Personal Reflections from Sanctuary Leaders from 1985 to Present

Earlier in this 30th-anniversary year for Jug Bay, Siobhan Percey, chair of the Friends of Jug Bay Research Committee, asked the two former Directors of the Sanctuary to update us on their work and reflect on their Jug Bay experience. Here are their stories...

CHRISTINE GAULT
(JBWS Director from 1984 to 1989)

Christine retired in 2006 and now lives with her husband part of every week on Martha’s Vineyard, where he grew up, and where they have a substantial garden that they live off of year round, and the other part of the week in Falmouth. She and her husband are busy with natural history illustration, growing and preserving their food, grandchildren, and enjoying life in two extraordinarily beautiful places. They also spend about a month every winter in Costa Rica.

My fondest memory of JBWS:
▶ I bonded with the land at Jug Bay. I loved walking the trails after hours, coming upon Otters at Otter Point and Sora Rails off the old railroad bed. It was a great situation for working full time while raising my daughter.

My proudest moment at JBWS:
▶ I am proud of my involvement saving the land. During my time, seeds were also sown for the more recent additions to the Sanctuary. I also understood and appreciated the vision of NERRS, a system of sites sharing data, programs, and vision.

What I miss most about JBWS:
▶ I miss the land and the animals. There is an incredible amount of wildlife at Jug Bay, considering how close it is to Washington, DC. I lived on the Sanctuary, and I loved to get out on the trails in the evening, while it was still light.

How volunteers contributed to my time at JBWS:
▶ Volunteers were indispensable to achieving my goals. So too was a friends group, and from that group, the Friends of Jug Bay was born. They did everything and were involved in every aspect of the Sanctuary, from greeting visitors, to leading tours, to performing water quality. So many wonderful people have contributed so much over the years, some of whom are still involved. It couldn’t have happened without volunteers.

Continued on page 2
Jug Bay Wetlands Sanctuary
1361 Wrighton Road
Lothian, MD 20711
410-741-9330
e-mail: info@jugbay.org
www.jugbay.org

Jug Bay Wetlands Sanctuary is operated by the Anne Arundel County Department of Recreation and Parks. It was established in 1985 with the goals of wetlands research and environmental education. The Sanctuary is a limited-use park. Groups are requested to make a reservation by calling the office before planning a visit.

Jug Bay Wetlands Sanctuary is a member of the Chesapeake Bay - National Estuarine Research Reserve Maryland system, which promotes scientific research, public education, resource management and stewardship in estuarine reserves across the nation.

SANCTUARY STAFF
Patricia Delgado, Superintendent
Liana Vitali, Education Coordinator
Debra Gage, Office Manager
Melinda Fegler, Volunteer & Stewardship Coordinator
Heather Baden, Naturalist
Darcy Herman, Naturalist
Richard Chaney, Maintenance
Donald Smith, Maintenance

FRIENDS OF JUG BAY OFFICERS:
Al Tucker, President
Vice President vacant
Jim Harle, Treasurer
John Norris, Secretary

BOARD OF DIRECTORS:
Blythe Alexander
Darcy Herman
Sean McGuinn
Anne Muecke
Dotty Mumford
Siobhan Percey
Colin Rees
Jeff Shenot
Nora Terres

Marsh Notes is produced quarterly by Jug Bay Wetlands Sanctuary.

Comments and suggestions are welcome.

Editor: Darcy Herman
Graphic Design: Liz Fisher, EC Fisher Design
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This newsletter is printed on recycled paper.

CHRIS SWARTH
(JBWS Director from 1989 to 2012)

Chris is currently Director of the University of California’s Merced Vernal Pools and Grassland Reserve, where he manages a 6,500-acre grassland on the eastern edge of the San Joaquin Valley. The Reserve contains thousands of small vernal pools that support a variety of endangered fairy shrimp, tadpole shrimp, and endemic wildflowers. His job has been to set up the guidelines and policies for the Reserve and to work with faculty and grad students to initiate studies. He also teaches classes in conservation biology, teaches naturalists, and mentors many undergrads.

Fondest memory of JBWS:
▶ I have many, many great memories of working at the Sanctuary. It was a wonderful place to work and a great place for my family to become engaged in my job and in the beauty and rich biodiversity there. A couple specific memories that stand out are observing volunteers and university students develop their skills and knowledge and leading canoe and kayak trips, nature hikes, and waterbird surveys. I also loved exploring the remote, little-visited parts of the sanctuary on my own. Also meeting visitors or young adults who had returned to the Sanctuary after many years and hearing them describe how their experiences here had made a difference in their lives. Many had vivid memories of their visits many years before.

