to sign up.

**Fish Seining**
Saturday, September 13, 12:30 p.m. - 4 p.m.
Sunday, October 12, 12:30 p.m. - 4 p.m.
Volunteers willing to get wet are needed to conduct our monthly surveys of the fish population. We will capture, identify and release the fish. No identification skills are needed.

**Bird Netting**
The fall netting project is designed to study birds migrating south through the Sanctuary. We capture the birds in mist nets, identify them and release them. The research takes place Tuesday, Thursday and Saturday from now into November, beginning at sunrise and lasting about three hours.

**Salamander Migration Study**
Each fall, volunteers help us study the marbled salamanders that are migrating from the woods to temporary ponds to reproduce. Volunteers check pitfall traps in three sites to catch the salamanders, sex them and weigh them. Trap checking occurs between 8 a.m. and 10 a.m. each day.

**Aquatic Macroinvertebrate Survey**
Wednesday, September 10, 9:30 a.m. - noon.
We will explore Two-Run Creek to identify the aquatic insects, snails and other invertebrates living there. Be prepared for wet feet. Not appropriate for children under 10.

**Waterbird Census**
Join us for the 8th year of counting waterbirds (ducks, geese, shorebirds, herons, etc.) on Jug Bay. This joint project with Patuxent River Park serves to document the abundance and timing of migration of the 65 species of water-loving birds that spend the non-breeding season at Jug Bay. Counts take place on alternate Tuesday mornings, starting October 7.

**Insider’s Look: On Weather**
Saturday, November 8, 1 p.m. - 3 p.m.
This special session for volunteers will help explain what causes weather and how weather affects the plants and animals that live in the Sanctuary. We will spend time both indoors and outdoors.

**Trips and Treats**
Don’t forget three special events for volunteers: a boat excursion September 18, a visit to Otter Point Creek November 14 and the Volunteer Appreciation Dinner December 7. Call for details.

**Discovery Programs:**
Discovery Programs allow families to explore our natural world. Children under 13 must be accompanied by an adult. Led by naturalists Marcy Damon and Liz Clickner or trained volunteers.

**Marsh Boardwalk Tour**
Scheduled for the second weekend of every month, 1 p.m. - 2 p.m.
Sunday, September 14
Sunday, October 12
Sunday, November 9
Saturday, December 13

**Join a naturalist or volunteer 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.**

**Marsh Cleanup**
Sunday, September 21; noon - 3 p.m.
Volunteers will pick up tires, Styrofoam bottles and other flotsam and jetsam that have floated into the marsh. This is an opportunity to learn about our wetlands while helping to protect the wildlife and plants that depend on them. Please dress in old clothes (long pants and long sleeves), including boots or shoes (with shoelaces) that can get wet and muddy. Bring a bag lunch, work gloves, towel and a change of clothes. Free admission to the Sanctuary for all who help.

**Autumn Insects**
Saturday, November 22; 1 p.m. - 3 p.m.
Fall is the time for animals to prepare for winter. We’ll learn how insects, spiders and other invertebrates survive the cold by making cocoons, hiding under leaves and logs and hibernating. All ages.

**Lectures in the Field**
Lectures-in-the-Field offer a chance for adults and older children to gain firsthand experience learning about wetlands, ecology and the plants and animals of the Sanctuary. Dress appropriately for the weather, and bring a lunch, a drink and a sense of wonder about the natural world. Please call the Sanctuary to register for these programs.

**Create a Backyard Wildlife Habitat**
Saturday, September 13; 1 p.m. - 3 p.m.
Animals need food and water, but they also need cover, and this session will delve into both aspects of good habitat. You don’t need a lot of space to help local wildlife; you can improve even a small yard with the help of good ideas. Staff naturalist Marcy Damon will offer a special training on how to design your home landscape to provide good habitat for wildlife. Bring a rough sketch of a “bird’s-eye view” of your existing backyard (with water sources, species of plants and trees, and structures labeled). Free handouts will be provided. This program is supported by the WindStar Wildlife Institute.

**Sora Rail Migration**
Saturday, September 20; 10 a.m. - 1 p.m.
Hundreds of secretive Sora Rails inhabit the dense, tangled marsh plants at Jug Bay in the fall. Join Patuxent River Park naturalist Greg Kearns as he explains his fascinating studies of this migratory bird. We will board a pontoon boat from the Sanctuary and head to good viewing and listening areas. Please bring a bag lunch, and dress for the weather and for riding on an open boat.
Sanctuary to Sponsor and Host Conference on Amphibians

On Saturday, October 25, the Sanctuary, along with co-hosts Audubon Naturalist Society and the Calvert County Natural Resources Division, will host a conference titled "Conservation Ecology of the Amphibians of the Mid-Atlantic Region."

