

The Pelican Post

Weeks Bay Reserve Foundation
Newsletter
March 1996

Welcome to the official newsletter of the Weeks Bay Reserve Foundation. Articles of interest to bay watchers, wetland watchers, and others interested in the coast and in nature will be featured.

Focus on Water Quality

With this issue, the Weeks Bay Foundation begins its regular publication of the results of water quality monitoring in the Weeks Bay Watershed - consisting of the Fish & Magnolia Rivers, their tributaries and a land area of 125,800 acres that extends from Hwy 59 to Greeno Road and north to Stapleton.

What is water quality and how is it measured?

In the Weeks Bay Watershed, the primary determinants of water quality are non-point and point discharge sources, rainfall and temperature.

Non-point sources include agricultural runoff (animal wastes, pesticides, fertilizers, herbicides, sediment from plowed fields), sediment from dirt roads, construction sites and other similar substances coming from residences and businesses. Point sources include the sewage treatment plant in Loxley and the Plantation Hills plant which discharges into Fish River.

The parameters which are being tested include fecal coliform, dissolved oxygen, turbidity, temperature, pH, nitrogen, salinity, hardness, and alkalinity. A brief description of fecal coliform and dissolved oxygen are included in this issue. Future issues of the Pelican Post will contain descriptions of other parameters.

The Weeks Bay Water Watch is testing at 22 sites. Other entities involved in regular testing includes Geological Survey of Alabama, the U. S. Geological Survey and ADEM.

The only pure water is distilled water. From that point, additives from natural and man related sources change the nature of the compound.

The most common sources of pollution in the Watershed are sediment from farms, roads and construction sites, and fecal coliform from animal wastes, malfunctioning septic tanks and boats not properly equipped with sewage holding tanks.

The regulations governing septic tank installation and maintenance in Baldwin County allow tanks to be installed in areas that flood and no maintenance or inspections of existing tanks are required unless an addition to a home is constructed.

High fecal coliform counts occur in areas where pollution sources occur and in almost all water bodies during periods of excessive rainfall. Low dissolved oxygen (DO) can occur during long, dry periods where stream flow is low and temperatures are high. Acceptable limits for both fecal coliform and DO are shown on the enclosed graphs.

How good or bad is the Water Quality in the Weeks Bay Watershed?

It depends - on when and where the sample is taken. In most areas

the water quality is "OK", i.e. meets Fish & Wildlife criteria, at least some, if not most of the time.

In some areas pollution sources and low stream flows cause substandard conditions.

What can you do to help?

1. Become a certified sampler (March 9 at the Weeks Bay Reserve Center) and participate in the testing program. Call Tina Lynn at 928-9792.
2. Control soil erosion. Plant grass or ground cover on bare areas.
3. If you're farming, use no till or conservation tillage methods. Leave wetland buffers.
4. Maintain your septic tank. Inspect and pump the approximately every 2 to 3 years.
5. Control run-off from your yard.
6. Use lawn-care chemicals properly.
7. If you have a boat with a head and don't have a holding tank, they are available at a relatively low cost.
8. Dispose of household products properly.
9. Use car care products wisely.

Coastal Cleanup

National Coastal Cleanup Day was Saturday, September 16th. Alabama hosted cleanups at several locations along the Gulf coast. The Weeks Bay Reserve was a registration point that attracted 34 volunteers. Trash was picked up at Mullet Point Park, Mary Ann Nelson Beach, View Point boat ramp, and Manatee Park. Boating volunteers plucked debris from Fish and Magnolia Rivers as well. Approximately **900 pounds of trash** was collected in the Weeks Bay zone. Most prevalent of the debris were plastic bags and wrappers, plastic bottles, and cigarette butts. Over a dozen boys from **Boy Scout Troop 406** in Montgomery made the trip to Weeks Bay and cleaned the beaches south of the Weeks Bay mouth, where they dragged trash over 1/2 mile to the nearest road. In Baldwin County, 927 people collected 19,037 pounds of trash. In Mobile County, 1,263 people collected 21,006 pounds of trash. The volunteers in the Weeks Bay zone were treated to lunch and refreshments back at the Reserve on that hot and humid day. A big "**THANK YOU**" to all the concerned volunteers who helped make our shores cleaner and prettier.

New Staff

Weeks Bay Reserve has two new staff members, both working on educational projects. **Margaret Holcombe** is the education coordinator working with school groups, curriculum and exhibits. She recently taught marine and environmental science at Robertsdale High School. She obtained her B. S. degree in biology education from Auburn University and her M. Ed. degree in marine biology from the University of South Alabama. Margaret resides in Bay Minette. We are fortunate to have her knowledge and expertise in the marine sciences leading the educational activities. **Wayne Folks** is a part time educational assistant working to implement

the pilot curriculum, Estuary Net, into selected Baldwin County Schools. This water quality based curriculum will emphasize field monitoring with classroom activities. The telecommunications component will allow Baldwin County students to share information from coast to coast. Mr. Folks obtained his B.A. and M. A. degrees in science education from the University of Northern Iowa. Wayne resides in Bon Secour. Welcome to Margaret and Wayne!