Proudest moment at JBWS:
▶ The volunteer research conference at the Blue Heron Room, where 12 volunteers gave talks about the studies they were involved with. Also, completing the displays and exhibits in the Wetlands Center.

What I miss most about JBWS:
▶ The freedom and autonomy we were given by the parks department to develop an excellent and somewhat unique set of programs to serve the citizens of Maryland.

How volunteers contributed to my time at JBWS:
▶ I miss the camaraderie that developed among staff, volunteers and students, and the dedication that I could observe every day, over 23 years, of volunteers and others who clearly loved the Sanctuary and all that it offered for them in their lives.

Lastly…
▶ I’ve often said that the sanctuary is much more than a safe, protected place for plants and animals to carry out their life functions. It’s a sanctuary for people. We all need to connect with the natural world. As the world becomes ever more urbanized, over-crowded, and polluted, places like Jug Bay become even more indispensable.
Dear Friends,

As we celebrate the 30th anniversary of the Jug Bay Wetlands Sanctuary and the upcoming anniversary of The Friends of Jug Bay, I thought it would be good to reflect on how we got here today and where we should go in the future. The founding principles for JBWS and FOJB have stressed environmental research, education, and land stewardship. Although land stewardship appears last, it has been the bedrock that has allowed the other two to thrive. Research informs us about environmental changes occurring rapidly around us, while education helps us make informed decisions about the future. As the possibility of adding major pieces of land to JBWS diminishes, the focus of activity there will naturally shift to more research and education.

In the 1960s there was a growing environmental awareness about the impact of suburban growth and sprawl. In particular, there was a major environmental concern that suburban development would overwhelm the rich natural habitat of the Patuxent River. It resulted in the Patuxent River Protection Act of 1961 which stated “flood prevention and conservation, erosion control and protection from urban development within the watershed are a public benefit and conducive to the public health, safety, and welfare.” This act spurred the acquisition of land along the Prince George’s side of the river. Yet, on the Anne Arundel side, the absence of development pressure then sparked little interest in land preservation.

In 1971 that status quo ended when the owner of the land at Jug Bay sought to open an RV campground. Adjacent landowners saw this more as an opening for commercial development. Through the advocacy of several environmental groups and activists, Anne Arundel County was persuaded to purchase the land. With this foothold, Anne Arundel County embarked on a program to protect the river with further land and easement purchases. The County’s establishment of the Jug Bay Wetlands Sanctuary resulted from pressure from the environmental community. It demonstrated that land purchases could serve the dual roles of protecting the environment while providing a special opportunity for recreation involving research, education, and stewardship.

While open space preservation has always been the goal, now the environmental focus has shifted to the global issue of climate change. Wetlands, which form the interface between land and water, are expected to experience the most rapid changes. Wetlands will be the bulwark for resisting sea level change. But wetlands depend on the uplands for clean water and invertebrates to support them. The ecosystem of Jug Bay comprises wetlands, forested uplands, meadowlands, sand barrens and much more. It can serve as a model laboratory to help us understand how global changes will impact the future.

Given that the effects of rapid climate change are expected in only decades, there is an urgency to understand not only their impacts but also what steps can be taken to mitigate these impacts. In order to expand the dissemination of information, the development of educational programs, based on research, will play a central role. Students in Maryland are required to have an environmental education program in grades K – 12. The law requires that the program shall “advance students’ knowledge, confidence, skills, and motivation to make decisions and take actions that create and maintain an optimal relationship between themselves and the environment, and preserve and protect the unique natural resources of Maryland, particularly those of the Chesapeake Bay and its watershed.” Expanding the research and education programs at the Sanctuary to include educators would leverage the impact of these programs to reach many more students. Core research projects would offer educators the “hands-on” learning that could be brought back to the classroom. Such programs would support the requirement that “Each local school system shall establish a support system to enable teachers and administrators to engage in high quality professional development in content knowledge, instructional materials, and methodology related to environmental education.”

The present resulted from a core idea that the Sanctuary could be a place for environmental research, education, and land stewardship. I continue to believe that these core concepts will still serve us well in the future. Our vision, though, of how they will be balanced and interpreted will be developed by those charged with setting the course. I invite you to join us on the journey.

