



# The Pelican Post

Weeks Bay Reserve Foundation  
Newsletter  
December 1993

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.

## Boardwalk Construction Due for Completion Mid-December

The new boardwalk trail is under construction at the Reserve. Work began during the first week of November and is due for completion by mid-December. Building funds were supplied by the Alabama Department of Transportation, the Alabama Department of Economic and Community Affairs, and the National Oceanic and Atmospheric Administration.

The elevated boardwalk will have observation/ rest areas spaced along the 2,000-foot trail that meanders through the habitats of hardwood forest, woodland swamp, and salt marsh. The boardwalk will also be accessible to wheelchairs.

At the trail's end, the boardwalk will ascend to an observation platform 11 feet above the marsh, overlooking



Boardwalk under way. Positioned pylons wind the way to scenic overlook at Weeks Bay.

Weeks Bay and the fringing marshes. This will be a spectacular sight for soaking up the natural beauty of Weeks Bay. It is most understandable why Weeks Bay was admitted into the National Estuarine Research Reserve System.

Please come out to visit and walk the new boardwalk. It is our proud new addition to the Reserve.

*The Weeks Bay Foundation would like to express its sincere thanks to the Alabama Chapter of the Nature Conservancy for its generous donation of 60 acres of Fish River waterfront property. 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. For information on the Nature Conservancy of Alabama, call 205-251-1155*

## National Conference

The National Estuarine Research Association held its annual conference November 7—12 on Keewaydin Island near Naples, Florida. It was hosted by the Rookery Bay Reserve. In attendance were representatives of each of the 22 reserves, the National Marine Sanctuary Program, and U.S. government officials from the National Oceanic and Atmospheric Administration. The Weeks Bay Reserve was represented by Thomas McAlpin, Reserve Manager; Bob McCormack, Interpretive Coordinator; and L. G. Adams, Education Coordinator.

The conference was preceded by a three-day seminar on Aerial Photo Interpretation conducted by Cornell University and hosted by the Hudson River Reserve (New York) and the Old Woman Creek Reserve (Ohio). The Weeks Bay staff attended this seminar.

The subjects covered at the conference included the national education plan, national research plan, land acquisition, coastal restoration, environmental education evaluation methods, management and monitoring, national budgeting for the reserve system, and ecosystem management.

This meeting of all the reserves and most of the marine sanctuaries brought a great sharing of ideas to an organization that covers American Samoa to Puerto Rico.



Blue-winged Teal  
*Anas discors*

...when the last individual of a race of living things breathes no more, another heaven and another earth must pass before such a one can be seen again

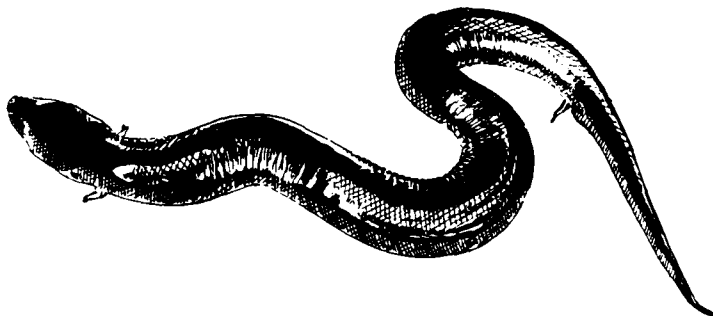
William Beebe

## What's the Most Unusual...?

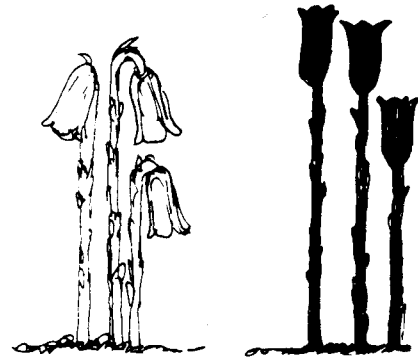
Recently, a group of students from Foley High School, under the supervision of Mary Ann Underwood, visited the Reserve. The students were involved in several educational activities, their main focus being on botany. During the day the question was asked, "What is the most unusual animal that can be found out here?" The question was answered in a general way, referring to many animals that are rarely seen, yet known to be found in the area.