Sanctuary naturalists and volunteers have taken a keen interest in amphibians ever since population studies were initiated in 1988. Over the years we have identified 19 species and have devoted special attention to two species of migratory salamanders. We decided to organize this conference because we believed that much could be learned by bringing researchers, resource managers and amphibian enthusiasts together for a day of discussion on the ecology and population status of amphibians. As many of you know, amphibian populations in diverse areas around the world are threatened or even facing extinction. The causes for these declines are hotly debated and much is still not known about the health, status and distribution of amphibians. This conference will shed new light on these fascinating yet beleaguered animals.

We are very pleased that Dr. Thomas Pauley of Marshall University in West Virginia has agreed to deliver a keynote address, in which he will discuss the general state of amphibian populations in this region. Following his remarks, scientists from federal, state and county organizations, as well as from academic and private institutions, will deliver scientific papers describing their findings and knowledge about amphibians in Maryland and nearby states. All those with a serious interest in amphibian ecology are encouraged to attend. For more information or to register (fee is $25), call conference chair and organizer Karyn Molina at 410-741-9330.

Sanctuary a Popular Meeting and Event Site

The Sanctuary hosts many groups and organizations involved with scientific and environmental issues. The following events, retreats and meetings took place at Jug Bay this past spring and summer:

May 9. Attendees at EPA's conference, "Communities Working for Wetlands," visited to learn about our various wetland research studies.

May 20. The Chesapeake Bay Program (EPA, NOAA and USFWS) held a retreat for its Living Resources Subcommittee.

May 21. EPA's Office of Site Remediation held a retreat and meeting.

June 6-11. The Institute for Wetland and Environmental Education and Research of Massachusetts gave a training workshop in plant identification and wetland delineation.

June 28. The Smithsonian Institution brought 30 railroad enthusiasts for an exploration of the historic Railroad Bed, which traverses the marsh. Mike Quinlan, a Sanctuary volunteer, led the orientation.

July 9. The Patuxent River Commission, chaired by Senator Bernie Fowler, held its monthly meeting here. New Recreation and Parks Department Director Tom Angelis welcomed commission members.

July 13. Coastal America (a federal agency partnership) filmed scenes and commentary by Robert Pericasepe, EPA's assistant administrator for water, for a video on efforts to protect, preserve and restore coastal ecosystems.

2,000 Nature Observations Chronicled and Compiled!

Since 1990 visitors, volunteers and staff naturalists have dutifully noted unusual and interesting nature sightings by jotting down details of observations on a clipboard hanging by the front door of the Wetlands Center. These notes provide a fascinating and important record of local plant and animal life (and a few unusual physical phenomena as well). Notes and descriptions of natural events keep us abreast of seasonal changes, breeding, migration, abundance and local distribution.

Natural history notes, if accurate, can be a valuable scientific record. But until this summer our notes were simply filed away chronologically; their usefulness was limited because they weren't computerized. That changed when Jean Herschner came along. She volunteered to take on the bulging binder and to transfer more than 2,000 handwritten (read scrawled) notes onto neat and orderly spreadsheets. Day after day, week after week, Jean took up her position at the keyboard. Now with this time-consuming task completed, it is easy for us to sort, extract and use these valuable data. Below are just a few of hundreds of observations:

| Barred Owl | Upper RR Bed Trail | 2-May-97 | Bud Taylor |
| Mud Turtle | Otter Point Trail between RR & Swamp Blind; laying eggs; female half-burrowed in ground | 27-Apr-97 | Cub Scout Pack #840 |
| Wild Turkey | along Two-Run Trail close to Beaver Ponds; didn't see but heard a loud thump and wing beats | 26-Apr-97 | Karyn Molines |
| Common Loon | Main river channel | 13-Apr-97 | Susse Wright |
| Two beavers | Utility Trail & Two Run Trail (nea Creek) | 12-Apr-97 | R.J. Turpin |
| Bald Eagle & American Coot | The eagle tried to catch the coot (unsuccessful); river channel west of Otter Pt. | 10-Apr-97 | Mike Quinlan |
| 5 Northern Watersnakes | 4 in cattail marsh; one on log in low marsh | 4-Apr-97 | Karyn Molines |
| Common Snipe (85+ | Observation Blind on mudflats | 31-Mar-97 | Danny Bystrak |
| Otter (young) | near the upper footbridge across Two-Run Creek | 19-Mar-97 | Marcy Damron |
| Wood Ducks (early arrivals) | 2 males and 3 females near Farm Road | 25-Feb-97 | David Laughlin |
| American Coots (120) | unusually large flock; feeding in water | 27-Oct-96 | Mark Peabody |
| Red-bellied Turtle | hatching (just hatched) near big barn at Farm | 9-Oct-96 | Karyn Molines |
| 2 Muskrats | on “feeding stations,” some on old floating tires | 16-Apr-96 | Erik Kivist
| American Bittern | in marsh; heard but did not see | 11-Oct-95 | Turner and Starr |

**Summer Volunteers**

The following volunteers donated time and labor this summer. Thank you.