Al Tucker, President

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FOR MORE INFORMATION AND TO RSVP, VISIT WWW.FRIENDSOFTJUGBAY.ORG/EVENTS.HTML

**Soup and Science**
**SUNDAYS, 12:00 – 3:00 PM**
**JAN 10, FEB 14, AND MAR 13**
**DETAILS ON PAGE 6**

**WE WELCOME NEW AND RETURNING FOJB MEMBERS:**

| Anne Baynes | Jennifer Mehl |
| Mary Beth Bray | Denise Molnar |
| Karen Call | Jan Montag |
| Mark and Nilya Chambers | Mark Moran |
| Marilyn Clemes | Jackie Niles |
| Marie and Pat Delaney | John Nugent |
| Jerry Finan | Cyra O’Daniel |
| Kenneth Foley | Gary Ruberd |
| Susan Frey | Paul Schneeman |
| Mary Gordon | Henry Selkirk |
| R. Hendrick | Marianne Starr |
| Katherine Henry | Stee and Barbara Tillett |
| Linette Lander | Betty Weinkam |
| Alexandra Macie |  

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FOJB LOCATIONS

**112 BAY ROAD**  **CHESTERTOWN, MD 21620**
**IN WINTER, CALL (410) 778-3597**
I first came to Jug Bay in 2007, when a friend discovered the Sanctuary when he was looking for opportunities where we could volunteer together on ecological research. We took the Sunday morning shift on the Marbled Salamander project that fall, and we were fortunate to be on duty following one of the epic rainy migration nights that have drawn visitors from all over the country (and other continents) to witness. The anticipation of peeking into each pit trap along the drift fence to see what it held reminded me of the undergraduate research I did on Blue-spotted Salamanders at Michigan State University in the early 90s, and I was hooked to this new place.

Salamanders led me to Jug Bay as a volunteer, but butterflies gave me my first official gig here as a research intern three years ago. I helped initiate a butterfly phenology study using the protocols of Nature’s Notebook (https://www.usanpn.org/natures_notebook), and staff and volunteers have been contributing data to this national citizen science initiative since 2013. That fall, I also joined the board of the Friends of Jug Bay, where I have served as co-chair of the Grants and Fundraising Committee and, recently, the Strategic Planning Committee. My passion for the Chesapeake Bay area led me to Towson University to complete a master’s in professional writing, so I am thrilled to be able to contribute to Jug Bay in particular in the areas of communications and outreach. I hope that my experience will help enrich the connection between the Sanctuary and the people who cherish and support it.

New JBWS T-Shirt Styles Available by Debra Gage

New Jug Bay Wetlands Sanctuary T-shirt styles have arrived! Our three new styles all feature our marsh design on the back and our popular Jug Bay logo on the front left side. The first new style is a quick-dry 50-50% cotton/polyester blend short-sleeved teal shirt with gold ink. The second is also a quick-dry 50-50% cotton/polyester blend short-sleeved shirt but in gray with teal ink. The third new style is a 100% cotton long-sleeved gray shirt with teal ink. These three new style shirts are unisex and are available in adult sizes small – 2XL. We also still have limited supplies of two styles of 30th-Anniversary logo T-shirts: a 100% cotton short-sleeved women’s cut in gray with teal ink and a 100% cotton short-sleeved youth-sized shirt in teal with gold ink. Short-sleeved tees are $15, and long-sleeved tees are $20. Our popular $15 tone-on-tone baseball caps (several colors available) also make great gifts. Stop by the Wetlands Center and shop early for the best size selection.
The recovery of our national symbol, the Bald Eagle, is considered one of the greatest conservation successes of the 20th century. The 44 nesting pairs detected in Maryland in 1977 represented an all-time low for the state. However, as actions were taken to reduce the declines (e.g., banning harmful pesticides like DDT), Bald Eagle populations recovered to the point that they were removed from the federal threatened and endangered species list in 2007. Today, the Chesapeake Bay region is home to the largest concentrations of Bald Eagles in the lower 48 states, with an estimated 600 or more pairs currently breeding in Maryland.

Although organized surveys of Maryland’s Bald Eagle population were discontinued in 2005, the existence of threats such as pollution, increased frequency of violent storms, coastal development, and collapsing fish populations prompts the need for continued monitoring of Bald Eagles in our state. The Maryland Bird Conservation Initiative (MBDCI), a partnership working to conserve birds and their habitats, is launching a new citizen science monitoring program this December to document the nesting success and productivity of the Maryland Bald Eagle population—and we are seeking volunteers to assist us in this effort!

