



# The Pelican Post

Weeks Bay Reserve Foundation Newsletter  
Winter 2003-2004

## Forever Wild Visits Reserve

Weeks Bay Reserve Foundation treated Forever Wild Board Members, ADCNR Commissioner **Barnett Lawley**, and friends of the Reserve to a fieldtrip and seafood dinner on Wednesday, September 24. The Foundation has conveyed parcels of ecologically significant watershed lands to this critical conservation program, the Alabama State Lands Division's Forever Wild Land Trust Program. The Forever Wild Board held its quarterly meeting the following day at the new Gatra L. Whele Nature Center at Blakeley State Park.



## Jack Edwards Day Celebrated

The Honorable **Jack Edwards**, who served as a distinguished Member of Congress for 20 years from 1965-1985, was recognized on October 10, 2003 for his lifetime of conservation achievements and especially for his efforts in establishing the Bon Secour National Wildlife Refuge in coastal Alabama. The Bon Secour Refuge, part of the U.S. Fish and Wildlife Service Refuge System, was designated in 1980 due to legislation sponsored by Edwards. He also provided the leadership that led to the establishment of the Weeks Bay National Estuarine Research Reserve in 1986, its Foundation in 1990, and The Coastal Land Trust of the Mobile-Tensaw River Delta, all conservation spinoffs from the establishment of the Refuge. A large bronze plaque was placed at the Pine Beach Trailhead of the Refuge and dedicated in his honor, recognizing that these tremendous conservation achievements would not exist in this, the 100<sup>th</sup> anniversary year of the National Refuge System, without Edwards' initiative and continuing support. Edwards currently serves as the Chairman of the Board of the Weeks Bay Reserve Foundation. Also recognized for their continuing conservation efforts in Coastal Alabama were current **Congressman Jo Bonner** and **Legislative Director Nancy Tippins**.



*Dr. John Borom, Skipper Tonsmeire, Bon Secour National Wildlife Refuge Manager Lynn Askins, Jack Edwards, and Nancy Tippins*

## Griggs Headlines Guest Lecture Series

State Lands Director **Jim Griggs** recently shared his insights with a large crowd in Fairhope about "State Lands Division Mission and Purpose." The guest lecture series is always interesting and informative. If you missed this one, you can check out the Power Point presentation at [www.faulknerstate.edu/meer/Griggs.html](http://www.faulknerstate.edu/meer/Griggs.html). Note the calendar in this issue of *The Pelican Post* and plan to attend a session this winter.



## Volunteers Break Record at Annual Coastal Cleanup

The record-breaking 87 volunteers for the Weeks Bay Zone of the National Coastal Cleanup on Saturday September 20--including accountants, students, retirees, nurses, construction workers, realtors, and teachers--made this year's event a great success. Over 1,000 pounds of debris was picked up in just 3 hours from the shoreline, parking lots, fishing piers, bridge crossings, and roadsides in the immediate area. "This year the Weeks Bay Zone saw many new faces participate. There were people from Mobile, Robertsdale, Bay Minette, and Daphne, in addition to the dedicated folks from Fairhope, Foley, and Magnolia Springs," said Stewardship Coordinator **Bob McCormack**. "I am also grateful to the volunteers who helped with registration, set up and break down, and cooked lunch." The Reserve wishes to thank especially **Harry Anderson, Kathy Bullock, Paul Dowsey, Walter Ernest, John Glaze, Peggy Glaze, Mark Hutter, Pamela Hutter, Fred Jordan, Sarah Rankin, Brenda Spivey, and Robin Williams** for their efforts in making the Cleanup a great success.

## NEWS OF NOTE



### Forever Wild Car Tags Boost Conservation

You can support Alabama's Land Trust Program by purchasing Forever Wild License Plates, now available throughout the state. Proceeds from the sale of these tags are used exclusively to purchase nature preserves, recreational areas, state parks and wildlife management areas.

Since its inception in 1992, Forever Wild has preserved 90,000 acres in Alabama, with some of the most significant purchases here in south Alabama.

If you registered for a free tag, just carry the receipt you received to your local courthouse when you renew, and get your Forever Wild Tag to replace your present one. You can personalize your tag at no additional cost.



### Lindsey Memorial Recognized

Weeks Bay Reserve Foundation Chairman **Jack Edwards** and Foundation President **Skipper Tonsmeire** recently presented a proclamation on behalf of the Foundation to **Gaye Lindsey** for her conservation efforts in establishing a memorial in honor of her late father **Walter Lindsey**. The proceeds from this donation were utilized to underwrite a conservation easement on Fish River.



### Estuary Live! Proves Big Success

Estuary Live!, an interactive web-based broadcast in celebration of National Estuaries Day, was held September 27, 2003. This year, several Baldwin County classes, as well as classrooms from around the planet, tuned in to learn more about the treasures of our nation's estuaries. Visit [www.estuaries.gov](http://www.estuaries.gov) to learn more about National Estuaries Day and Estuary Live!

### Weeks Bay Plant Sale Best Yet

The tenth Annual Native Plant Sale at Weeks Bay October 10-12 was the most successful ever. Our volunteers, the Baldwin County Master Gardeners, and our customers were not discouraged despite the pouring rain and high winds on Friday, and took home several thousand wonderful native plants for their landscapes and gardens. This year, we had customers from Florida, Mississippi, and a couple who drove down from Atlanta, just for the sale!



