



The Pelican Post

Weeks Bay Reserve Foundation
Newsletter
June 1994

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.

Grand Opening Ceremony

Festivities celebrating the opening of the Interpretive Center and the boardwalk nature trail were held at the Reserve on April 16. Officials from the federal, state, and local government, as well as community supporters who donated their time and services, made the ceremony an especially successful event.

Many fine people volunteered their expertise and energy to ensure that the program ran smoothly. The Baldwin County Master Gardeners under the guidance of Maureen Nation, created a splendid butterfly garden which set the tone for the ceremony. Volunteers were involved in every phase of the event. The Dogwood Trail Maids graced the garden.

Governor Jim Folsom, the keynote speaker, focused on the significance of the Reserve's mission of resource protection, education, and research in teaching visitors of all ages the value of estuaries. He announced plans to construct a new building that will include an auditorium, a wet laboratory, and housing for visiting researchers.

Guest speakers included former congressman Jack Edwards, representing the Weeks Bay Reserve Foundation; Captain Francesca Cava and Dr. Stanley Wilson, representing NOAA's Sanctuaries and Reserves Division; Mr. David Hooks, representing the Alabama Department of Economic and Community Affairs; and Reserve Manager Thomas McAlpin. Dr. Larry Newton, Superintendent of Education for Baldwin County, gave the invocation, and Dr. Jimmy Faulkner gave the benediction.

The following supporters made the event very special: Weeks Bay Reserve Foundation, Weeks Bay Advisory Committee, Faulkner State Community College, Alabama Power Company, Baldwin County

Board of Education, Baldwin County Sheriff's Department, Foley High School Key Club, B. J. Farms, Baldwin Rural Area Transportation Service, Pensacola Naval Air Station, Larkin Harris family, Barnwell Fire Department, Eastern Shore Optimist Club, Coca-Cola Company, Marriott's Grand Hotel, and Fleur-de-Lis Flowers and Gifts.

The Weeks Bay Reserve Foundation would like to express its sincere thanks to the many volunteers who gave their labor, time, and enthusiasm to make the Reserve's grand opening a success.

Present Needs

The Reserve is in need of a 10-horsepower outboard engine (preferably long-shaft) and a wheelchair or two, adult size, and another for a large adult. If you have or know of someone who would be willing to donate these items (tax deductible), please call 928-9792.

Wanted: Aquarium and Terrarium Sponsors

The back porch of the Interpretive Center has been remodeled into a new aquarium/terrarium room. New living exhibits will start moving in within the next few weeks.

Three native snakes, horseshoe crabs, and a touch tank with fiddler crabs are already being displayed. The room will feature 80-, 60-, and 40-gallon aquariums with native species of vertebrates and invertebrates representing the Weeks Bay watershed.

Help is needed in maintaining these living exhibits. The Reserve is requesting that local businesses and individuals sponsor their own aquarium or terrarium. The name of the sponsor will be attached to the exhibit. For more information and a sponsorship application, call 928-9792. Thank you for your support!

SOME BOARDWALK FERNS

Bracken Fern
Pteridium aquilinum



Look for the bracken fern (*Pteridium aquilinum*) along the drier, sandy portion of the boardwalk near the Interpretive Center. It grows to about three feet in height and spreads rapidly by underground rootstocks to form knee-high patches in sunny places. When large amounts are consumed by livestock over a period of time, toxic effects become evident—lack of coordination, lethargy, difficulty in standing, irregular heartbeat, and convulsions. Death will occur in a few days after the symptoms develop. Young leaves are sometimes cooked and used as a potherb by humans. However, the leaves contain a cancer-causing agent that persists even after cooking, so they should not be eaten.

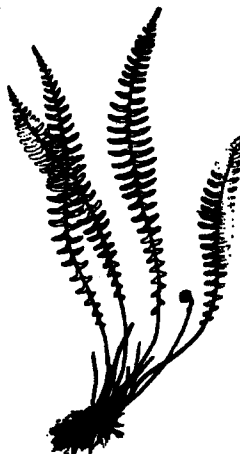


Royal Fern
Osmunda regalis

The royal fern (*Osmunda regalis*) is indeed a regal sight, reaching five and one-half feet in height. The spore-producing part of the plant is found on the top portion of the frond, providing a scepter-like appearance. Look for this fern near the observation deck at the end of the boardwalk.

Ebony Spleenwort
Asplenium platyneuron

The ebony spleenwort (*Asplenium platyneuron*) has long, stiff, ladder-like fertile leaves and a black midrib. The maximum height is about 18 inches. Look for this little fern at the beginning of the boardwalk.