**Wayne Folks &
Margaret Holcombe**

Staff Spotlight

Brenda Spivey is responsible for administrative, informational and public contact work and assists in the management of the Reserve. She develops and maintains procedures and systems in tracking administrative activities including personnel, annual plans, budgets, grants, and financial records. Brenda acts as liaison between the Reserve and other State and/or Federal agencies and the public. She communicates program goals and objectives, provides information, advice, and direction to the agency staff to assist them in carrying out assigned activities, achieving compliance, and resolving possible problems.

Brenda has a B.S. degree in public services administration from the University of South Alabama. She is married to **Dr. Henry Spivey** and is the mother of three daughters. The Spiveys reside in Bon Secour.

Nature's Calendar

The Atlantic Bottle-nosed Dolphin (*Tursiops truncatus*) is the most common species of marine mammal in the Alabama coastal waters. It usually can be seen throughout the year and occasionally will be found in mouths of coastal rivers that empty into Mobile Bay. The height of sexual activity occurs in March and April. The mating process last for 10 seconds or less, but may be repeated several times for a half hour or more. The gestation period is 12 months. Births occur at our latitude from February through May. The fetus usually emerges flukes first, and the birth process requires about 20 minutes. The newborn dolphin weighs about 30 pounds and is approximately three and a half feet in length. At the moment of birth, the female whirls suddenly around to face the infant, ready to help if aid is needed. This action also serves to snap the umbilical cord. Its eyes are open and it has no teeth. The infant swims expertly and immediately moves to the surface for its first breath of air. Within moments of birth, the baby dolphin seeks out one of its mother's two teats. Then, as soon as it takes hold of a nipple, the mother, by muscular contractions, squirts milk from the mammary sinuses into the infant's mouth. Calves are often nursed for a year or more.

During the first month of its life the infant stays close to its mother. Soon, though, the youngster begins to develop confidence and begins to slip away from its mother, especially when she drops asleep. They are closely tended by adults during at least the first half year. "Baby sitting" has been observed, in which nearby adults remain with a calf as its mother forages for food.

Males reach sexual maturity at 10 to 12 years of age, females 5 to 12. Once reproductively active, females bear a single calf every second or third year. The average life span for a dolphin is 25 - 35 years.

The Dolphin Skeleton

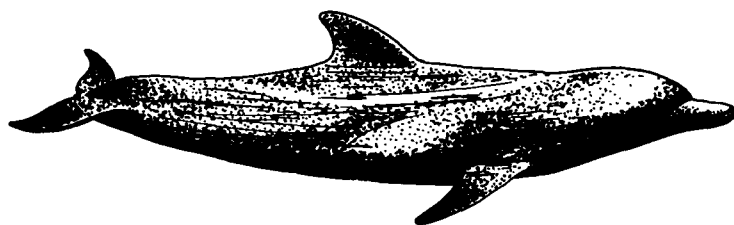
The newest educational exhibit is a skeleton of a female Atlantic Bottle-nosed Dolphin that died and washed up in Gulf Shores in 1995. It has a number of interesting features. The skull is greatly elongated anteriorly into a pronounced rostrum, or beak, that along with the tapering posterior end of the body, accentuates the animal's fusiform (tapering towards both ends) shape. The nostrils are located on top of the head rather than at the fore-end, as in other mammals, and have special flaps, using water pressure to close the blowhole while the animal is submerged. One remarkable anatomical feature is the structure known as the melon, located on the flat surface of the forehead anterior to the blowhole. It gives the head its bulbous crown. The melon is a huge mass of waxy, oily and gristly material that may act as an acoustical lens for concentrating the sounds received by the animal's sonar system. Sonar is used to locate prey and objects in the water. It captures speed and direction of prey. Sounds are produced in nasal sacs and beamed outward through the melon. Reception of the echoes of these sounds is by way of the lower jaw. The mandibles (lower jaws) are composed of very thin bone and each contains a large cavity filled with oil; posteriorly the jaws are in contact with the middle ear.

The brain is relatively large and weighs up to three pounds, and nine ounces. The human brain averages about three pounds. Dolphins are thought to be exceptionally intelligent.

The cervical vertebrae are flattened and frequently fused. The thoracic vertebrae articulate with several pairs of ribs that join the sternum, which is composed of several elements that fuse into one piece in the adult. The sacral vertebrae are similar to the adjacent lumbar and caudal vertebrae, but the caudal vertebrae have chevron processes on their ventral surfaces.

The dorsoventrally flattened flukes and the dorsal fin contain no bony elements and are not connected to the vertebral column except by muscles and connective tissue. The pectoral appendages are modified as flippers, but the joints beyond the shoulder are immobile, and the limb serves only as a steering, balancing and caressing organ. There is an increase in the number of bones in the digits over that found in other mammals. The pelvic girdle, which is reduced to two small bones embedded in tissue and not connected with the spinal column, provides only for the attachment of muscles associated with the external sex organs.

So when you visit the Interpretive Center and observe the dolphin skeleton suspended from the ceiling, think about how the skeletal features are designed for life in estuaries, and remember that educational exhibits are funded by the Weeks Bay Reserve Foundation.