Proceeds from the annual plant sale, hosted by the Volunteers at Weeks Bay Reserve, are used to support activities and projects at the Reserve. A portable intercom system for tour guides, an herbarium cabinet, and a tent are just a few of the items that the Weeks Bay Volunteers have purchased for the Reserve with money earned at our annual plant sale.

The Reserve staff, our wonderful, dedicated volunteers, and the entire community all work together to make the sale a success, and to support the important mission of Weeks Bay Reserve. The plant sale is a great example of community cooperation and volunteerism, and the native plants that receive good homes throughout the South are a beautiful bonus!

## New Exhibits Celebrated with Ribbon Cutting

Celebrating the completion of an extensive two-year project, the Weeks Bay Reserve officially dedicated its newly redesigned Center with a ribbon cutting ceremony on Friday, September 26. Participating in the event were officials from ADCNR State Lands and the Auburn University staff and students from the Department of Industrial Design (DID), who designed, constructed, and installed the new exhibits over four academic semesters. The exhibits' new look includes beautiful cypress wood, eye-catching backlit panels, colorful and descriptive interpretation, and attractive tile flooring. "Auburn University has done a wonderful job. The students designed this and built it, and we've been delighted to have an opportunity to work with them," said State Lands Director **Jim Griggs**. The project was a unique partnership between government agencies and universities, one of the first of its kind in Alabama, and accomplished a win-win for the participants. University students enhanced their expertise, gaining valuable professional experience, and the Reserve, state, and the people of Alabama saved hundreds of thousands of dollars, as well as received a quality product for the long term. Also participating in the ceremony were **Sharon Gaber**, Associate Dean of the College of Architecture, Design, and Construction at Auburn; **Clark Lundell**, Director DID; **Rich Britnell**, Professor DID and Project Co-Leader; **David Gowan** DID Foreman; and nearly a dozen of the former DID students involved in the multi-year project. Representing the Reserve were Reserve Manager **L.G. Adams**, Stewardship Coordinator and Project Co-Leader **Bob McCormack**, and many other Reserve staff members. "It goes to show that government and education can work together toward a common goal," said Adams.



*Dr. Sharon Gaber, Auburn University's Associate Dean of the College of Architecture, Design, and Construction, and Jim Griggs, Director, State Lands Division, Alabama Department of Conservation and Natural Resources, cut the ribbon to commemorate the new exhibits at the Weeks Bay Interpretive Center.*

## Enviroscape® A Hit with Kids

A new model that demonstrates stormwater impacts was a big hit with children and parents alike when showcased by Weeks Bay Watershed Project Coordinator **Mike Shelton** at a recent environmental fair. The coastal landscape model — called an **Enviroscape®** — is manufactured by **J.T.&A, Inc.** (Chantilly, Virginia) and is laid out with agricultural fields, commercial areas, residences, streets, parking lots and waterways. Rainfall is simulated using a spray bottle. As water washes off of each landscape on the model, different types of runoff pollution, such as sediment from agricultural fields and cleared construction sites, fertilizer and pet waste from residential lawns, and petroleum products from streets and parking areas are portrayed by various colored waters. The effects are dramatic and illustrate how damaging to local waterways these stormwater pollutants can be. Even the harmful effects of leaking septic tanks and underground storage tanks on groundwater were displayed, critical since all of the drinking water in Baldwin County comes from underground sources.



Importantly, actions to reduce runoff — Best Management Practices — can also be demonstrated. Practices like preserving grasses along the edges of sod or crop fields, riparian forests next to rivers and vegetative barriers around construction sites are important to protecting water quality and are exhibited by the model. A booklet called *Greener by the Yard*, developed by the **Watershed Project, Baldwin County Master Gardeners, Alabama Cooperative Extension** and other partners, was also popular as a do-it-yourself guide to helping homeowners reduce non-point source pollution from their own residences. *Greener by the Yard* and information about the **Enviroscape®** are available by contacting Mike Shelton at the Reserve.

## From the Executive Director. . .



I want to thank all of the Weeks Bay Reserve Foundation's Board of Directors and membership for extending such a warm welcome to me in my new position. The Foundation has been busy working in areas of habitat restoration, water quality and protection of our natural resources. In this issue you will read about many of the great activities and accomplishments of the Reserve and Foundation, and those to come.



A brief word about **conservation easements**, an area with tremendous potential for the Reserve, Foundation and private property owners in the area, not to mention our environment. A conservation easement is a creative way for private property owners of ecologically significant lands to maintain their ownership, but to receive financial benefit through the form of state and Federal tax credits by granting some form of use restriction for conservation purposes. The IRS provision of this bill can be found in Internal Revenue Code Section 170 (h). Two unique features of a conservation easement are that it 1) allows private property owners economic incentives to contribute to conservation efforts that may otherwise be financially untenable and 2) has flexible and diverse restrictions based on each case. The Weeks Bay Reserve Foundation will be accepting conservation easements in the future, with each easement considered on a case-by-case basis. See the story on the Reserve's recent workshop on page 10 in this issue of *The Pelican Post*. For more information on conservation easements, contact me at [wernest@weeksbay.org](mailto:wernest@weeksbay.org) or 251/990-5004, or log on to the Land Trust Alliance website at [www.lta.com](http://www.lta.com). I encourage each of you to consider such partnerships, as well as the benefits of donating property or other assets to the Weeks Bay Reserve Foundation, a 501 (c) (3) organization.

