



# The Pelican Post

Weeks Bay Reserve Foundation  
Newsletter  
March 1994

## Grand Opening Ceremony

The Opening Ceremony for the Weeks Bay National Estuarine Research Reserve's Interpretive Center and Nature Trail will be held on Saturday, April 16, 1994 at 11:00 a.m. Guest speakers include Governor Jim Folsom; Jack Edwards, Chairman of the Weeks Bay Reserve Foundation; and Captain Francesca Cava, Chief of the Sanctuary and Reserve Division within the National Ocean Service, NOAA. The public is invited to attend this special day at the Reserve.

## Weeks Bay Acquires Boat and Video Equipment

The Reserve purchased two boats this fall. One, a 32' pontoon boat, was built to take classes and groups out onto Weeks Bay and designed to pull a small trawl for sampling. The other boat is a 15' shallow-draft work boat to conduct research on the bay and rivers.

Equipment purchased includes a Super VHS video camera, VCR, 35mm film camera with two additional lenses, and tripod. Additional video equipment was donated by Tonsmeire Development Corp., including a video editing deck, edit controller, tripod, and accessories. This donation is greatly appreciated and, with the purchased equipment, will allow the Reserve to produce high-quality educational programs in-house, as well as document important events and changes here at the Reserve.

## Water Week

A test project of the Water Week Program was taught in January 1994 at the Reserve. The program was well received, and teachers who attended will train other teachers in the future. Over 1,500 sixth-graders in Baldwin County will benefit from the program.

The Water Week Program is designed for sixth-graders and will be taught in April 1994 in conjunction with Earth Week. The Reserve will work with the Baldwin County Board of Education on this program. Kits, materials, and training will be provided for teachers.

The Water Week Program ties in with the World of Water Program, which will be four days of in-service training for teachers in conjunction with the Cooperative Extension Service. Funding will be available from the Alabama Department of Environmental Management and disbursed from the Auburn Extension Service to the Reserve.

## Lott Donation

The Weeks Bay Foundation would like to express its thanks to the family of the late Col. William B. Lott for its generous donation of two acres of waterfront property at the mouth of Weeks Bay near the end of County Road 1. This gift not only will be preserved but will be used to match federal funds from NOAA for land acquisition and other efforts of the Reserve.

## The Manatee Skeleton

The forelimbs of the manatee are used in forward propulsion, sometimes simulating crawling motions when the manatee is feeding on the bottom of a river. They can be used to a limited extent in directing food to the mouth. The pectoral appendages of the whales and dolphins lack any such mobility. The flippers of a manatee also differ from those of whales and dolphins in possessing vestigial nails on the tips of the terminal phalanges. The manatee has only six neck vertebrae, and nearly all of the 4,500 other mammals have seven neck vertebrae. This is as true in the stubby, rigid neck of whales as in the elongated neck of the tallest giraffe. Another peculiarity is the density of the bones, including the skull and even the ribs. The bones are almost as solid as a piece of ivory. The increased specific gravity is probably of considerable advantage to a manatee in permitting it to sink with a heavy load of air and to stay submerged while feeding on underwater plants. Bone marrow is virtually absent. So when you visit the Weeks Bay Interpretive Center and observe the manatee skeleton suspended from the ceiling, remember that it is an endangered species with some interesting skeletal features designed for its life in estuaries.

# The Bog Is Alive and Well

A small two-acre site on County Highway 17, half a mile north of Inspiration Oak, has been a busy place over the last six months. The remnants of what used to be a 30—40-acre pitcher plant bog are slowly being restored.

Pitcher plants are a group of several carnivorous plants found at Weeks Bay Reserve. These plants, in addition to making their own food by photosynthesis, supplement their diet by capturing and digesting insects and other small organisms. These insectivores capture their prey by passive means. There are no moving parts as found in some carnivorous plants. The three species found in the bog on Highway 17 are the purple, white trumpet, and parrot pitcher plants. Another carnivorous plant, the pink sundew, is also found at this site.