ATLANTIC BOTTLE-NOSED DOLPHIN
Tursiops truncatus

Fecal Coliform Sampling Program

In May of 1995, **Weeks Bay Reserve Foundation** and **Weeks Bay National Estuarine Research Reserve** initiated a fecal coliform sampling program in Fish River. The Foundation arranged for the laboratory analyses of five samples per week with the **Alabama Department of Environmental Management's (ADEM) Mobile laboratory**.

The purpose of this sampling program is to provide a comparison of fecal coliform concentrations among the five stations in Fish River during a range of weather conditions. These data cannot be used for regulatory purposes, however, problem areas in the watershed can be identified. It is not always possible to detect the specific source (s) contributing to fecal coliform contamination from these samples. The information being gathered by the Reserve will be used to identify very general trends at different locations in Fish River. When problem areas are identified, regulatory authorities will be notified and a more detailed fecal coliform sampling can be conducted.

Fecal coliform concentration is a measure often used to determine the presence of water-bearing pathogenic organisms in surface water. Fecal coliform and fecal streptococci bacteria are microorganisms that live in the digestive tracks of warmblooded animals. The presence of these bacteria in surface waters may be used to indicate contamination from human or animal waste. The occurrence of fecal coliform bacteria does not present a direct health risk to humans, rather they are used as indicators of the presence of disease-causing microorganisms such as *Salmonella sp.* (which cause typhoid fever) and *Shigella sp.* (which cause bacillary dysentery).

Fecal coliform bacteria are generally short-lived and do not reproduce in water. They reach surface waters by direct contact or discharge into surface waters (such as from livestock in a stream or from a municipal wastewater treatment facility), through surface water runoff usually associated with rainfall, or transport by groundwater. Rainfall causes surface water to "runoff" over the land surface and through the first several inches of soil. Therefore, when interpreting fecal coliform data it is important to remember that the concentration of fecal coliform is closely related to precipitation. Our rivers and streams in Weeks Bay watershed drain pastures, residential areas, and parking lots which in turn flush contaminants, sediment, and nutrients from the land into surface waters. As a result, a sudden increase in fecal coliform concentrations in a series of samples may be induced by a rain event.

ADEM has classified bodies of water in Alabama according to specific uses. Most of the water use classifications in the Weeks Bay watershed are "Fish and Wildlife". Several areas of the watershed are classified as Swimming/Fish and Wildlife. Weeks Bay proper is designated as an Outstanding National Resource Water. ADEM has developed specific water quality criteria for bodies of water according to their water use. The methodology used by the Reserve for fecal coliform sampling in Fish River may be applied to Fish and Wildlife waters. This sampling regime does not meet ADEM sampling requirements for areas classified for swimming and other whole body water contact sports. An objective of the Weeks Bay Foundation is to provide the necessary equipment and personnel for this level of testing.

Dissolved Oxygen

A low dissolved oxygen level indicates a demand on the oxygen in the system. Pollutants, including inadequately treated sewage as well as decaying natural organic matter, can cause such a demand. Organic materials accumulate in bottom sediments and support microorganisms which consume oxygen as they break down the materials. Some wastes and pollutants produce direct chemical demands on any oxygen in the water. In ponds or impoundments, dense populations of active fish can deplete dissolved oxygen levels. In areas of dense algae, DO levels may drop at night and during cloudy weather due to reduced photosynthesis.



Tina Lynn (Watershed Coordinator) and Harry Larson (Volunteer) test Water Quality south of Fish River Bridge.

Watershed Project Sponsors Septic Workshop

Approximately 17,000 homes in Baldwin County rely on septic systems to treat and dispose of wastewater. Septic systems are generally a practical and adequate method of treating residential wastewater, yet there are many factors which inhibit the functioning of septic tanks. Malfunctioning septic systems are among the most common sources of ground and surface water pollution.

Some of the factors which can inhibit the proper treatment of wastewater by septic systems are high water table and low soil permeability which are common in the coastal areas of Alabama. Current regulations allow for the use of alternative systems to correct for an existing system failure or on sites unsuitable for traditional septic systems. Many alternatives are available which meet or exceed treatment standards, particularly on marginal soils.

In an attempt to address on-site sewage management issues in the Weeks Bay Watershed, the Weeks Bay Watershed Project sponsored a workshop entitled Alternative On-Site Wastewater Treatment. This workshop, held on September 20 at **Faulkner State Community College**, and on November 2 at the **Weeks Bay Reserve**, targeted engineers, planners, septic tank installers and local officials. Approximately 37 professionals were in attendance. The training of local professionals is a critical first step in the adoption of alternatives in this area.

A DEFINITION OF A WATERSHED

A watershed is more than the physical landscape where all of the water flows to a central basin. A watershed is defined by its resources, uses, activities, and values, where everything is linked in such a way that eventually all things are affected by everything else in the watershed. Perhaps, more importantly, a watershed contains the history of all that went before, and the spirit of all those who touch it remains.

WATERSHED LAND USE

The Weeks Bay drainage area is composed of:

(Acres)	(Land Use)
50,000	Cropland
10,100	Pasture/Hayland
57,000	Forestland
8,500	Urban/Misc.