Working for Conservation,

Walter Ernest

### Rapid Assessment Plant and Animal Survey Conducted in Mobile Bay

Weeks Bay NERR staff members **Scott Phipps** and **Eric Brunden** and Weeks Bay volunteer naturalists **Fred Nation** and **Dr. Harry Larson** recently took part in a rapid assessment of Mobile Bay as members of the newly formed Alabama-Mississippi Rapid Assessment Team (AMRAT). A rapid assessment survey of plant and animal species in Mobile Bay was conducted the first week of September, the primary aim of which was to detect non-native invasive species. During this survey--the first of its kind on the Gulf Coast--researchers conducted a variety of sampling techniques including trawling, seine netting, hand netting, hand picking, scraping of fouling organisms, and sampling of ballast water from ships. Over 50 researchers and technicians participated in the survey from many area agencies and institutions. The Reserve crew was part of the emergent and submerged aquatic plant team. Plants collected from Baldwin County were added to the Weeks Bay Herbarium, which is administered by Fred and Harry.

The AMRAT survey resulted in a "snapshot" inventory of coastal species

that are invasive or nuisance species. The inventory will also provide insight into the ways that invasive plants and animals arrive in our area, and can serve as a basis for development of management plans to deal with potential nuisance species. The Mobile Bay survey was only half of the planned rapid assessment: Next year there will be a survey of the entire Mississippi Sound.

Aquatic invasive species are not new phenomena. Non-native species have been introduced, both unintentionally and intentionally, into habitats of the United States and the rest of the world for hundreds of years. Coastal invaders have produced significant economic and environmental problems. Some well known problem species here along the northern Gulf Coast include nutria, the Australian spotted jellyfish, giant *Salvinia*, *Hydrilla*, water hyacinth and water lettuce to name a few. These species spread rapidly, produce serious environmental impacts, out-compete native species that are economically and ecologically important, and result in economic and social losses to our community and nation. The National Research Council has identified the invasion of non-indigenous aquatic species as "one of the five most critical environmental issues facing the ocean's marine life."

The Mobile Bay National Estuary Program, the University of Southern Mississippi's Center for Fisheries Research and Development (Gulf Coast Research Laboratory), the Dauphin Island Sea Lab, The Alabama Department of Conservation's Marine Resources Division and the Mississippi-Alabama Sea Grant Program led the AMRAT, coordinating with the Gulf of Mexico Regional Panel on Aquatic Nuisance Species. Other organizations participating in the survey include: Auburn University Marine Extension and Research Center, the Mississippi Department of Marine Resources, the University of South Alabama, the U.S. Food and Drug Administration, the U.S. Coast Guard and our own Weeks Bay National Estuarine Research Reserve (Coastal Section, Alabama State Lands Division). Funding for this effort was provided from the U. S. Environmental Protection Agency, the National Oceanic and Atmospheric Administration and from all of the aforementioned participants.

For more information on the rapid assessment and its preliminary findings, go to the Mobile Bay NEP web site (<http://www.mobilebaynep.com>) and follow the links to AMRAT.

## Volunteer Spotlight on Allison Graves

When the staff at Weeks Bay Reserve was asked to suggest a hard-working, dependable volunteer to spotlight in this issue of *The Pelican Post*, their unanimous choice was **Dr. Allison Graves**. Allison has certainly worked hard during the long, hot summer, on some of our most rigorous projects. And, like many of our treasured volunteers, she manages, somehow, to find time for Weeks Bay Reserve in her busy schedule.

Allison hails from Ozark, in the Wiregrass Region of Alabama. She attended Auburn University, and the Medical School at the University of South Alabama, where she met her husband **George**. Allison and George are a "two doctor family" he a neurologist, with a practice in Fairhope, and she a pathologist. They have three children: two daughters, ages 9 and 11, and one son, who is 6 years old.

"I have reduced my medical practice to part-time, and when my youngest child entered school, I was able to find the time to work at Weeks Bay Reserve --something I have wanted to do for a long time," Allison said. "I have always been an outdoors person. Some of my happiest childhood memories are of the out-of-doors, spent camp-

ing with my father. I know it sounds corny, but I really do want to give something back, to learn about our native plants and animals and how they fit into our natural habitats and ecosystems. We have taken so much from the environment and I want to do what I can to help preserve what remains of our natural heritage here in South Alabama. I have a vendetta against popcorn trees [an invasive species]!"

Allison's concern for the environment extends to her home and family: She runs an "organic household," using environmentally friendly cleaning products, and the Graves are members of a co-op, where they grow organic foods.

Aside from volunteering at Weeks Bay Reserve, Allison is interested in genealogy, botany and gardening. She is also into physical fitness, which includes running 8 to 10 miles a week. To do the things that she has done at the Reserve, Allison needs to be fit! She has worked alongside **Eric Brunden, Scott Phipps**, and a group of dedicated volunteers in the physically demanding habitat restoration project, clearing brush, and blazing trails. Along with **Dr. Harry Larsen** and **Fred Nation**, Allison braved the steamy summer heat, catbriers, and chiggers, to conduct an extensive inventory of the plants that grow in and around the restoration site.

Allison may soon look a bit different than we have become accustomed



*Weeks Bay Volunteer Allison Graves working to restore habitat on Reserve properties*

to seeing her at work at the Reserve. She plans to cut her shoulder-length brown hair, and donate the shorn locks to "Locks of Love," a group that makes wigs for cancer patients who lose their hair through chemotherapy. This is just one example of the dedication and caring that makes Allison Graves one of our very special Weeks Bay volunteers!