Perhaps it was just a coincidence, but before that very day was over, two unusual organisms were collected and brought in to the Center. One was an animal seldom seen because of its reclusive nature, the two-toed amphiuma. The other was an uncommon plant called an Indian pipe.

The two-toed amphiuma is a large, eel-like salamander commonly up to 2 1/2 feet in length, but reaching almost 46 inches. It has two pairs of tiny, virtually nonfunctional legs, each with two toes. The skin is smooth, and the eyes



Two-toed Amphiuma  
*Amphiuma means*



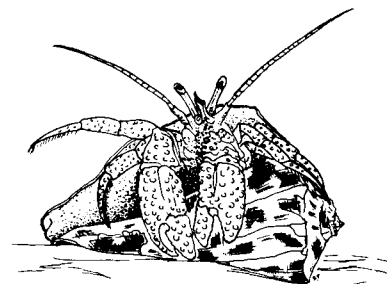
Indian Pipe  
*Monotropa uniflora*

lack eyelids. Amphiumas are primarily nocturnal animals. By day they hide under debris in the water or in crawfish burrows. At night they emerge to forage for food. During rains they may slither overland. They have been used for biological research because their cells are exceptionally large and hence ideal for tissue studies.

The Indian pipe is a very unusual flowering plant. The white, waxy appearance of this flower gives rise to another of the plant's common names—ghost-flower. When young, Indian pipes are usually pure white (sometimes pinkish-white). Their flowers nod. As they mature, the flowers lift upward, and the plant becomes black and brittle. Indian pipes lack the leaves and green pigment of most other flowering plants. As a result, they cannot make their own food. They live instead upon the dead and decaying remains of other plants. The Indian pipe's root system is a compact ball of small rootlets tightly interwoven with fungal strands. Experiments have shown that the fungus is necessary if the plant is to obtain nutrients from the surrounding soil. Clearly, the fungus benefits the Indian pipe. What do you think is in it for the fungus?

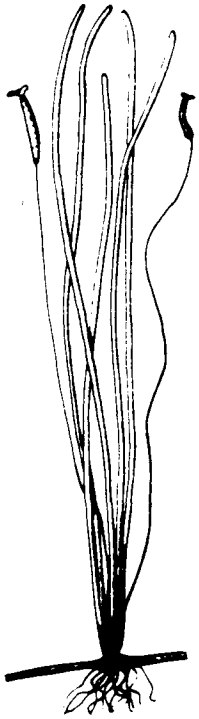
## Giant Red Hermit Crab

A gigantic red hermit crab was caught September 23 in the fishing nets of the vessel Chris-Da-Lyn, captained by Charles King. This enormous crab weighs approximately 1.5 to 2 pounds and is on display in the lobby at the Reserve. We thank Captain King for his consideration in donating this unusual specimen to our collection for all of us to see!



Giant Red Hermit Crab  
*Petrochirus diogenes*

## Submerged Grassbeds

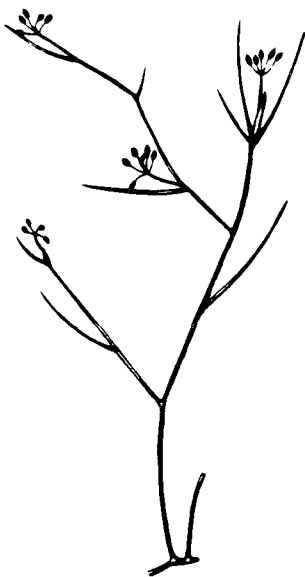


Tape Grass  
*Vallisneria  
americana*

Two species of flowering plants live underwater in the Weeks Bay Estuary and form grassbeds. Tape grass (*Vallisneria americana*) has long, ribbonlike leaves and grows along the edges of the rivers. Widgeon grass (*Ruppia maritima*) has slender, grasslike leaves and grows at the base of salt marsh grass (*Spartina alterniflora*) around the tidal creeks. Like land plants, they produce oxygen, and the depth at which they are found is limited by water clarity because they require light. Submerged grassbeds perform many significant functions: (1) they help maintain water clarity by trapping fine sediments and particles with their leaves, (2) they stabilize the bottom with their roots and rhizomes in much the same way that

land plants retard soil erosion, (3) they provide habitat for many small animals, (4) the microorganisms that grow on them provide food for many animals, (5) the leaves provide food for ducks, muskrats, and manatees, and (6) they are nursery areas for much of Alabama's marine life.