Adopt-A-Watershed Project

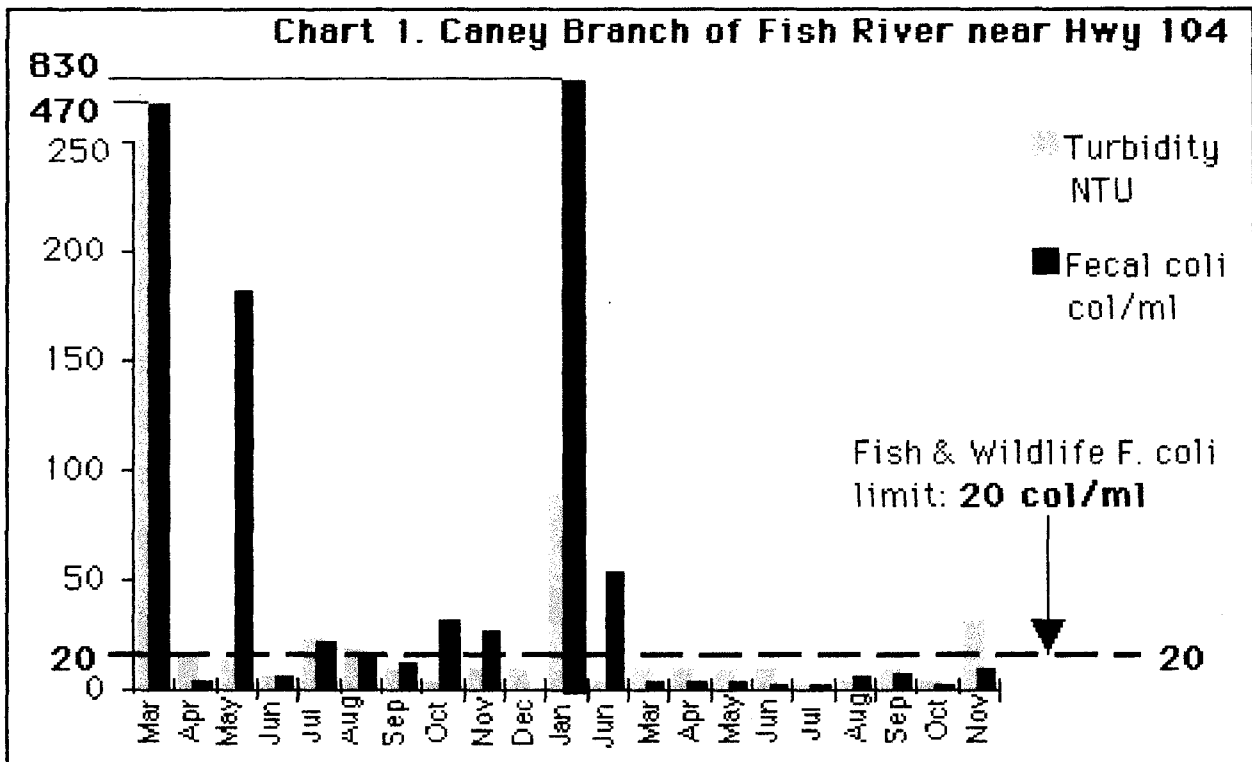


Chart 1. Geological Survey of Alabama data from March, 1994 through Nov., 1995. Fecal coliform samples surpassed Fish and Wildlife single-sample limit (2,000 colonies per 100 ml or **20 colonies per milliliter**) in March, May, October and November of 1994; and in January and February of 1995.