### July - October 2003

## THE WEEKS BAY RESERVE FOUNDATION THANKS OUR NEW AND RENEWING MEMBERS AND DONORS

Jane M. Allgood  
Tina Baker  
R. Michael Booker  
Mrs. L. T. Coggeshall  
Robert & Irene Comalander  
Mr. and Mrs. William Davis  
Donald F. Dohn  
Fairhope Garden Club  
Adele Fay  
Mary Douglas Foreman  
Nancy Garrett  
Fred and Blair Garth  
John B. Glaze  
Mr. and Mrs. Win Hallett, III

Kenny Hanak  
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Hattie L. Smith  
Hector H. Sutherland  
Robert Tate  
Len & Pam Turner  
Charles W. Weinacker, Jr.  
Laurel Wilson

*The Weeks Bay Reserve Foundation is a non-profit 501(c)(3) organization. Donations to the Foundation are tax deductible. In addition to membership dues and cash donations, other gifts range from stocks and bonds to land, equipment and professional services.*

## CALENDAR

The Weeks Bay Reserve Interpretive Center is open to the public Monday – Saturday 9am-5pm, and Sunday 1pm-5pm. The Interpretive Center is located at 11300 US 98 just west of the Fish River Bridge. For more information call the Reserve at 251-928-9792, or facsimile 251-928-1792.

### DECEMBER

**Common in winter on the Gulf Coast, Lesser Scaup (*Aythya affinis*) often form large flocks in estuaries.**

- 2 Citizens Advisory Committee of the Weeks Bay Watershed Project meeting, 6pm at the Reserve.
- 9 Guest Lecture Series. "Travels from Alaska to Japan and the Russian Far East" presented by John and Beverly Winn. Government Street Baptist Church in Mobile, 7 pm. Bring a friend and a plate of your special holiday goodies (finger food only) to share around the Wassail Bowl.
- 11 Weeks Bay Holiday Open House 11-1pm at the Reserve Auditorium; Weeks Bay Advisory Committee quarterly meeting, 2pm at the Reserve Auditorium; Public Meeting on Federal Evaluation of the Reserve, 5-6pm.
- 22 Winter begins.
- 25 Christmas Holiday. The Interpretive Center will be closed. All trails and boardwalks will remain open for your walking and sightseeing pleasure.

### JANUARY

**Often overlooked because of its transparency, the luminescent sea walnut (*Beroe ovata*) is the more common ctenophore in estuaries during the winter.**

- 1 New Year's Day Holiday. The Interpretive Center will be closed. All trails and boardwalks will remain open for your walking and sightseeing pleasure.
- 6 Citizens Advisory Committee of the Weeks Bay Watershed Project meeting, 6pm at the Reserve.
- 13 Guest Lecture Series. "The Challenges of Bird Migration" presented by Eric Soehren, terrestrial zoologist, Natural Heritage Section, State Lands Division, ADCNR. Faulkner State Community College Fairhope Campus, Centennial Hall, 7:30 pm. Bring a friend.
- 19 Martin Luther King, Jr. Holiday. The Interpretive Center will be closed. All trails and boardwalks will remain open for your walking and sightseeing pleasure.
- 24 Field trip to the Bon Secour National Wildlife Refuge. Meet under the live oaks at the Pine Beach Trail head which is located on the south side of the Fort Morgan Road (Hwy 180) at the 11-mile marker, 8:30 am-noon. Bring a friend.
- 27 Free Natural History Film. "In Search of the Albino" presented by wildlife photographer/narrator Tom Sterling. Faulkner State Community College Fairhope Campus, Centennial Hall, 7:30 pm. Bring a friend.

### FEBRUARY

**Young southern stargazers (*Astroscopus y-graecum*) can be found on sandy bottoms in estuaries during the winter.**

- 3 Citizens Advisory Committee of the Weeks Bay Watershed Project meeting, 6pm at the Reserve.
- 10 Guest Lecture Series. "Grand Bay National Estuarine Research Reserve in Southeast Jackson County Mississippi" presented by Dave Ruple, Reserve Manager, Mississippi Department of Marine Resources. Government Street Baptist Church in Mobile, 7:30 pm. Bring a friend.
- 16 Presidents' Day Holiday. The Interpretive Center will be closed. All trails and boardwalks will remain open for your walking and sightseeing pleasure.
- 21 Field trip to the 18,400-acre Grand Bay National Estuarine Research Reserve. If you are coming from Baldwin County, meet at the ADCNR Wildlife and Freshwater Fisheries office parking lot on the Causeway at 8:00 am. If you are coming from Mobile County, meet at the Chevron Station at Exit 4 off I-10 at 8:30 am. Bring a friend.
- 24 Mardi Gras Day. The Interpretive Center will be closed. All trails and boardwalks will remain open for your walking and sightseeing pleasure.

### NATURE'S CALENDAR

by John Borom

The Oak Toad (*Bufo quercicus*) is the smallest toad in North America reaching sizes up to 1.3 inches. The generic name comes from the Latin for toad, *bufo* and the specific name is from the Latin *quercinus*, of oak leaves. Perhaps this is because this tiny toad looks like a dried oak leaf.



Its skin can be blackish to silvery-gray but more typically is brownish. There is a cream-colored to orange stripe down its spine as well as four-to-five pairs of brown or black blotches on its back. It may have flecks of orange or red on its back; its belly is a cream color. This toad has a very short head, a pointed nose, and parotid glands behind the eyes shaped like tear drops.