Report Your Local Bald Eagle Nest

The Bald Eagle nesting season in Maryland starts in October, with pair formation and construction of large stick nests in the upper crotch of tall trees. Eggs are usually laid in February, but pairs in southern parts of Maryland occasionally start laying their eggs in January. The clutch of 1 – 3 eggs usually hatch by mid April, and the nestlings fledge May – June. For this effort, volunteers will be asked to visit a nest repeatedly between March and July to collect information on nest occupancy and the number of young. Training will be provided but participants will need their own binoculars or spotting scope. Care will be taken to respect private property and to not disturb the nesting eagles. To learn more and to register as an official Eagle Nest Monitor, contact MBDCI Science Coordinator Frode Jacobsen at mdeaglenests@gmail.com.

New Bald Eagle Nest Monitoring Program Launched by Maryland Bird Conservation Initiative

by Frode Jacobsen

Coming in March 2016
ActiveNet Online Registration for JBWS Public Programs

By Heather Baden

In 2015, Anne Arundel County’s Department of Recreation and Parks began phasing in a new online registration system through ActiveNet. Jug Bay Wetlands Sanctuary will begin using this system for online registrations in March 2016.

Previously, only summer camp registration was available online. Registration for all other programs was taken over the phone, and JBWS staff recorded registration information in a hard copy notebook. Starting in March 2016, however, all registration for county programs will be done online through the county’s ActiveNet system. ActiveNet has several significant administrative advantages: it will allow us to accurately collect registrants’ contact information, send electronic notifications of any program changes, receive payments electronically, and more effectively promote our programs county wide. ActiveNet also offers advantages to the public. After creating a personal account, registrants will be able to search, sign up, and pay for JBWS programs.

Note, however, that registration through the ActiveNet system only applies to programs conducted by the county—programs offered by the Friends of Jug Bay (such as the Steiner Memorial Canoe Trip and the Holiday Wreath Workshop) will continue to be registered through the FOJB website (www.friendsofjugbay.org) or by phone (410-741-9330).

The county’s ActiveNet system is currently live and fully operational for registration for programming at other Anne Arundel County parks; we encourage you to create your own account online in advance of March 2016 and begin to familiarize yourself with the system. We will still share our programs through our monthly e-newsletter, but beginning in March you will also see an Activity Number at the end of each program description that you can use to search and register for that program online.

To learn more about ActiveNet and to create your own account in the Anne Arundel County system, visit https://apm.activecommunities.com/aarecparks/Home.
**Open Hours:**

Sanctuary Wetlands Center: Wednesdays, Fridays, and Saturdays, 9:00 am – 5:00 pm

Glendening Nature Preserve: Wrighton Road Entrance daily, gate open 9:00 am – 5:00 pm; Plummer House Entrance, gate open 9:00 am – 5:00 pm (trails, butterfly garden, dogs on leash)

**NOTE:** Parts of the Sanctuary will be closed for managed deer hunts on two dates in January: Monday, January 4 (Glendening Nature Preserve); and Thursday, January 14 (Sanctuary Proper/River Farm), 5:00 am – 12:00 pm.

Patuxent Wetland Park: daily, dawn to dusk (fishing, hand-carried boat launch)

Wooton’s Landing Wetland Park: daily, dawn to dusk (fishing, loop trail, hand-carried boat launch)

Sanctuary Wetlands Center admission fee: $6.00 per vehicle.

Free for current Friends of Jug Bay members, active volunteers, and active military.

There are no fees to visit our other sites.

Visit www.jugbay.org for directions, information and updates to our schedule.

Registration is required for all programs. Please call 410-741-9330 or email programs@jugbay.org to register. All programs meet at the Wetlands Center at 1361 Wrighton Road unless otherwise noted. Program fees are in addition to vehicle admittance fees. An adult must accompany children under 13.

**Birdwalk**

First Saturday of every month; 8:00 – 11:00 am

Ages: 12 and up

Fee: Free with $6 vehicle entrance fee

Learn the skills of identifying birds by sight and sound. Binoculars and field guides are available to borrow. Wear comfortable walking shoes and dress for the weather.

Registration Required: Call 410-741-9330 or email programs@jugbay.org.