Pitcher plants require periodic burning to keep an area open and free from competitive hardwood trees and shrubs. Historically, natural fires from lightning would sweep through coastal areas. These fires would provide the mechanism to keep vast wetland or bog areas open to full sunlight, helping to maintain the pitcher plant communities. As development accelerated, fires were kept in check, and slowly such bog areas have disappeared. At present, less than 2% of the pitcher plant bogs in the southeastern United States remain.

In October, the trees at the bog site were cut with the assistance of an inmate crew contacted by Henry Wilson and Linda Loftin of Baldwin County Environmental Management. Much of the wood was removed by Boy

Scout Troop 47 and used for a ground trail behind the Interpretive Center. A homeschool group led by Joy Spencer followed the activities with articles published in the Eastern Shore Courier.

In January, the site was burned with the assistance of the Forestry Service under the guidance of Lynn Booth. In February, a crew of inmates under the supervision of Jimmy York again worked in the area to clean up

stumps and burn piles of tree tops that remained. The site was at this point open, dormant, and receiving the winter rains that annually help to establish the wet conditions so characteristic of the bog.

During this time, an area in Washington County was identified where, due to future construction of a gas pipeline, numerous pitcher plants were doomed to be destroyed. Through the efforts of John Borom of Faulkner State Community College and Steve Carey of the

University of Mobile, a coordinated effort was made to arrange the transplanting of these soon-to-be-destroyed plants. With the assistance of L. G. Adams and volunteers from Weeks Bay Reserve, Faulkner State, and the University of Mobile, two truckloads of pitcher plants were transplanted into the Highway 17 bog site.

## THANKS!...

The Weeks Bay Foundation would like to express its thanks to the Alabama Department of Economic and Community Affairs, the Auburn University Marine Extension and Research Center, the United States Fish and Wildlife Service, and the National Oceanic and Atmospheric Administration for the production and donation of the Alabama Coastal Wetlands posters. These beautiful posters are available at the Interpretive Center (donation \$5.00 each). Profits benefit the Reserve.

## Value of Bottomland Hardwood Swamps

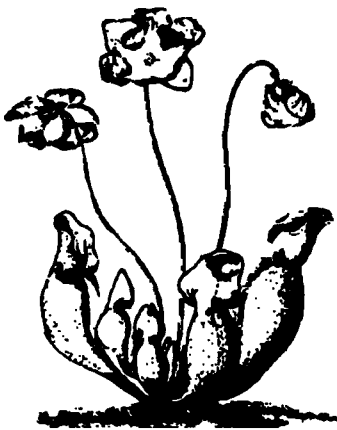
Bottomland hardwood swamps dominate the habitats of the Reserve. One of the major functions of this habitat type is to serve as a refuge for wildlife. Although many animals live here all year, others are resident only during the winter months, or use the habitat as a stopover point during spring and fall migrations. Over nine-tenths of all the different kinds of birds of eastern North America use bottomland hardwood swamps at one time or another.

In addition to resident wood ducks, vast numbers of other waterfowl species winter in Southern bottomland hardwood swamps. Countless numbers of other birds make the long journey every year from the north. The plentiful food and mild conditions help prepare for their return in the spring.

For some birds, bottomland hardwood swamps are not just seasonal refuges—they are their only chance for survival. Creatures like wood ducks, hooded mergansers, barred owls, and screech owls are closely linked to this habitat. Endangered animals such as Bachman's warbler and Swainson's warbler may be making their last stands in Southern bottomland hardwood swamps. As the size and number of such forests shrink, more and more animals will become endangered.