The Oak Toad inhabits the coastal plain from eastern Louisiana to southeastern Virginia. It is found in the southern half of Alabama. This toad is associated with sandy pine scrublands, hiding under the litter of the forest floor. In such habitats, oak trees may or may not exist. It is much more active during the day than most other kinds of toads. Because of rampant development, these well-drained uplands are among the most rapidly disappearing habitats in Baldwin County.

Shallow semi-permanent ponds and roadside drainage ditches are used for breeding. The Oak Toad breeds from April through August, stimulated by warm heavy rains. Eggs are laid in very short strings of jelly. They may adhere to the vegetation or float on the water surface. Hatching and transformation to adult form takes two months. The tiny tadpoles are dark above and lighter below.

The call of the Oak Toad is very high-pitched and bird-like, and similar to the peeping of a newly-hatched chick. Although males may call sporadically during the daylight hours on overcast or rainy days, the largest and most persistent choruses are heard on humid or rainy summer nights.



### New Reserve Christmas Ornaments, Other Merchandise Benefit Reserve

Deck the halls this holiday season with the newly commissioned Weeks Bay Reserve commemorative Christmas ornament, and also benefit the work of the Reserve in one fell swoop. The ornament is the perfect gift or stocking stuffer at \$10 each and can serve as the starting point in your commemorative collection. Also available for the holidays, as well as year-round, are Reserve t-shirts and ballcaps in kid and adult sizes at \$10 each and a series of 10 pitcher plant notecards, also for \$10. In addition, the popular *Coasting* book, an insider's tourguide for our unique coastal area is made available at the Reserve Center for \$18, with proceeds benefiting the Reserve. Visit the Reserve Center or contact the Reserve or Foundation for more information.

### Nature Trail Restoration Activities Continue

Marla Favar, Baldwin County extension agent, recently hosted a workshop at the Reserve for volunteers involved in the Nature Trail Restoration Project. Marla presented information relating to the proper handling of herbicides and worker safety. This information helped increase awareness of the need for reciprocal communication among project participants and the necessity of employing proper procedures and equipment when working in the field. A big thank you to Marla!

The information Marla presented was put to pragmatic use in the weeks following her presentation. Eleven volunteers have assisted with the cutting and "painting" (treating the freshly cut stumps with herbicide) of Popcorn trees found within the restoration area.

The Popcorn tree, *Sapium sebifurum*, is one of many exotic invasive species found within the restoration area. One of the primary goals of the restoration project is to inhibit the growth of exotic invasive species and encourage an environment conducive to native secondary succession.

Efforts also continue with the groundwater hydrology component led by **Jim Conners**, as well as the collection of data by Reserve staff, volunteers, and associated researchers. If you would like to receive additional in-

formation or wish to volunteer your time, please contact **Eric Brunden** at the Reserve.

## 2003-04 Winter Film Series

### December

- 3 - Fire and the Longleaf: Laurel Hill
- 10 - Last Stand of the Tallgrass Prairie: Altman-Larrabee
- 17 - Tropical Rainforest: Holiday

### January

- 14 - Rainbow of Stone: Terra
- 21 - Costa Rica - Land of Pure Life: PBS
- 28 - Yellowstone - America's Sacred Wilderness: PBS

### February

- 4 - Wisdom of the Wild: Nature
- 11 - Animals Are Beautiful People: Warner
- 18 - Strange Creatures of the Night: National Geographic
- 25 - American Buffalo - Spirit of a Nation: Nature

*Each session will be held on Wednesday at 10am, and will last approximately 50 minutes. There is no charge and refreshments will be provided.*



Faulkner State Community College  
Centennial Hall - Giddens Auditorium  
440 Fairhope Avenue, Fairhope AL 36532  
Phone: 251-990-0420  
<http://www.faulknerstate.edu/meer>



*Reserve Technician Eric Brunden and volunteer Allison Graves cutting and painting large popcorn trees.*

## Mercury Testing in Largemouth Bass Continues in the Weeks Bay Watershed

Since March 2003, the Weeks Bay Watershed Project, in partnership with the Weeks Bay Reserve and US Fish and Wildlife Service, has collected and analyzed 28 largemouth bass for mercury, approximately 33% of the number of samples targeted for collection in this study, funded in part by the Mobile Bay National Estuary Program. Cooperation with volunteer anglers has been established and productive due, in part, to extraordinary print and broadcast media coverage. On June 14, for instance, the Pensacola Bass Club provided 14 fish caught during one of its tour-

naments.

The remaining 14 samples have been taken in several locations along the length of Fish River. The largest fish collected to date--a bass weighing over 4 lbs and measuring 20 inches in length--contained 2.00 parts per million (ppm) of mercury, the highest concentration recorded.

Ten of the 28 fish tested above the advisory level of 1 ppm. Since mercury bioaccumulates in the food web and in a freshwater system like Fish River, where largemouth bass are the dominant predator, the highest concentrations were present in the largest fish.

Polecat Creek had the highest proportion of fish testing above the advisory limit. The watershed of Polecat

Creek is one of the largest subwatersheds of Fish River that drains east to west. Agriculture is the principal land use with a growing number of sod farms. In addition, stormwater from nearly all of Silverhill and parts of Robertsedale and Summerdale collects into Polecat Creek. Polecat Creek will be targeted in future sampling efforts.