George Allen  
Peter Asmus  
Sue Barber  
Marty Barron  
Brian Bartimo  
Ralph Beachley  
Vincent Beachley  
Mike Blackstone  
Chrissy Blackstone  
Susan Blackstone  
Sharon Brewer  
Peggy Bosman  
Dan Brunstedt  
Gena Brunstedt  
Mitchell Brunsted  
Danny Bystrak  
Maureen Carr  
John Cestone  
Betty Cheney  
Ginger Cheney  
Mary Chor  
Liz Clicheun  
Robert Craver  
Cathy Cronin  
Sandy Curry  
Sam Droge  
Dennis Duke  
Evan Duke  
Robert Frezza  
Elaine Friebel  
Stephanie Fritz  
Grace Gast  
Roy Gast  
Yvonne Goad  
Dan Grogan  
Susanne Gubbings  
Jim Harle  
Carlton Herschner  
Jean Herschner  
Tony Higdon  
Deborah Hopkins  
John Hopkins  
University Ecology Classes  
Kim Hudyma  
Jonathan Jordan  
Humaira Khan  
Eric Kivist  
Tony Klagenberg  
Hannah Knight  
Jennifer Kauvaski  
Doug Kuzniak  
Bob LaPorte  
Bill Laffuer  
Mike Leasure  
Lloyd Lewis  
Dave Linthicum  
Kelly Lion  
Aaron Lorsong  
Rick Malmgren  
Barbara Mason  
Stewart McCormick  
Jessica Meyer-Asmus  
Dotty Mumford  
Val Murdock  
Tom Nappi  
Samantha Neubert  
Diane Nisson  
Shelly Nixon  
Eileen O'Brien  
Dave Perry  
Doris Peters  
Tom Petska  
Beryl Pierce  
Mike Quinlan  
Gemma Radko  
Judy Reardon  
Mary Reardon  
Sue Ricciardi  
Rogard Ross  
Jill Russ  
Lisa Ruthel  
Vinnie Salomone  
Dave Smaldone  
Diana Smith  
Bill Steiner  
Joyce Svedberg  
Rod Svedberg  
Evan Swarth  
Kathy Szaevicz

**Donations**

We thank the following people for their donations.

Duke Family for “Owl Pellet Bone ID Sheet.”

Dotty Mumford for a Swift spotting scope and tripod.

Mike Quinlan for three books.

K. Kent Stow for shed logs.

Joyce and Rod Svedberg for two books for children and an album of bird songs.

Correction: Tamas Stalay, the son of Dr. Kathy Szaevicz and Dr. Alex Stalay, was misidentified in the Summer Marsh Notes. Our apologies for this editing error.

- Bud Taylor  
- Lorna Totman  
- Mac Vehalage  
- Alisa Vunich  
- Jim Wick  
- Daniel Wilkinson  
- Elizabeth Wilkinson  
- Mattius Wilkinson  
- Catherine Wood  
- Susie Wright  
- Tom Wright
Governor and County Executive to Dedicate Largest Created Wetland in Maryland

The public is invited to attend a dedication ceremony on Friday, October 17, at 10:00 a.m. Governor Glendenning and County Executive John Gary together with other federal, state and county officials will be on hand to celebrate the completion of the largest wetland mitigation project in Maryland. The ceremony takes place at the 140-acre Sands Road Wetland Park in Harwood, southern Anne Arundel County, on the east bank of the Patuxent River. Those interested in attending the ceremony can call the Sanctuary office for details and directions.

For decades, the Sands Road Wetland Park was a sand and gravel quarry. After it ceased operation in the 1970s, Anne Arundel County purchased the land as part of our commitment to preserve riparian lands along the Patuxent River. The site was little used by the public (except dirt bikers and poachers) and sat dormant until 1990 when the State Highway Administration (SHA) contacted the county with a request to convert the area to a wetland. We readily agreed to this exciting plan. Since that time this site five miles upriver from Jug Bay has undergone dramatic changes. For four years major construction to the tune of $2.1 million took place: grading, landscaping, topsoil application, erosion control measures. Tidal and non-tidal lagoons were created. Tens of thousands of wetland tree saplings and shrubs were planted. Now this former quarry is taking on the appearance of a wetland. Birds, turtles, amphibians and beavers have moved in, and the wetland plants are thriving.

You ask why the SHA wanted to create a wetland? The recent, federal “no net loss” wetland regulations require agencies to make up for or mitigate for wetlands that they destroy or alter. Because wetlands are destroyed during road building operations the SHA must mitigate these losses. Ongoing research by U.S. Fish and Wildlife Service biologist Dr. Matt Perry (Patuxent Wildlife Research Center) and his assistants serves to monitor successional and ecological changes. Biology teacher Kathy Chow and her students at Southern High School in Harwood are also monitoring the site and carrying out conservation projects.

Nominees for '98 Jug Bay Award Needed

The Friends of Jug Bay are soliciting nominations for the 1998 Jug Bay Award. The purpose of the award, given annually by the Friends, is to honor an individual for local actions in the Jug Bay area in wetlands preservation, conservation, education, scientific research or esthetic appreciation. To request a nomination form, call the office at 410-741-9330. The deadline for nominations is January 30; the award is presented at the annual meeting in March.