*Like winds and sunsets, wild things were taken for granted until progress began to do away with them. Now we face the question whether a still higher "standard of living" is worth the cost in things natural, wild, and free.*

Aldo Leopold



Purple Pitcher Plant  
*Sarracenia purpurea*

## Weeks Bay Volunteer Program

The Volunteer Program at Weeks Bay Reserve currently numbers about 30 active members and another 45 part-time or seasonal members, and is always looking for more to serve the many functions of the Reserve. The volunteers are diverse in age, and their varied experiences are very welcome at the Reserve. Weeks Bay staffers L. G. Adams and Bob McCormack have been conducting training sessions during January, February, and March, getting volunteers ready to serve the growing numbers of visitors and school groups, as well as the demands of exhibit upkeep, aquarium maintenance, small vessel piloting, landscaping, and educational interpretation. "Our volunteers are an enthusiastic, creative, and very intelligent group," says McCormack. "We are very grateful for their dedication and willingness to be of service. All of them care about the health of Weeks Bay and want to learn more." Weeks Bay Reserve will no doubt greatly benefit from the work of its volunteers.

The Baldwin County Master Gardeners are doing a great job designing and developing landscaping at the Reserve. Members have worked very hard planting native trees donated by local nurseries.

The U.S. Coast Guard Auxiliary held a safe boating class at the Reserve for staff and volunteers interested in our maritime education program. This special group of volunteers will assist with educational activities on the Reserve's pontoon boat.

We need help in getting ready for our grand opening ceremony in a few weeks. If anyone is interested in trail maintenance, assisting with exhibits, maintaining aquaria, or assisting with the ceremony on the day of the opening, call Brenda Spivey at (205) 928-9792.

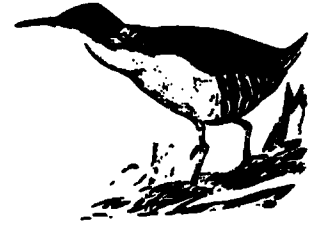
## Diorama Lobby Exhibit

Late February brought the arrival and installation of a major exhibit in the lobby of the Interpretive Center. Months in planning by Thomas McAlpin, and a few more months in construction by Southern Custom Exhibits of Piedmont, the three-dimensional diorama was installed in two days. It measures 15 feet in length, 7 feet in height, and 4 feet in depth. Complete with a beautiful background photograph taken on Weeks Bay by Thigpen Photography of Mobile, the diorama portrays the vital habitats of the swamp, marsh, and benthos (bay bottom), and the plants and animals that make these habitats their home.

Realistically done, the diorama, with supporting text, explains the interconnection of healthy estuarine habitats and serves to educate visitors about the importance of these coastal areas as food "factories," nurseries, and spawning grounds for literally thousands of marine and estuarine species. The diorama was contracted through Faulkner State Community College.

## Clapper Rail

The clapper rail (*Rallus longirostris*), 15 inches long, has a grayish or olive brown—streaked back, pinkish gray neck and breast, and black and white barred flanks. The rather chickenlike shape, with a long, slightly drooping bill and an often upturned tail, is distinctive.



Clapper Rail  
*Rallus longirostris*

Clapper rails are shy, retiring birds of salt marshes, where they walk about in the shelter of dense grasses and reeds and are more often heard than seen. The marshes that fringe Weeks Bay are a favorite habitat. Much of the bird's life is spent out of sight in the marsh grass. Sometimes a startled bird gives a series of rapidly repeated calls: a harsh cackling "kek-kek-kek-kek." Others take it up, and the calls fly over the marsh. But the birds do come out on exposed mud, walking slowly and daintily, with heads going back and forth and short tails twitching in time with their steps. When startled, the bird runs with its body and neck stretched out and its tail straight up, and disappears into cover. Despite their unwebbed, long, slender toes, sometimes clapper rails swim across narrow channels and feed on the open mud, picking up crustaceans, insects, small fish, and seeds.

## Thanks!...

The Weeks Bay Foundation would like to express its thanks to David Ingersoll for his donation of wildlife prints. These beautiful prints are available at the Interpretive Center (donation \$6.00 each). One half of the profit from sales benefits the Reserve.