Efforts are continuing to recruit volunteers to collect samples in order to analyze the 70-80 fish included in the minigrant application. All fish collected must be 13 inches in length or greater. Contact Mike Shelton, Watershed Project Coordinator at the Reserve, if you or someone you know would like to get involved.

### Mercury Sampling Results in Largemouth Bass in Weeks Bay Watershed

#	Location	Length (in)	Weight (lbs)	Total Mercury (ppm)
1	Private Pond on CR13, Fairhope	13.00	ND	0.100
2	Fish River @ Honey Road	16.00	ND	0.520
3	Fish River Opposite Polecat Creek	13.50	ND	0.880
4	Fish River @ River Road	13.00	ND	0.650
5	Polecat Creek @ mouth	13.00	ND	1.10
6	Polecat Creek @ CR9 Bridge	13.00	ND	1.06
7	Polecat Creek, 200 yds downstream of CR9 bridge	20.00	ND	1.75
8	Canal off Fish River, North End	17.00	ND	0.650
9	Canal off Fish River, Midway	14.00	ND	0.310
10	Canal off Fish River, South End	13.00	ND	0.780
11	Cowpen Creek, 100 yds upstream of mouth	16.00	ND	0.440
12	Turkey Branch, 250 yds upstream of mouth	17.00	ND	1.18
13	Waterhole Branch, 300 yds upstream of mouth	16.00	ND	0.620
14	Magnolia River @ CR49 bridge	17.00	ND	0.450
15	Bon Secour River at Unknown location	17.50	2.4	0.630
16	Canal off Fish River, North End	18.00	2.8	1.18
17	Fish River @ Swann Island Point	15.50	2.1	0.703
18	Fish River, 1 mi south of CR32 Bridge	18.00	3.1	0.596
19	Fish River, 300 yrd north of US98 Bridge	17.25	2.4	0.672
20	Fish River @ CR32 Bridge	20.00	4.3	2.00
21	Fish River @ Red Bluff	16.00	1.8	1.57
22	Fish River @ Unknown Location	14.50	1.5	1.07
23	Fish River @ CR 32 Bridge	13.50	1.1	1.28
24	Fish River @ Unknown Location	13.75	1.3	0.943
25	Fish River @ Unknown Location	13.50	1.1	1.07
26	Fish River @ Unknown Location	13.00	1.1	0.681
27	Fish River @ Unknown Location	13.00	1.1	0.774
28	South Basin @ Weeks Bay Marina	15.00	2.0	0.622

*Levels of 1 part per million or above are considered unsafe for consumption.*

## Great Blue Heron by John Borom



This photograph of a Great Blue Heron in the salt marsh was taken on Dauphin Island, on May 4, 2003.

The Great Blue Heron (*Ardea herodias*) is the largest heron in North America, measuring 46 inches from tip of bill to tip of tail, and 72 inches from wing tip to wing tip. The generic name is from the Latin word for heron, *ardea*, and the specific name is from the Greek word for heron *herodias*.

These magnificent birds are commonly seen throughout the year on the northern Gulf Coast where they forage close to shore, either alone or in well-distanced loose flocks. They typically walk and forage more slowly than other herons. When a Great Blue Heron finds a fish, it quickly thrusts its head and neck into the water, comes up with the fish in its bill, and swallows it on the spot. In addition to fish, its primary food source, this heron eats frogs, salamanders, lizards, snakes, crabs, shrimp, and insects. Sometimes they will walk up to a fisherman on a pier or sea wall looking for a chance to get an easy fish meal.

This species does not yet enjoy any special conservation attention, but they are often easily disturbed or harmed by human activities. Building roads and even simply walking near nesting colonies can result in the birds leaving temporarily or permanently. Threats to herons include loss of habitat, water pollution, and toxic chemicals that tend to accumulate in the food web and concentrate in their tissues.

Fish eating predators generally have very high concentrations of methylmercury. High levels of methylmercury are suspected to impair a bird's reproductive success as well as cause growth related problems. These problems inevitably lead to an increased

death rate and a decreased birth rate, resulting in a reduction of natural populations.

Historically, methylmercury risk reduction strategies focused on restricting human consumption of heavily contaminated fish in order to protect human health. Such a strategy is clearly not adequate for the protection of wildlife. Species such as Great Blue Herons cannot heed warning notices or fish consumption advisories. Since methylmercury is so widely distributed in the environment, their risk is real and immediate, especially when effects such as impaired growth and reproduction, neurological damage, kidney damage, and weight loss, which occur at relatively low concentrations, are considered. Like canaries in a coal mine, the bioaccumulation of chemical toxins such as methylmercury in tissues of wildlife should be a clear warning to humans.

For more information about Great Blue Herons, check out the following website:

[www.faulknerstate.edu/meer/heron-rookeries.html](http://www.faulknerstate.edu/meer/heron-rookeries.html)

## Did You Know? by John Borom

All turtles are oviparous; that is, they lay eggs. For many species this is a laborious process. The digging of the nest, the arranging of the eggs in the nest, and the covering of the nest are completed with hind feet only. The female never turns to look into the nest, and after filling it, she walks away never to return.



For the turtles that live in water, the effort appears even more intensive, as they have to leave their supportive medium. They must drag themselves back to the water. All of this is done instinctively. The eggs are left to hatch or not, as environmental conditions dictate. Several clutches of eggs may be laid each season. After hatching, the young

receive no parental care and are strictly on their own.