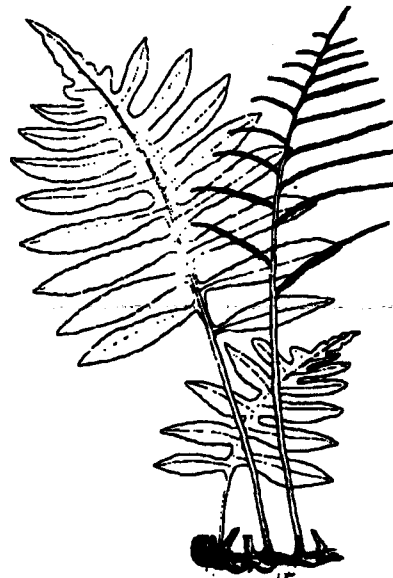
Cinnamon Fern
Osmunda cinnamomea

The cinnamon fern (*Osmunda cinnamomea*) gets its name from the fertile portion of the plant bearing the sporangia. This fertile frond is a rich cinnamon-brown in color. It may grow to four and one-half feet in height. This is the most abundant large fern along the boardwalk.



Netted Chain Fern
Woodwardia areolata

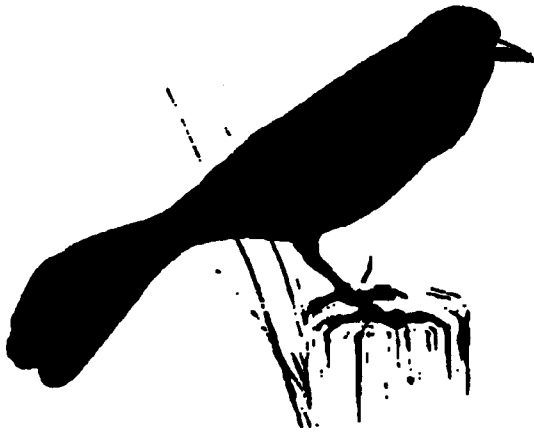
The netted chain fern (*Woodwardia areolata*) has a fertile frond that produces sporangia and a vegetative frond that is sterile. The fertile portion has protective coverings over the sporangia, and these covers give the impression of chain links. It grows up to two and one-half feet in height. Look for these ferns in wet places along the boardwalk.



Virginia Chain Fern
Woodwardia virginica

The Virginia chain fern (*Woodwardia virginica*) has thick, erect leaves and dark stalks. It reaches about three feet in height and occurs in the wet, lowland portions of the boardwalk.





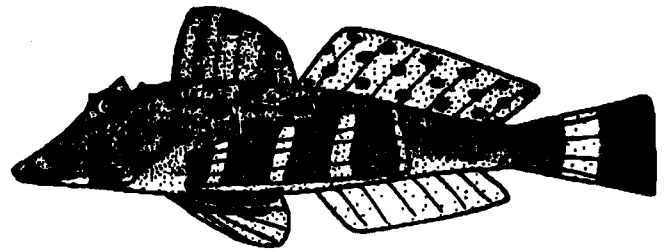
Boat-Tailed Grackle

The Boat-tailed Grackle (*Cassidix major*) is the largest blackbird in Alabama. The adult male is iridescent blue-black and about 16 inches in length, including a very long keel-shaped tail. The adult female is tawny-brown with darker wings and tail and about 14 inches in length. The bill is long and powerful, and the eyes are yellowish-brown. Calls include a quiet cluck and a variety of loud, harsh, squeaking, rattling, and penetrating whistling calls. In Alabama this noisy grackle is common throughout the year within a half mile of salt or brackish water and seldom strays beyond coastal salt-water marshes. Like other grackles, it is gregarious in habit and nests in small colonies in patches of reeds or rushes growing in shallow water. The bulky nests are composed of dry rushes with an inner layer of mud and a lining of grasses. When feeding, the birds travel in small and rather loose flocks, and most of their food is secured on the ground. The main food items in this bird's diet are beetles, moths, grasshoppers, shrimp, crabs, crayfish, snails, lizards, and spiders. It also eats seeds, wild grapes, and nuts.

The Common Grackle (*Quiscalus quiscula*) is a large blackbird that occurs throughout the entire state. Apparently Alabama's two grackles cannot readily coexist, and Boat-tailed Grackles occupy most estuarine habitats where Common Grackles are not present.

Visit the Weeks Bay Reserve Interpretive Center and Nature Trails

Office hours are: 8 a.m. to 5 p.m.
Monday through Friday and Saturday 9
a.m. to 5 p.m. If you are interested in
scheduling a special group activity,
call 928-9792.



Bighead Sea Robin

The bighead sea robin (*Prionotus tribulus*) is a peculiar fish, with a heavily armored head about a third the length of the body. The head is armed with many spines, some of which change considerably with growth. It reaches a length of about one foot, and the gigantic head with bright green eyes is striking.