Although submerged grassbeds are a valuable part of the estuarine environment, they are disappearing at an alarming rate. Dredge and fill projects for waterfront homesites, marinas, and bulkhead construction, as well as other activities that degrade water quality, are responsible for their decline. Though these activities may temporarily enhance real estate values, ultimately they may decrease long-term value as the natural amenities disappear, the water becomes foul, and wildlife leaves and estuaries become less productive.



Widgeon Grass  
*Ruppia maritima*

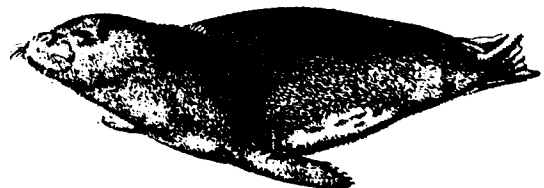
## Extinction

The Caribbean monk seal (*Monachus tropicalis*) was the only seal native to the Gulf of Mexico and Caribbean area. In historic times the range included the Gulf of Mexico and Caribbean Sea as far south as the coast of Honduras, eastward to Jamaica and Cuba, northward throughout the Bahamas and the Florida Keys as far north as Pensacola, and westward to Galveston and Brownsville, Texas. Adult monk seals were eight feet long and weighed 400 pounds. The color was uniform brown, tinged with gray, caused by the hairs being light at the extreme tips. The colors were lighter on the sides and gradually passed into pale yellow and yellowish-white on the ventral surface of the body.

This was the first New World animal to be logged in the journals of Christopher Columbus on his historic voyages of discovery. During his second voyage, in 1494, seals were found on the islet of Alta Vela off the coast of Hispaniola, eight of which were slaughtered by his crew for food. The famous buccaneer William Dampier wrote that in the late seventeenth century, the monk seals were the source of a profitable oil industry, and there is evidence that in the early part of the eighteenth century as many as 100 were sometimes taken in a single night, their oil being much in demand for lamps. They were hunted on a massive scale through the eighteenth and nineteenth centuries.

Virtually nothing was learned about the life history of the monk seals before their extinction. Apparently the young were born in early December because several females killed in the Triangle Keys during this time had fetuses nearly ready for birth. Because they evolved in island environments where there were no natural enemies on the shore, they were inherently tame and thus easy victims. They were remarkably sluggish and unsuspecting, allowing persons to come among them without great alarm, so that numbers could be easily killed. No doubt this lack of suspicion and fear contributed to their extinction.

The last known populations of Caribbean monk seals were on the Triangle Keys, a series of small sandy islets off the Yucatan Peninsula. In 1911, fishermen came and slaughtered all of the 200 remaining seals in this region. This was the virtual end of the species. Although a few monk seals have been observed since then, the last reliable sighting was in Jamaican waters in 1952. A thorough aerial survey of all possible habitats in 1972 and an expedition in April 1980 failed to find any trace of the Caribbean monk seal. Both searches concluded that the animal is extinct.