Sex determination in turtles is different than in humans. No turtle species in North America has heteromorphic sex chromosomes, but the spiny softshell (*Apalone spiniferus*), and the wood turtle (*Clemmys insculpta*), have homomorphic sex chromosomes and genetic sex determination. All other North American turtles that have been studied have temperature (environmental) dependent sex determination; that is, the incubation temperature of the eggs at a sensitive period of development in the middle trimester triggers the gonadal development leading to the sex of the hatchling. Two patterns of temperature dependent sex determination have been discovered in turtles. Pattern I, common among turtles in which the adult females are larger than the males, has a transition zone of temperature of about 30°C above which incubation yields only females and below which only males are produced. Pattern II, known only from musk turtles and mud turtles in North America, has two transition zones, with males predominating at intermediate temperatures and females predominating at both extremes.

Strange as this system might appear to humans, it is not uncommon in the animal world, with the sex of alligators and crocodiles being similarly affected by incubation temperature (although males are produced at warm temperatures).

Recently, some scientists have suggested that global climate change has the potential to eliminate the production of male turtle offspring if mean global temperatures increase 4°C. Although the scenario of turtle extinctions as a result of climate change may seem far-fetched, other scientists believe that the extinction of dinosaurs may be linked to temperature-dependent sex determination and rapid climate change.



Look for information in the next issue of *The Pelican Post* about the first ever  
Alabama Coastal BirdFest  
coming October 14-17, 2004

## Summer Workshops Reach Both Coastal Resource Managers and a Statewide Audience

The Weeks Bay Reserve and the Weeks Bay Watershed Project, in cooperation with the Foundation and other partner agencies, presented a full slate of educational programs to local, state and Gulf-wide audiences this summer. Many innovative methods exist to preserve natural resources and to better perform tasks like wastewater treatment. The workshops presented in the summer of 2003 should elevate the participants' awareness and enhance their willingness to use and recommend the techniques to their clients and, in the case of elected officials, their constituents.

### Decentralized Wastewater Workshop

On July 27<sup>th</sup> at the PZK Hall in Robertsdale, the Citizens Advisory Committee of the Watershed Project, the Baldwin County Soil and Water Conservation District and the Watershed Project sponsored a special educational opportunity for local elected officials and wastewater professionals. Participants were introduced to an innovative method for wastewater treatment, decentralized sewer systems, that are both cost effective and, in appropriate applications, a better alternative to traditional sewer or septic tank systems. **Dr. Kevin White** of the University of South Alabama was the principal instructor for the course. Dr. White has been a proponent of these systems for several years and has assisted the **Mobile Area Water And Sewer System** with design, installation and management of four systems operating in Mobile County. Decentralized treatment operations eliminate many costly and failure-prone functions of typical sewer systems while discharging cleaner water than onsite septic tanks. Participants included elected officials from the state legislature, the Baldwin County Commission and local municipalities, as well as wastewater professionals and concerned citizens.



Throughout the course, Dr. White demonstrated how the systems can better treat domestic wastewater in areas not suitable or accessible to more traditional methods. In addition, the economic ben-

efits were made clear by Dr. White using the Mobile County projects as examples of successful operations in a coastal environment.

### Conservation Easements Workshop

*A Guide to Conservation Easements* workshop was presented on August 11-12. A consortium of agencies and local businesses organized the two-day event at the Grand Hotel in Point Clear and welcomed over sixty participants. The program was sponsored by **WETLAND RESOURCES Environmental Consulting**, the **Weeks Bay Watershed Project**, **Citizens Advisory Committee**, and the **Alabama Forest Resources Center**. Additional support was provided by **Weeks Bay Reserve Volunteers and Foundation**, **Hand Arendall**, **Weeks Bay Watershed Protection Association**, **Weeks Bay Mitigation Bank**, **Alabama Cooperative Extension System**, **Baldwin County Soil & Water Conservation District** and **ADCNR, State Lands Division**.

Conservation easements are one of the most frequently used methods for protecting land in the United States. A conservation easement is a legal agreement that limits certain kinds of development on the land while allowing the landowner to continue to own it, live on it, and use it. It allows landowners to achieve their conservation goals while maintaining ownership and a high degree of control over their property. The landowner donates the easement to a qualified organization or government agency that, in turn, ensures that the conditions of the easement are met.

The workshop provided the participants with an overview of what con-

servation easements are and how they can be used to meet a landowner's management and conservation goals. Participants were diverse and included landowners, attorneys, real estate professionals, appraisers, planners, consulting for-



esters, financial advisors, and others involved in land management decisions and activities. The principle instructor for the workshop was **Dr. Harry Haney**, Garland Gray Professor of Forestry and Extension Specialist in the Department of Forestry, College of Natural Resources, Virginia Tech, Blacksburg, VA. **Edward F. Travis**, president of the Alabama Forest Resources Center, a consulting forester and appraiser, and owner of **Edward F. Travis Company, Inc.** in Mobile; **Arthur C. Dyas**, president of **Southeastern Natural Resources, Inc.**, Mobile; and **Neil C. Johnston, Esq.**, a member of the Hand Arendall law firm, Mobile, contributed presentations on management and tax aspects of easements. Several individuals with experience in the establishment and management of easements outlined their first-hand, local perspective.

### Onsite Sewage Management

The Weeks Bay Reserve and the Weeks Bay Watershed Project hosted the *Onsite Sewage Management Workshop: Septic Tanks, Alternative Treatment Systems, and Beyond* on August 14<sup>th</sup>. Thirty participants for the workshop

### Workshops -continued from page 10

included septic tank installers and individuals for several state agencies. Dr. Kevin White, Department of Civil Engineering, University of South Alabama made presentations of onsite treatment and advanced treatment systems such as wetlands, peat and decentralized.