## Olive Nerite

### *Neritina reclivata*

Olive nerites are globular snails about one-half inch across. The shells are smooth, shiny, and dark green in color, usually with many fine, wavy dark lines. The species occurs along the Atlantic and Gulf coasts from North Carolina to Mexico and Central America. They are one of the most common invertebrates found in protected shallow estuaries like Weeks Bay and are often numerous in damp, lower intertidal areas of tidal marshes as well as manmade structures such as pilings, boat ramps, and bulkheads.

In the marshes along the edge of Weeks Bay, they climb up the lower parts of cordgrass stalks (*Spartina*) to graze on encrusted algae and other microflora that often occur there. They are also abundant in the submerged aquatic grassbeds along the banks of the Fish and Magnolia Rivers, where they graze on epiphytic algae on the leaves of wild celery (*Vallisneria*).

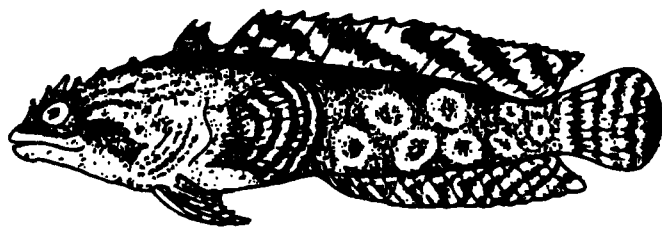
During the breeding season in the warmer months, females may lay over 50 small, white, oval egg capsules on marsh grass stems, submerged aquatic vegetation, mollusk shells, and any other hard surfaces available. Each egg capsule usually contains from 60 to 80 eggs. The capsules rupture several days after being laid, releasing microscopic veliger larvae with small, embryonic shells. The veliger larvae remain in the plankton and grow until they settle to the bottom as small juveniles to begin a bottom-dwelling existence.

Populations of olive nerites are thought to be an important food for certain kinds of wild ducks, such as lesser scaup, redhead, and northern shoveler. Blue crabs and Gulf toadfish eat adult snails, and seaside sparrows and clapper rails eat juvenile snails.

## Gulf Toadfish

The Gulf toadfish (*Opsanus beta*) is a scaleless, slow-moving, bottom-dwelling fish with a large mouth equipped with strong teeth and powerful jaws. Three pairs of massive gills are present in the heavy, broad head that is depressed anteriorly and tapers to a long slender tail. The small first dorsal fin has three spines buried in thick skin and is followed by a second long, soft-rayed dorsal fin. The pelvic fins are placed under the throat ahead of the fanlike pectoral fins.

The color is brownish-black on lighter tan, gold, or yellow. The pattern is highly mottled and irregular. Maximum size is about a foot, probably about a pound. It is very common on estuarine shell bottom, in oyster reefs, and around jetties. It is naturally sluggish and is a poor swimmer, but is able to engulf prey in a single slurp because of its large gills and mouth. Its diet consists of crustaceans, small fishes, and mollusks.



Gulf Toadfish  
*Opsanus beta*

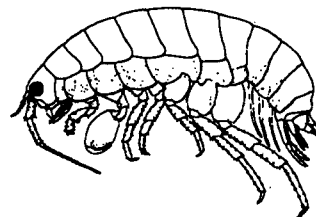
Spawning apparently takes place throughout the summer. The eggs are very large, being 5.0 millimeters in diameter (about one-quarter inch), and are laid under stones, in large shells, or in a crevice, tin cans, old shoes, or similar cavity. They adhere in a single layer to the surface upon which they are deposited. The nest is guarded by the male during the period of incubation, which lasts about three weeks. It is very pugnacious and capable of inflicting a savage bite, especially when guarding the eggs. Larval Gulf toadfish remain attached to the yolk sac and

the nest for several days after they break the egg cases. When they finally become free-swimming fish, they are about 15 or 16 millimeters in length (about five-eighths inch).