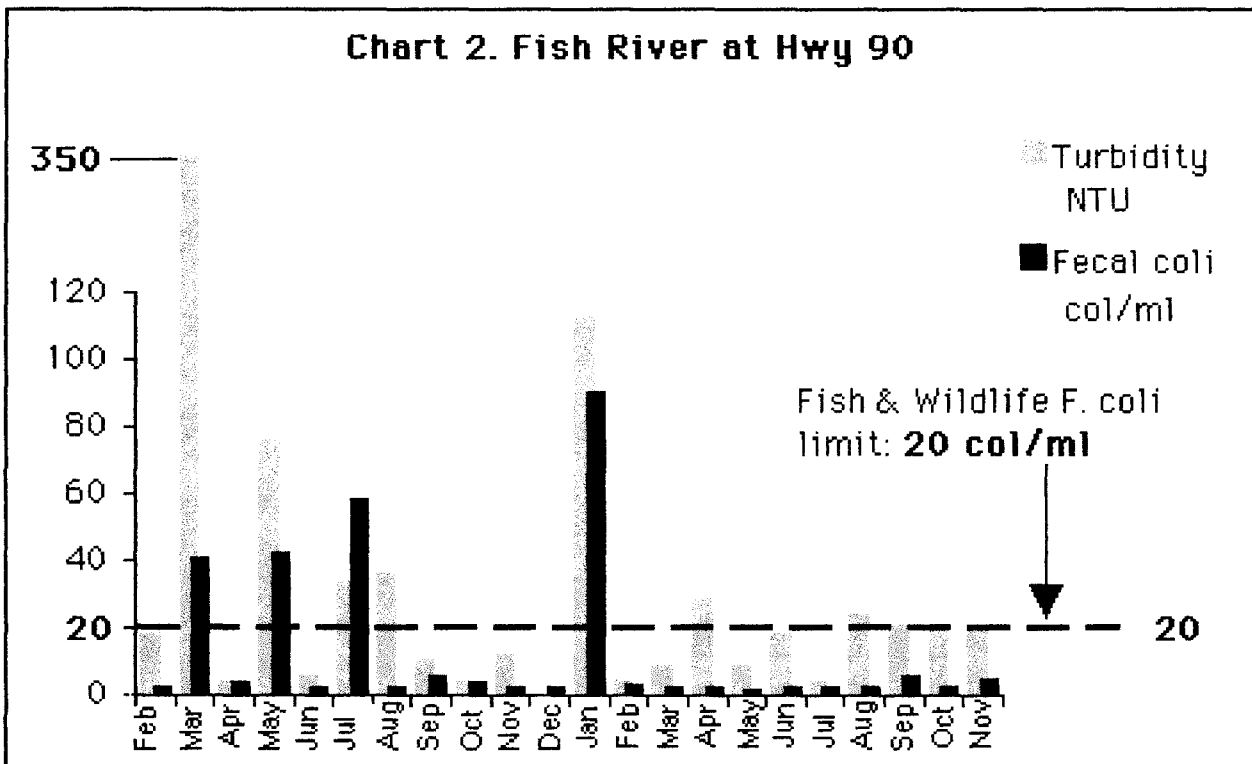


Chart 2. Geological Survey of Alabama data from February, 1994 through Nov., 1995. This sampling site is near Loxley. Note that fecal coliform samples surpassed Fish and Wildlife single-sample limit (2,000 colonies per 100 ml or **20 colonies per milliliter**) in March, May and July of 1994; and January of 1995.

NOTE: The very high *F. coliform* counts on the Fish River are often associated with heavy rain and surface water runoff of non point source pollutants. The turbidity of this river closely reflects these

heavy rainfall and runoff events.

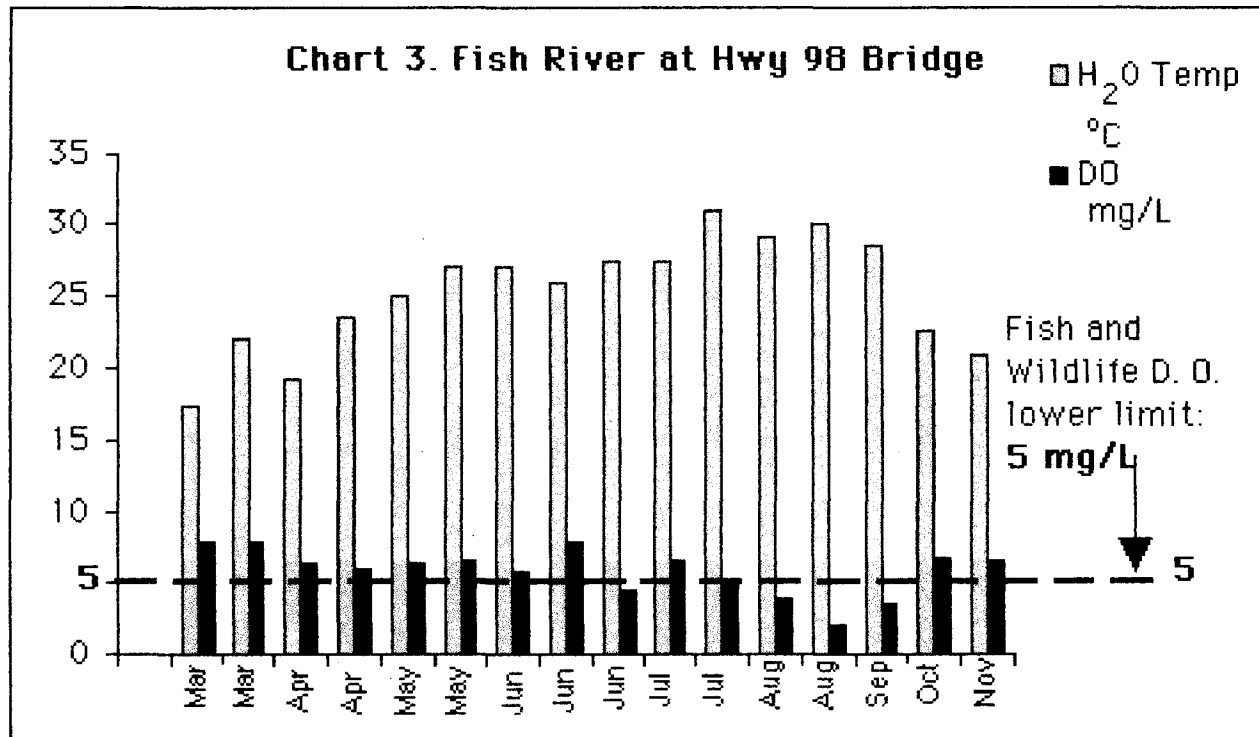


Chart 3. Weeks Bay Water Watch volunteer samples for dissolved oxygen and water temperature taken from February through November 1995. Mid-summer water temperatures approached the desirable upper limit (32 °C) for water quality standards in streams classified by ADEM as Fish and Wildlife streams.