**Teddy King and Camilla English**, Baldwin County Health Department, described the current rules and procedures for traditional septic tank and drain field systems followed by **Greg Smith**, Baldwin County Subdivision Planner who spoke on county regulations. **Gary Stringfellow**, Executive Director of the Alabama Onsite Wastewater Board, provided an update on the statewide licensing procedures and requirements. The Baldwin County Wetland Conservation Plan was outlined by **Cara Stallman**, Baldwin County Natural Resources Planner. Information collected about wetlands throughout the county will be another tool for better onsite wastewater system placement and treatment. **Mike Shelton**, Watershed Project Coordinator, introduced the audience to the training and educational opportunities at the Alabama



Onsite Wastewater Training Center at the University of West Alabama in Livingston. Training is available for many aspects of onsite wastewater treatment, including advanced and innovative systems. The workshop was concluded with a presentation on the Alabama NEMO (Nonpoint Source Education for Municipal Officials) Program. NEMO was developed to educate officials and individuals in a watershed on the importance of collective action to prevent pollution.

Participants left all three workshops with additional tools to protect surface waterways from pollution and protect sensitive and important land for conservation purposes.

### Grand Bay Savanna Fieldtrip by John Borom

It was a clear, crisp and beautiful morning on September 20 as we stopped along the red clay surface of University Road at a seepage bog to look at the dark red fall leaves of purple, pale and hybrid pitcher plants. Small bright yellow horned bladderwort flowers, yellow sunflowers, goldenrods, deep purple blazing star and light purple false foxglove were abundant. As we drove south, we stopped to observe a wet area with a grove of pond cypress trees and saw a leopard frog in the wet ditch, Common Yellowthroats in the trees and a black racer that had been smashed in the road by a car several days earlier.

The 3,396-acre tract was purchased by the Forever Wild Land Trust to serve as a state-owned nature preserve. It is being managed primarily for the preservation and restoration of species and communities endemic to or dependent upon the Coastal Lowlands of Alabama.

University Road ends at Point aux Pins where we saw the ruins of the old Marine Science Institute that existed prior to the Dauphin Island Sea Lab. This is a biologically rich area, and we observed Great Blue Herons, Green Herons, Brown Pelicans, Eastern King birds, immature White Ibis, immature Yellow-crowned Night Herons, and Ruby-throated Hummingbirds feeding on late blooming trumpet vine flowers. The extensive salt marsh in this area provides excellent food and cover for many species and is an important nursery for marine species.

As we left Point aux Pins, a squirrel treefrog jumped on my windshield and when I stopped to remove it to a safer place, I could see seagulls in the distance and Gulf fritillary butterflies next to the road. We turned off University Road onto Little River Road



*Eric Soehren of the Alabama State Lands Division points out carnivorous plants to field trip participants.*

and stopped at the large diked ponds near Bayou La Batre.

Built in 1996, these Corps of Engineers' ponds hold dredge material and they have become one of the top local shorebird spots, worthy of a check

at any season. We saw two Ospreys through a spotting scope, bathing in the water like small birds in a backyard bird-bath. We also saw numerous Black-necked stilts, a large flock of Blue-winged Teal, Great Egrets

and an immature Little Blue Heron.

It was a beautiful trip and you are invited to come along on the next one, noted in the calendar in *The Pelican Post* on page six.

### From *The Fragile Species* © 1992

By Lewis Thomas

I am obsessed by bacteria, not just my own and those of the horse chestnut tree in my backyard, but bacteria in general. We would not have nitrogen for the proteins of the biosphere without the nitrogen-fixing bacteria, most of them living like special tissues in the roots of legumes. We would never have decay; dead trees would simply lie there forever, and so would we, and nothing on earth would be recycled. We could not keep cows, for cattle cannot absorb their kind of food until their intestinal bacteria have worked it over, and for the same reason there would be no termites to cycle the wood; they are, literally, alive with bacteria. We would not have luminous fish for our aquariums, for the source of that spectacular light around their eyes is their private colonies of luminescent bacteria. And we would never have obtained oxygen to breathe, for all the oxygen in our air is exhaled for our use by the photosynthetic microbes in the upper waters of the seas and lakes, and in the leaves of forests.

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Suggestions and comments from readers on future topics of interest are welcome. If you know of others who would be interested in receiving this newsletter, call the Foundation at 990-5004. *The Pelican Post* is produced quarterly by The Bellwether Group, Mary Mullins, Partner. Funds for the publication are provided by members of the Weeks Bay Reserve Foundation.

**JOIN US!****Weeks Bay Reserve Foundation**

Weeks Bay Reserve Foundation is a non-profit organization whose members provide assistance and support to the Weeks Bay National Estuarine Research Reserve's goals and programs.

As a member, you will be joining a group of people with similar interests and concerns for natural resources. You can become directly involved with the Reserve's research and educational programs by volunteering to help with field trips, seminars, cultural events, newsletters, and special projects.

You will be regularly informed of Reserve activities through newsletters, special mailings, and meetings. The opportunities for involvement are unlimited. Whatever your talents or interests, the Reserve can use your support. You, the environment, and your community will benefit as a result of your membership. If you are not a member and would like to join, please mail this form along with your tax-deductible donation.

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From "An Outdoor Journal" by Jimmy Carter

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