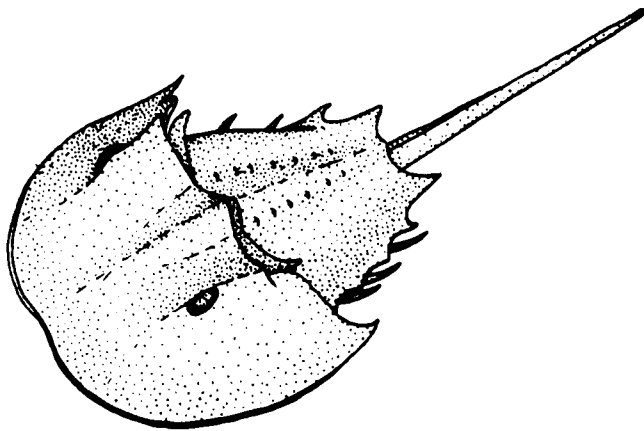
Caribbean Monk Seal *Monachus tropicalis*



## Education at Weeks Bay

Many public and private school groups have been involved in interpretive activities. These include classroom programs, exhibit descriptions, and field excursions. Several school groups have been involved in research projects coordinated with trips to the Reserve on a regular basis. These projects involved the characterization of the pitcher plant bog flora and estuarine aquatic fauna.

The pitcher plant bog has recently been undergoing changes to continue restoration of that habitat. The larger trees have been cut in a small area (2—3 acres) in preparation for an upcoming December burn. A group of students under the leadership of Mrs. Joy Spence viewed the area in early October and were so interested in this collection of wildflowers and carnivorous plants that they decided to follow the restoration project. Their work led to an identification of the more dominant species of plants and a photojournalistic account of the changes that are in progress. This school project will continue through the planned transplanting of some recently donated pitcher plants as well as the spring rejuvenation of the more established plants. A photo album of this student project is planned, to remain on display in the Center.

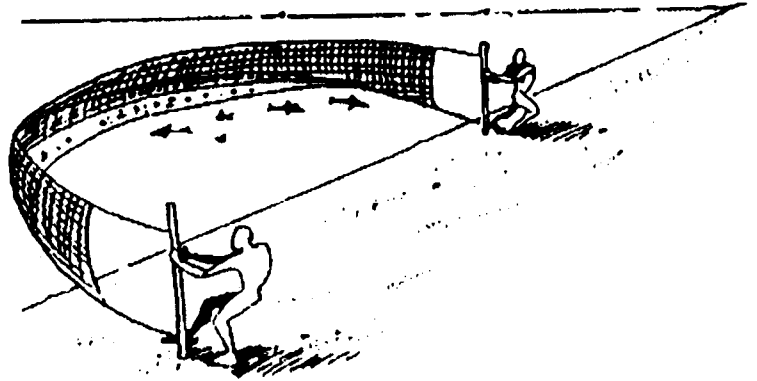


Horseshoe Crab  
*Limulus polyphemus*

A new activity in this school year's educational program is a focus on the horseshoe crab. Appropriate for grades K-5, this activity includes a reading of *Harry the Horseshoe Crab* followed by observations of a live horseshoe crab. This organism, though infrequently occurring in Weeks Bay, is an ideal example of a marine organism that has benefited man through scientific research. The

children's book highlights the usefulness of the horseshoe crab's blue blood for diagnostic medical tests as well as optical research on the crab's "four" eyes. This activity is informative for the younger students, and the chance to touch the spiderlike, creepy-crawly animal is full of fun.

A group of about 12 students under the supervision of Mrs. Diane Lake visited the Reserve in October. They were



involved in several activities, which included the sampling of estuarine organisms with a seine. The students were so amazed at the abundance and diversity found so close to shore that they have initiated a research activity on such aquatic animals.

Visiting the Reserve every week or two, this student group has continued sampling, making observations of changes associated with the move from warm to cooler weather. This group will continue to follow species abundance through the remaining weeks of the year. A group awareness of the more dominant vertebrate and invertebrate species will result from their activities as well as individual poster exhibits covering selected species. One educational activity that young students always enjoy is the Predator/Prey Freeze Tag game. This is a dynamic modeling of the constant pressure prey organisms are under as they constantly feed and hide from the continuous attack of predatory species. Students are divided into groups, and five students play the role of a redfish (predator) while 10-15 students play the role of a croaker (prey). Hula hoops represent grassbeds in which the prey can hide, and they have to cross the playing field (Weeks Bay) to obtain food items like polychaete worms and juvenile shrimp (Mardi Gras beads and coins). The predators try to tag the prey as the time ticks away, with a confusion of running and hiding that is surely an accurate depiction of the constant struggle of aquatic life in the estuary. Everyone involved in this learning experience is a winner.