**Preschool Nature Series**

Friday, December 4 and Friday, February 5; 10:00 – 11:00 am (generally first Friday of each month)

Ages: 3-5

Fee: $2 per child

Children enjoy sensory activities and learn about nature through an interactive story, craft and hike. Explore a new topic each date. Extend your visit with free play at our Nature Play Space.

Registration Required: Call 410-741-9330 or email programs@jugbay.org.

**Soup and Science Lecture Series**

Sunday, January 10, February 14, and March 13; 12:00 – 3:00 pm

Fee: Free

Enjoy hearty homemade soup and fresh bread with fellow nature lovers at the Jug Bay Wetlands Sanctuary. Then sit back with a cup of coffee or tea and dessert and enjoy listening to our guest speakers.

Sunday, January 10: Stephanie Sperling:
- Relating Archaeological Findings at River Farm and Glendening Preserve to Research at Pig Point

Sunday, February 14: Chuck McClain:
- Using Satellite Observations of Ocean Biological and Optical Properties to Study the Marine Carbon Cycle
- MD100 Butterfly Big Year – The Quest to Find 100 Species of Butterflies in Maryland and DC in a Single Year

Registration Required: Call 410-741-9330 or register online at www.friendsofjugbay.org.

**Got You Covered!**

Saturday, January 9, 1:00 – 2:30 pm

Ages: Appropriate for ages 5 and older

Fee: Free with $6 per vehicle entrance fee

For animals surviving the winter months, it’s what’s on the outside that counts. Explore how fur and feathers get mammals and birds through our cold weather, followed by a short hike.

Registration Required: Call 410-741-9330 or email programs@jugbay.org.

**Skunk Cabbage Swamp Stomp**

Sunday, January 24, 1:00 – 3:00 pm

Ages: adults and families with children 8 years and older

Fee: Free with $6 vehicle entrance fee

Volunteer Siobhan Percey has been studying skunk cabbage and has learned a lot about this unusual wetland inhabitant. Join her for the 4th-annual swamp stomp, off-trail adventure to visit this fascinating plant, in bloom, along the swamp edges. Wear boots that can get wet.

Registration Required: Call 410-741-9330 or email programs@jugbay.org.

**Winter Tree Identification Workshop**

Saturday, February 6, 1:00 – 3:00 pm

Ages: 18 and older

Fee: Free with $6 vehicle entrance fee

Ever wonder what kind of tree are you looking at while during your winter hike? This is your opportunity to learn tree identification by looking at signs such as bark, buds, and twigs. Join Naturalist Elaine Friebele for a short lecture and a hands-on hike through our forest to learn and practice your newly learned skills.

Registration Required: Call 410-741-9330 or email programs@jugbay.org.

**Pysanky: Ukrainian Egg Decorating**

Saturday, February 27, 10:00 am – 2:00 pm

Ages: 16 and up

Fee: $25 per person ($20 for FOJB members); vehicle entrance fee waived

Create a beautiful egg in the time-honored Ukrainian tradition of Pysanky. Pysanky eggs are created using motifs rooted in nature and the cycles of life. Designs are made with an instrument called a kistka, beeswax, and dyes. This workshop will explore the art in a free form, using symbolism that tells a specific story. Each participant will receive an egg and a Pysanky kit containing the basic tools and materials required for the class. Instructor Coreen Weilminster has been making Pysanky for over 20 years. Bring a bag lunch.

Pre-registration and payment is required by February 15th. Space is limited.

Registration Required: Call 410-741-9330 or e-mail programs@jugbay.org to check availability. Your reservation will be secured when a payment is received. Checks should be made payable to Friends of Jug Bay.
Volunteer Opportunities

Save the Date

Volunteer Appreciation Social
Sunday, February 13, 12:00 – 4:00 pm
(snow date: February 21)
12:00 – 1:00 Hike
1:00 – 2:00 Social Hour
2:00 – 3:00 Dinner
3:00 – 4:00 Awards
Volunteers, please join us for the annual celebration of you! Volunteers receive a catered meal and enjoy a slideshow presentation, and awards are given for milestone achievements. Spouses and families welcome.