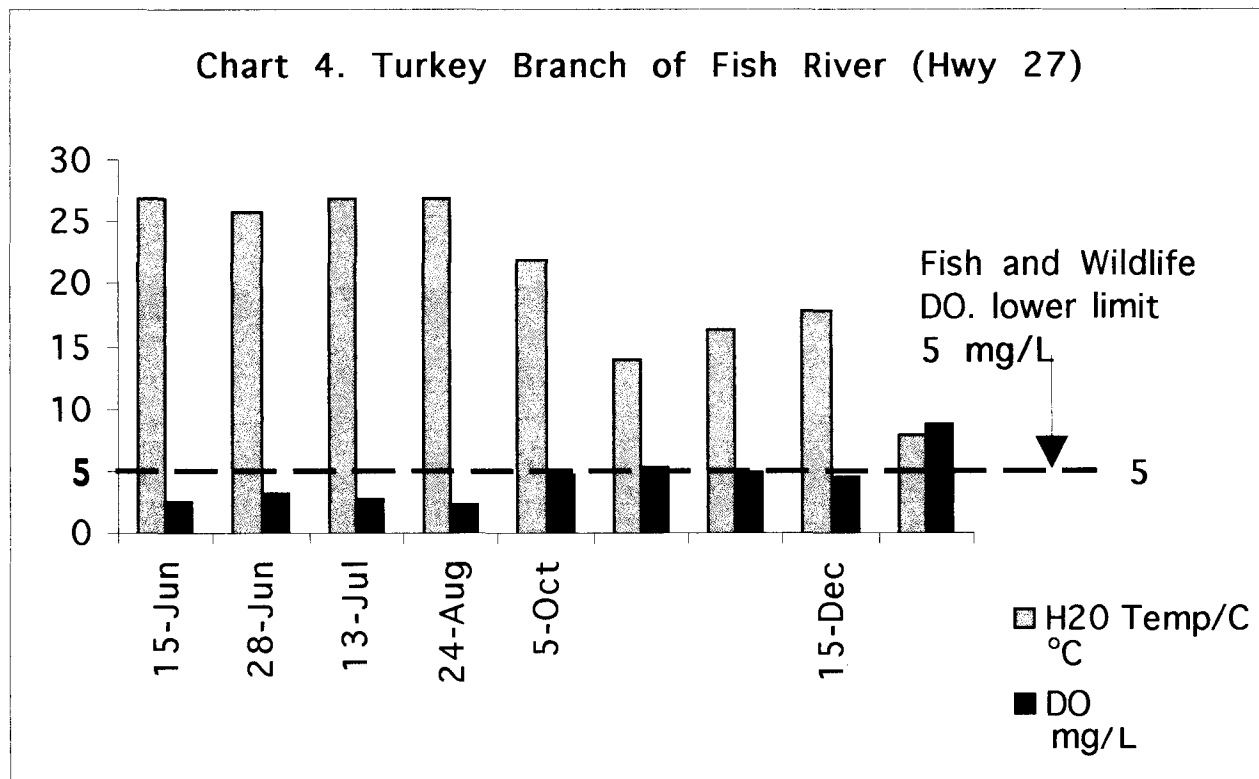


Chart 4. Weeks Bay Water Watch volunteer samples taken from June through December 1995. This chart suggests that seasonal changes in dissolved oxygen occurs at this site. Dissolved oxygen is a highly variable parameter dependent upon water temperature, seasonal oxygen demands, stream flow conditions and time of day.

Special Thanks

A special thanks to volunteer Paul Hansche for his excellent work on developing the graphical presentations for the Water Quality samples.

Federal Evaluation of Weeks Bay Reserve

Pursuant to federal regulations as stated in sections 312 and 315 of the Coastal Zone Management Act, Weeks Bay National Reserve must periodically undergo an information gathering evaluation by an investigative team from Washington. This week long process was held in February. The progress of the Reserve over the last four years was evaluated. The team reviewed adherence to the management plan, successes over the years, and made recommendations for the future.

Did You Know?

- Losses of wetlands since the United States was colonized in the 1700's have been tremendous. It has been estimated that about 220 million acres of wetlands existed in the contiguous United States in colonial time. Today, only about 103 million acres, or 47 percent of these wetlands remain.
- The Gulf Coast fishery (finfish and shellfish) is the largest in the county, supporting thousands of people directly and indirectly. Ninety percent of this fishery depends on estuaries and wetlands during some part of its life cycle.

Schedule of Events at the Weeks Bay Reserve

The Weeks Bay Guest Lecture Series will resume on a quarterly basis. There will be two speakers at each Series event. A variety of popular topics will be chosen, and expert speakers will relate their knowledge and experience.