## Bird Banding Project



White-eyed Vireo  
*Vireo griseus*

This fall Weeks Bay had some very interesting visitors from all over the United States. They were here to monitor some other very special visitors and winter residents of the Gulf Coast. A national tourist survey on the visitation habits and migration of "snowbirds," you may guess? Well, not exactly, but close. Research assistants under the direction of Dr. Frank Moore from the University of Southern Mississippi were collecting scientific data on migrating and winter-resident songbirds. There has been a noticeable decrease in the overall population of songbirds.

The Gulf Coast is the last stop for migrating birds to rest and "refuel" for their final nonstop flight over the Gulf and into Central and South America. The entire migration for a single bird takes only three to five days. Dr. Moore has been conducting this research each spring and fall for three years.

This fall was the first time data have been collected from Weeks Bay. From this research it is hoped that some answers may be found to the question of the decline of these colorful and cheerful birds that entertain us with their melodious songs and the delightful beauty of their plumage.

Each morning at sunrise for approximately eight weeks during September and October, the period of heaviest migration, the research assistants would man their posts in the thick brush and woods. Their equipment included a tent with measuring instruments, bird bands and recording books, small boxes to collect the birds in, and lots of mosquito spray.

Each hour they would collect the birds caught in one of the 21 "mist nets" strategically placed along the trails. These nets were designed to entrap small birds without harming them in any way. The nets, which are barely visible to humans or birds, are made of soft twine and feel similar to a hairnet.

Captured birds are taken to the tent, and the process of recording scientific data begins. The birds are identified. The sex is determined and measurements taken of the wing and tarsus, which is the distance from the knee to the ankle. The age is determined as well as the proportion of fat, which is important for migration purposes, and then they are weighed. Last, small num-

bered metal bands are placed around the ankles for future identification.

The information collected goes to a place in Maryland where the data for every bird caught and banded are stored. If you ever find a bird that has been banded, you may report it to: Bird Banding Laboratory, U.S. Fish and Wildlife Service, Laurel, MD 20708-4037.

At Weeks Bay a total of 1,045 birds of 51 different species were caught and banded. Some of the most common and memorable species were the common yellowthroat, black and white warbler, prothonotary warbler, American redstart, yellow-breasted chat, and white-eyed vireo.

On November 12, a black and white warbler was spotted along the edge of Eslava Creek not far from Weeks Bay. So it may not be too late to get a glimpse of the most colorful and cheerful visitors and winter residents of the Gulf Coast. See you at Weeks Bay!

## 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
Senior Citizen	\$10.00
Individual	\$15.00
Family	\$30.00
Commercial	\$100.00
Corporate	\$250.00

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

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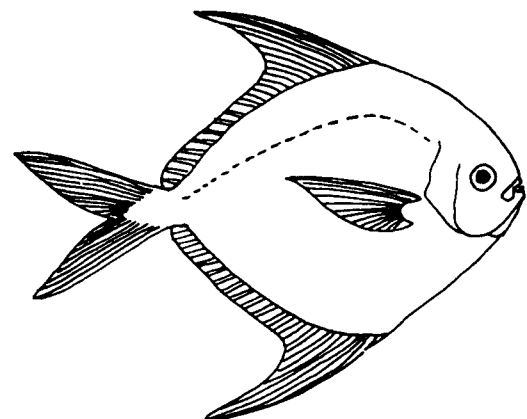
Suggestions and comments from readers on future topics of interest are welcomed by the editors. If you know of others who would be interested in receiving this newsletter, please have them send requests to be included on the mailing list to the return address shown on the panel below.

### WEEKS BAY RESERVE FOUNDATION

11300 U. S. Highway 98

Fairhope, AL 36532

<b>BULK RATE PERMIT # 50 FAIRHOPE, AL 36532</b>
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Harvest Fish  
*Peprilus paru*

*Happy Holidays!*