Stream Water Chemistry
Friday, December 18, 9:30 am – 12:00 pm
(Galloway Creek); Saturday, December 19, 9:30 am – 12:00 pm (Two Run Branch) and 12:00 – 2:30 pm (Pindell Branch)
Friday, January 15, 9:30 am – 12:00 pm
(Galloway Creek); Saturday, January 16, 9:30 am – 12:00 pm (Two Run Branch) and 12:00 – 2:30 pm (Pindell Branch)
Friday, February 19, 9:30 am to 12:00 pm
(Galloway Creek); Saturday, February 20, 9:30 am to 12:00 pm (Two Run Branch) and 12:00 – 2:30 pm (Pindell Branch)
Volunteers will be conducting field tests on dissolved oxygen content and other parameters. Water samples are also collected for lab analysis. New volunteers interested in assisting the study should contact Melinda Fegler, Volunteer Coordinator, at 410-741-9330.

Winter Waterbird Survey
Thursday, December 10, December 24, January 7, January 21, February 4, February 18; 7:30 – 9:30 am
Avid Birder? Novice? Come and join the amazing volunteer birding team of Jug Bay Wetlands Sanctuary! The ornithological knowledge of this team makes for a phenomenal learning and collaborative experience. All of this in the beautiful early morning light of Jug Bay on the Patuxent River. The Winter Waterbird Survey is a four-stop point count conducted bi-weekly during the non-breeding season. It tracks the diversity and abundance of geese, swans, ducks, shorebirds, raptors, and other avian species that frequent the wetlands of the Jug Bay area. Our wetlands are an important stop for migrating birds in the spring and fall. Many stay for the winter as well. Over 60 species have been documented through this volunteer-driven project.

Vernal Pool Monitoring
Friday, December 11; Saturday, December 19; Saturday, January 2; Friday, January 8; Saturday, January 16; Friday, January 22; Friday, February 12; Saturday, February 20; Friday, February 26
10:00 am – 2:00 pm
Join our Vernal Pool monitoring volunteer team. We will meet at 10:00 am and hike out to assess hydrology and herb activity at each of our pools. Contact Melinda Fegler at rfpeglo00@aacounty.org or call 410-741-9330 to register.

New Year’s River Cleanup
Wednesday, December 30, 9:00 am – 12:00 pm
Patuxent River Park, 1426 Mt. Zion Marlboro Rd, Lothian, MD 20711
Help us have a clean spot for New Year’s fishing. The Patuxent River Park is a popular fishing spot in our community and we want everyone to enjoy a clean and safe space. Participants will receive a voucher for 1/2 off entry into the spring fishing tournament to be held March 22 – 26. Contact Melinda Fegler at rfpeglo00@aacounty.org or call 410-741-9330 to register.

Adopt-A-Plot Training
Saturday, January 23 and Friday, January 29
10:00 am – 12:00 pm
Come learn the ropes of our Adopt-A-Plot Monitoring Program. Volunteers will immerse themselves in one (or more!) 100-sq-meter plots within the sanctuary to monitor plant diversity, signs of animal presence, and other key factors that increase our understanding of this beautiful place. Contact Melinda Fegler at rfpeglo00@aacounty.org or call 410-741-9330 to register.

Volunteer Statistics

Fall 2015
Jennifer Muro
Jennifer Acton
Blythe Alexander
Lawrence Ash
Katherine Baer
Tere Baranano
Mike Blackstone
Susan Blackstone
Dick Blas
Cynthia Bravo
Jennifer Dennis
Mary Burton
Danny Bystrak
Jeff Campbell
Karen Caruso
Alan Christian
Rebecca Christopher
Ed Conaway
David Davis
Chad Dennis
Cathryn Dippo
Ken Elliott
Karsten Enzinger
Lee Fisher
Bob Ford
Elaine Friebele
Lynette Fullerton
Madeline Gardner
John Gillespie
Diane Goebes
Ernie Goins
Jim Harle
Philippe Hensel
Darcy Herman
Regina Kreger
Dave Larrabee
David Linthicum
Cliff Loudermilk
Clara Mankowski
Charles McClain
Rob McEachern
Pat Melville
Amanda Mink
Dave Mozurkewich
Anne Muecke
Manfred Muecke
Dotty Mumford

Donations:

Siobhan Percey:
Golden Guides and several other kid-friendly natural history books

Thank You!

Volunteer Groups:
- National Aquarium
- Maryland Department of Natural Resources:
  Communications Department
- During the fall, volunteers logged 1432 hours.
  A contribution worth over $37,819!

Thank You!

photo by Frode Jacobsen
Who Will Help Us Plant These Seeds? By Darcy Herman

Most of Marsh Notes’ readership knows that Jug Bay Wetlands Sanctuary is envied by many similar organizations because of its loyal, talented, generous, and extensive volunteer corps. Volunteers make things happen at Jug Bay—they do science, lead events, act as supplemental teaching staff, and simply show up prepared to do the work that’s necessary to carry out the Sanctuary’s mission. Most volunteers would probably also tell you that they get back as much as they give, with opportunities to learn new things, share their knowledge, and motivate others to also contribute.