March

- 9 Volunteer Water Quality Monitoring
- 20 - 31 Boardwalk Azaleas coming in bloom

April

- 8 Certification upon completion of "Boating Skills & Seamanship"
- 20 Open House Anniversary Celebration Program
10 - 11:30 am; Tours 12:30 - 3:30 pm
- 24 - 26 Weeks Bay symposium in Fairhope, Centennial Hall (FSCC)
- 30 Last look at White Pelicans before they migrate north

May

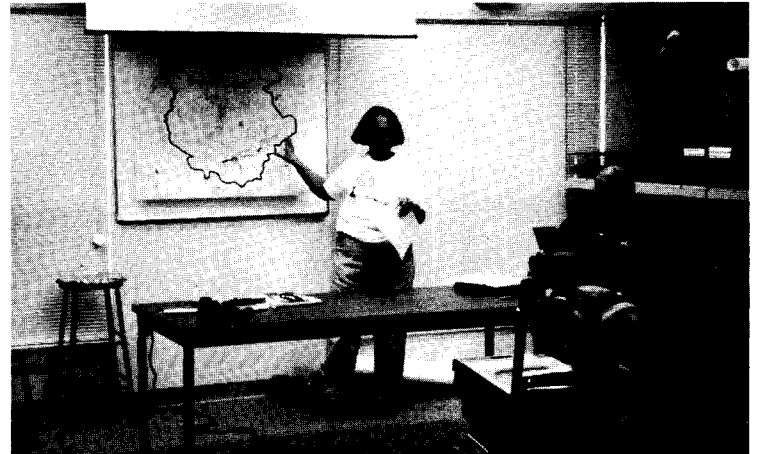
- 14 Guest Lecture 7:00 p.m.
Centennial Hall, Fairhope Campus FSCC
- 30 Boardwalk Extension Complete
An additional 1,155 feet open to the public

March 9th Certification For Water Quality Monitoring

On March 9th, a one day water quality certification program will be given at Weeks Bay. If you are interested in signing up for this program and helping with water quality monitoring in the Weeks Bay Watershed, please call Tina Lynn at 928-9762

Water Quality Teacher Workshops

A very successful teacher workshop was held in August 1995 for advanced training in watershed investigation techniques. This four day session included field and classroom exercises. Participants were certified in water quality testing by **Alabama Water Watch**. They were split into working groups to evaluate water quality in different areas of the watershed. By collecting chemical and biological data, the working groups determined the water quality and organized a presentation of information. On the last day of the workshop, the presentations were made before a mock city council to summarize the findings. Annual water quality workshops are planned for the future and will be open to statewide participants.



Jane Jeffers (Weeks Bay Volunteer) and Eddie Walley (Mobile County Teacher) present their findings to the mock city council at the August Teacher Workshop.

Weeks Bay Anniversary

In February of 1986, Weeks Bay was designated as the sixteenth National Estuarine Research Reserve in the system. This event marked the successful efforts of many local community leaders and contacts throughout the state of Alabama, the Nation and Washington, D. C. Today, the results of their efforts are recognized in the preservation of over 3,000 acres of estuarine habitat, educational outreach programs and exhibits touching some 20,000 persons annually, and coordination of research activities throughout the 200 square miles of Weeks Bay watershed area.

A **CELEBRATION** is in order! On **Saturday, April 20, 1996**, the Reserve will host an open house recognizing ten years of success. A formal program is planned from 10:00 - 11:30 am at the Interpretive Center located on U. S. Highway 98 just west of Fish River bridge. Come join the festive occasion and plan on spending the day in celebration of estuaries at Weeks Bay National Estuarine Reserve.

The celebration of the Tenth Anniversary of Weeks Bay Reserve is coordinated with the weekend of Earth Day. This would be a good time to "Think globally and act locally" by participating in the activities at the Estuary on Saturday followed by a day at Fairhope Pier on Sunday. The environment needs your help and support, if not for today then for tomorrow and the many years to come.

Growers Avoiding Use of Bug Poisons

ORLANDO, Fla. - Friendly insects, soap sprays and such old-style remedies as garlic extract are replacing toxic chemicals on many farms and cutting production costs as well.

Researchers at Florida's Institute of Food and Agricultural Sciences rank the state among the nation's leaders in moving toward sustainable agriculture - farming done at the lowest cost to natural resources.

"There has been a very, very fast adoption on a lot of this stuff," said M. E. Swisher, a University of Florida home economics professor who studies farming.

The use of "good bugs," waterbased soaps, natural repellents, pest-resistant plants and physical barriers control the pests but are generally benign to the environment.

Swisher and other experts say the best way for farmers to cut costs is through what scientists are calling "integrated pest management," which allows growers to rely less on chemicals.

"The whole idea is to be the low-cost producer, and chemicals are the most expensive part," said Tom Morgan, spokesman for A. Duda & Sons, Inc. of Oviedo, one of Florida's largest agricultural companies.

"If that means releasing ladybugs into a field to keep aphids from eating your new leaves instead of spraying, you do it," he said. "The key to integrated pest management is knowing when to spray and when to let the bugs chew away."

A 1994 study by Virginia Polytechnic Institute found such a course cut costs, pesticide use and food-contamination risks while making higher profits.

But it requires more education and effort. Farmers have to become amateur horticulturists and entomologists, constantly walking their fields or nurseries looking for trouble.

"We feel like it's the coming thing," said Bill Bodnaruk, production manager at Jon's Nursery Inc. in Eustis. "I have one foot in my grandfather's technology and one foot in the 21st century."