To some people the Gulf toadfish is very ugly in appearance, being always densely coated with slime, but it is ideally designed for a cryptic lifestyle. It often makes a croaking sound when removed from the water, and erects its short spines and snaps with its mouth at anything that comes near.

The species is comparatively abundant in Weeks Bay where the habitat is suitable and is taken through the summer in seines and with hook and line. The flesh is said to be of good appearance and fine flavor, but the fish apparently is not utilized on account of its repulsive appearance.

## Common Marsh Hopper



Common Marsh Hopper  
*Orchestia grillus*

The common marsh hopper (*Orchestia grillus*), slightly more than one-half inch long, is the largest amphipod found in the tidal marshes around Weeks Bay. This secretive, light gray or olive brown creature can often be found under damp piles of dead marsh grasses occurring

along the upper intertidal zone of marshes. The common marsh hopper is a scavenger, feeding on decaying plant and animal matter. It is eaten by shore and marsh birds, including rails and seaside sparrows. This species as well as other amphipods are thought to be important biological agents in the mechanical breakdown of plant material to detritus in the intertidal zone.

## Weeks Bay Reserve Fellowships for Summer 1994

This summer marks the initiation of the Weeks Bay Fellowship Program, which will be supporting two graduate student research projects and four undergraduate research projects. The Fellowship awards are made possible by funding from the National Oceanic and Atmospheric Administration (NOAA) and the Alabama Department of Economic and Community Affairs (ADECA). The Graduate Research Fellowship winners will receive a \$3,000 award to support their research this summer, and the undergraduate winners will receive a \$750 award.

The Fellowship awards are designed to support a student's work in estuarine and coastal research that will contribute to the physical, chemical, or biological understanding of the complex natural patterns, processes, and relationships that exist in the estuary. Projects on public policy

and coastal management will also be considered for Fellowship awards. The information gathered from the research projects should contribute to a better understanding of estuarine resources and lead to better management of our nation's estuaries.

Anyone interested in applying for a Fellowship should contact the Weeks Bay Reserve at (205) 928-9792 for an application. Applicants must be graduate or undergraduate students registered at an accredited four-year college.



Lesser Scaup  
*Aythya affinis*

The Weeks Bay Foundation would like to express its **thanks** to Geoffrey Cain and *See Coast Manufacturing Company, Inc.* of Fairhope for installing a coin operated telescope on the nature trail observation deck overlooking Weeks Bay. One hundred percent of the collected funds from the telescope will benefit the Reserve.

## Join Us!

If you are a member, please tell a friend about the Weeks Bay Reserve Foundation. If you are not a member and would like to join, please send your tax-deductible donation to:

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

### Membership categories are as follows:

Student	\$5.00
Individual	\$25.00
Family	\$35.00
Commercial	\$100.00
Corporate	\$250.00

## Sponsors Needed for Aquaria

The Reserve recently acquired fifteen aquaria (assorted sizes), which will be set up in the exhibit halls and will feature live animals of the Bay. We are looking for individuals or corporations interested in sponsoring setup and maintenance on a yearly basis. For more information, call Thomas McAlpin at (205) 928-9592.

## Visit the Weeks Bay Reserve Interpretive Center and Nature Trails

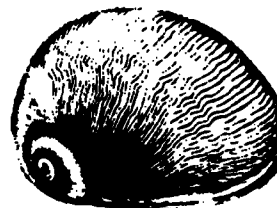
Office hours are 8:00 a.m. until 5:00 p.m. Monday through Friday and Saturday 9:00 a.m. until 5 p.m. Special lectures and guided trail walks are planned on Saturdays. For details on the Saturday trail walks, call (205) 928-9792.



American Beech  
*Fagus grandifolia*



Cinnamon Fern  
*Osmunda cinnamomea*



Olive Nerite  
*Neritina reclinata*

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.

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BULK RATE  
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Swainson's Warbler  
*Limnothlypis swainsonii*



Seaside Sparrow  
*Ammodramus maritimus*