I want to tell you about an opportunity to volunteer that is also vitally important to Jug Bay’s mission but doesn’t (generally) involve chest waders, sunblock, or even a deep knowledge of one area of natural history. That opportunity is serving on the board of the Friends of Jug Bay (FOJB), the nonprofit organization that supports Jug Bay Wetlands Sanctuary. Board members meet at the Wetlands Center for two hours on the evening of the second Tuesday of every other month (members may also participate via phone or video conference). They also serve on one or more committees which may meet periodically independently of the bimonthly board meetings or conduct their business via phone or email.

As my bio elsewhere in this newsletter shows, I did not originally come to Jug Bay to do anything other than take a little time out from my desk job to look for salamanders in the vernal pools. But as my experience with Jug Bay has grown and I have come to know its needs and aspirations not only as a place, but as an organization, I have realized that simply loving being here is not enough to make the Sanctuary thrive. It also takes a group of people who share ideas and bring their talents to play to help sustain a vision. The board of the Friends of Jug Bay exists to connect aspirations to actions. Board members may organize, staff, and sponsor public events like the Spring Festival; raise and manage funds in many categories to support Sanctuary programs such as the summer research internships and bus transportation to Jug Bay for underserved schools; and serve as advocates when Sanctuary staff, as county employees, cannot. Similarly, the Friends of Jug Bay, as a nonprofit organization, can act like a fairy godmother for the Sanctuary, supplementing county resources for programs and needs and doing so independently and expediently.

My father, a retired public school teacher and administrator, used the story of The Little Red Hen often as a metaphor for investing time in what you love in order to earn a share in future rewards. My involvement on the FOJB board—something I would never have pictured myself doing even five years ago—has been immensely rewarding to me as a volunteer. I am both humbled and empowered to serve alongside the diverse but similarly motivated people of the board. But we need more voices, skills, and fresh perspectives to ensure that we are always doing the best job possible for Jug Bay. If you are curious, please consider attending one of our upcoming board meetings, which are always open to the public. There are no specific qualifications for serving on the board beyond the motivation to contribute and the ability to make the time commitment.

Wont’ you help reap the wheat, mill the flour, and proudly share in our bread?

Contact FOJB President Al Tucker at al.tucker@friendsofjugbay.org to inquire about joining the board.
One of the most rewarding things for me as Jug Bay Wetlands Sanctuary’s Volunteer & Stewardship Coordinator has been learning new ways to incorporate stewardship and citizen science that build on the past successes (and lessons learned) from volunteer programs that have been historically conducted at the Sanctuary. Adopt-A-Plot is one such program that we will be re-introducing in 2016 not only because it has the potential to help meet the goals of the Sanctuary’s research, education, and stewardship mission, but also because we hope that it can help meet our volunteers’ desires for programs that are convenient, flexible, and offer a sense of ownership.

JBWS’s trail monitoring project is a successful model for meeting these goals. Each year the trail monitors of both the Sanctuary Proper and Glendening Preserve trails have a potluck dinner. On this important, highly anticipated day, volunteers pour in with hopes of putting their names on one of the pristine trails as THE monitor for the year. On volunteer recruitment days, the trail monitoring project is also one of the most inquired about. Why is this? Feedback indicates that it is because it gives volunteers ownership, a sense of connection to a specific place, a reason to get out on the trails every season of the year, and a place to volunteer while walking the dog, babysitting the grandkids, or hanging out as a whole family. There are never enough trails for interested trail monitors even when a trail is shared by more than one family.

This is why I feel that Adopt-A-Plot can become our most exciting new volunteer project. Adopt-A-Plot will be more involved, more protocol and monitor driven, and will require more training, but it has the potential to offer the same benefits of one of our most treasured but often overfull programs. The ultimate goal of Adopt-A-Plot will be to gain important information about the entire Sanctuary. The data collected will be used to make important carrying capacity decisions for staffing/volunteer resources and stewardship needs. The program will concentrate on monitoring things like the vegetation present in a plot, obvious wildlife activity, canopy conditions, and deer population and transient habits.