Consider a Conservation Gift

You can receive an income tax deduction and obtain the satisfaction of making a significant gift to The Weeks Bay Reserve Foundation. You can be assured that your financial contribution will be used to enhance the goals and objectives of the Weeks Bay National Estuarine Research Reserve. For information, contact: Planned Giving Program, Weeks Bay Reserve Foundation, 11300 U. S. Highway 98, Fairhope, AL 36532.

IN MEMORIAM

Conservation lost a very good friend with the passing of H. E. "Buddy" Smith on December 27th. Buddy was a dedicated and long time supporter of conservation. We will miss him.

Buddy's wife, Hattie Smith, has been active in the establishment of the Bon Secour Wildlife Refuge on the Fort Morgan Peninsular and serves on the Weeks Bay Reserve Advisory Committee.

ADEM Watershed Tour A Success

On October 19th and 20th, members and leaders of key organizations in the Alabama non-point source community toured the Weeks Bay watershed. Approximately 47 people visited a constructed wetland septic system, a peat biofilter septic system, a volunteer monitoring site, a land acquisition site, a dirt pit reclamation area, and a restored wetland. The **Baldwin County Soil and Water Conservation District** assisted in hosting the tour and provided a cajun cookout in Gulf Shores for tour attendees. This tour was an opportunity to show policy makers how effective a local, citizen-based water quality project can be. This was a first visit to Weeks Bay by many members of the tour. Hopefully, all left with a greater appreciation for the unique and special resource we have here!

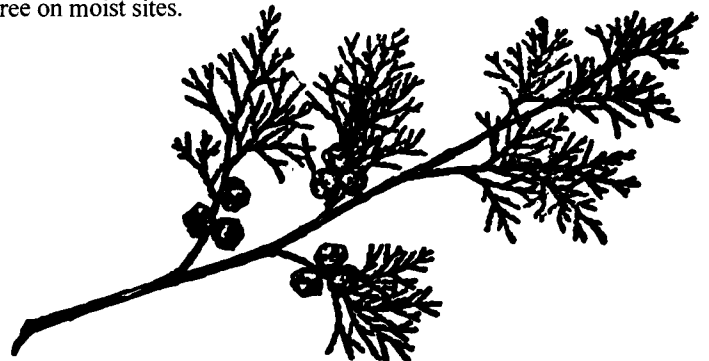
Atlantic White-Cedar

Atlantic White-cedar (*Chamaecyparis thyoides*) ranges from central Maine south to north Florida and west to Mississippi in a narrow coastal belt. The species is considered rare in Alabama where it is confined to swamps in the southern half of the state. A stand occurs near the observation deck overlooking Weeks Bay at the end of the nature trail that begins behind the kiosk. The largest trees there are about 50 feet tall and about one foot in diameter.

The branches are very short and horizontal, so that even when grown in the open the tree has a long, narrow, conical shape. The leaves are minute, scalelike, overlapping, four-ranked, of a bluish-green color, and entirely cover the ends of the slender, drooping twigs. The fruit is a rather inconspicuous, smooth cone, nearly round, about one-fourth inch in diameter, maturing in one year and contains from four to eight winged seeds. The bark is thin, varies in color from ashy gray to light reddish brown, and readily separates into loose platelike scales, which easily peel off in long fibrous strips. The wood is light, soft, close-grained, slightly fragrant, especially in contact with the water.

Atlantic White-cedar superficially resembles Eastern Red-cedar (*Juniperus virginiana*). However, the twigs of Atlantic White-cedar are flattened rather than four-angled as are those of Eastern Red-cedar, and the seed cones are larger with visible protuberances and open scales at maturity.

Atlantic White-cedar is restricted to wet sites around acidic, fresh water bogs and swamps. Pure stands were once relatively common in swamps in coastal Alabama. However, extensive cutting has largely destroyed these stands. The wood was used for cooperage, fence posts, and boat and canoe construction because of its durability to weathering and resistance to decay. Pioneers prized the durable wood for log cabins, including floors and shingles. During the Revolutionary War, the wood produced charcoal for gun powder. Ancient logs buried in swamps have been mined and found to be well preserved and suitable for lumber. Today, because of its hardiness and beauty, it is sometimes planted as an ornamental tree on moist sites.



ATLANTIC WHITE-CEDAR
Chamaecyparis thyoides

Funds for publication of this newsletter are provided by members of the Weeks Bay Reserve Foundation.

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Suggestions and comments from readers on future topics of interest are welcomed by the editors. If you know of others who would be interested in receiving this newsletter, please have them send requests to be included on the mailing list to the return address shown on the panel below

WEEKS BAY RESERVE FOUNDATION

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Fairhope, AL 36532
334-928-9792

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 to:

Weeks Bay Reserve Foundation
11300 U. S. Highway 98
Fairhope, AL 36532

NAME _____	STUDENT \$5/YR
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CITY _____	FAMILY \$35/YR
STATE _____ ZIP _____	COMMERCIAL \$100/YR
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Things You Can Do To Protect Marine Animals

1. Do not discard fishing line, nets, plastic bags, six-pack rings, or any kind of trash into the water.
2. Discourage helium balloon releases at special events.
3. Pick up what you find floating, and dispose of it properly.
4. Participate in beach clean-up days.
5. Support environmental education.



SPOT
Leiostomus xanthurus