How will this be facilitated? Jug Bay Wetlands Sanctuary is mapped with a 100 m² grid. For each corner of this grid, a GPS coordinate has been recorded, making most of our plots easy to locate using one of a variety of different GPS tools and apps that are available to volunteers. Several specially marked “difficult” plots will also be available for adoption—these plots will either be monitored by staff or by volunteers with an extra sense of adventure! Individuals or families may adopt as many plots as they feel they can handle. At the trail monitors’ potluck, we plan to offer our trail monitors first chance to adopt plots that include or are directly adjacent to the trails they already monitor monthly. Similarly, water quality monitors will get first choice of the grid plots en route and within their collection sites. There are plenty of plots to go around, and we plan to recruit both volunteers who have served the Sanctuary for many years and our new volunteers who are looking for a chance to gain experience and a sense of ownership over a part of the Sanctuary. During the next month, I will be taking your questions, suggestions, ideas and other thoughts about the Adopt-A-Plot program. You can contact me by email at rpfegl00@aacounty.org or call me at 410-741-9330. We can’t wait to get this program started, and, as always, we are so thankful for our elite volunteer squad at Jug Bay that turns aspirations into reality.
Understanding Climate Variability in the Chesapeake Bay

by Jenny Allen, CBNERR Research Coordinator

The Chesapeake Bay is the largest and most productive estuarine ecosystem in the United States, providing its surrounding communities with important economic, environmental, and recreational services. In order to protect these vital resources, it is important to understand how changes in the frequency of weather events (storms, droughts, heat waves, cold snaps, etc.) will influence the Bay’s already stressed ecosystems.

To better understand how climate variability will affect ecosystem resiliency and the coastal communities of the Chesapeake Bay, a collaborative project between the Chesapeake Bay National Estuarine Research Reserves in Maryland and Virginia, the National Center for Coastal Ocean Science (NCCOS), and the University of Maryland Center for Environmental Science (UMCES) was established. In this project, 26 climate indices were assessed to investigate how extreme climate change and variability has already manifested in the Chesapeake Bay over the last century. These climate indices, established by the Expert Team on Climate Change Detection and Indices, determine the absolute intensity, duration, and frequency of temperature and precipitation-based events. These analyses were conducted for the Chesapeake Bay National Estuarine Research Reserves, with a particular focus on Jug Bay in Maryland and Goodwin Islands in Virginia. Using long-term data sets from the Reserves provides a place-based lens on climate variability for the Chesapeake Bay as a whole.

This study has found significant trends such as an overall increase in warmer summer days and nights (Fig. 1) and an increase in the annual number of wet days and annual precipitation. These trends have major ecological implications within the Chesapeake Bay, including impacts on water quality and submerged aquatic vegetation.

So what do these trends mean for Jug Bay specifically? In addition to an increase in annual precipitation, moderately wet days (days when between 0.4 in and 0.8 in of precipitation fell) have also increased seasonally. On an annual basis, the average of moderately wet days has increased by one day each year. This means that we are not just experiencing more extreme wet events but more “average” wet events as well. The study uncovered an interesting correlation between moderately wet days and nitrogen loading at Jug Bay. The amount of nitrogen loading into the Patuxent River can be estimated based on the number of wet days.

Figure 1: The mean summertime % days and nights when the daily temperature exceeded 91°F. The dotted line indicates that 25% of the days were above 91°F.

Figure 2: Linear regression of wet day frequency with total nitrogen (TN) load in the Patuxent River. This relationship can be used to estimate total nitrogen loading based on the number of wet days.
moderately wet days (Fig. 2). For example, if there are 20 moderately wet days in a year, we can estimate that 134,000 lbs/yr of nitrogen will have entered the Patuxent River. The relationship between nitrogen loading and the number of moderately wet days is extremely important because it shows that even small rain events can have a significant effect on the amount of nitrogen that is entering the system.

Having a better understanding of historical climate trends gives us important insight into possible ecological implications within the Chesapeake Bay and allows policy-makers to develop the best management strategies to enhance our resiliency to future climate events and ecosystem changes.

Interested in learning more? Visit SciencePensieve (http://www.sciencepensieve.org/) to read archived posts related to the project. You can also subscribe to SciencePensieve and receive notifications of new posts by email.
Volunteer Appreciation Social

Sunday, February 13, 12:00 – 4:00 pm
(snow date: February 21)

Volunteers, please join us for the annual celebration of you! Volunteers receive a catered meal and enjoy a slideshow presentation, and awards are given for milestone achievements. Spouses and families welcome.