It has gaudy, enlarged, and colorful pectoral fins that can be spread like wings. Despite this illusion of wings, it is found close to the bottom, and the lower pectoral rays are detached and are used as feelers or "tiny feet" as the fish "walks" along the bottom. A fairly distinct oblique bar located near the rear flank is useful in distinguishing this fish from other sea robins. It produces strong grunting sounds when caught and during spawning.

Adults spawn offshore, and the young congregate in estuaries, where they feed on shrimps and worms. The presence of small bighead sea robins in Mobile Bay in April and May and from October through December indicates sporadic or continuous spawning in this area.

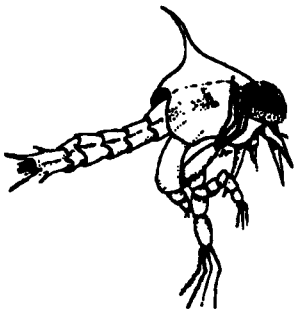
A young bighead sea robin less than three inches long, with its oversized head armed with large spines, makes an interesting aquarium pet. Despite the fearsome appearance, it is a passive, docile species. The presence of armor and spines renders it unpalatable to most predators.

Blue Crab Reproduction and Development

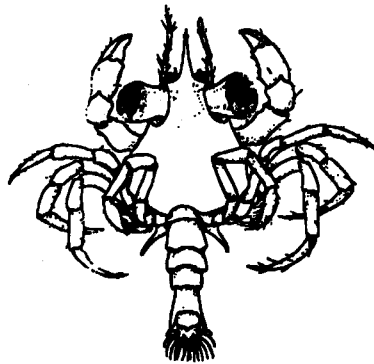
The blue crab (*Callinectes sapidus*) has a life span of about two or three years. During that time a female mates only once but may spawn more than one time, producing one to three million eggs in a spawning. In Alabama, the usual spawning season occurs from December of one year to October of the next.

The peak of the season is in June and early July, when the Gulfward movement of fertilized female crabs is at its height. During spawning season it is common to see "doublers," or crabs in the process of mating, as the male carries the female tucked securely under his own body. Mating occurs in estuaries when the juvenile female begins her terminal molt. Male crabs seem to know when this is about to take place and seize the females to prepare for mating. When shedding takes place and the female is

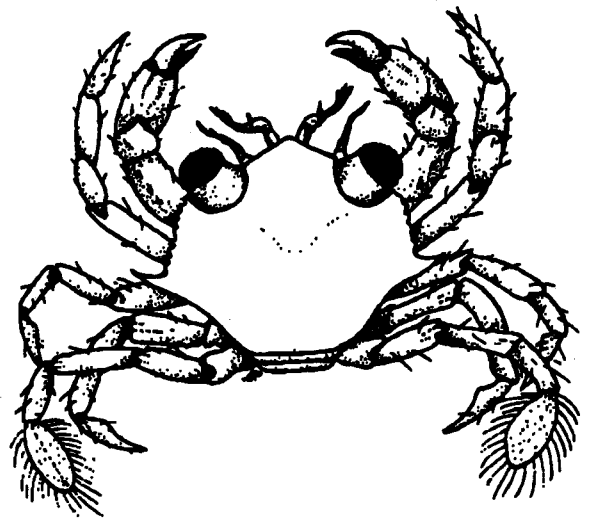
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Zoea, first larval stage of blue crab



Megalops, second larval stage of blue crab



First crab stage of blue crab

(Blue Crab Continued)

very soft, copulation is accomplished. At this time sufficient spermatazoa are implanted in the female's sperm sacs to fertilize all the eggs she will lay in her lifetime. The process may take a day or two, ending when the female's new shell becomes hardened. After fertilization has occurred, the pair separate and go their own ways.

After mating, the female seek the deeper water of the Gulf in which to produce her eggs. The eggs are about 1/100 of an inch in diameter and are deposited onto the fringes of hair on the swimmerets between the body and abdomen. The eggs form a mass about one-third the size of the crab, forcing the abdomen out and away from the body. The eggs are carried about until they hatch. A period of about 15 days is required for the eggs to develop. Hatching takes place in the Gulf.

Immediately after leaving the egg, the young crab larva is called a "zoea." This is a free-swimming planktonic state. Its body is approximately 1/25 of an inch in length. Large eyes dominate the cylindrical body, which has a long curved spine on its back and a long, slender, shrimp-like abdomen. A zoea larva swims backward in quick, jerking motions by snapping the abdomen under against its body. Molting may occur as many as seven times during this stage.

The second planktonic larval stage, called the "megalops," looks more like a crab. It has well-developed claws, and the body has become flattened and is now about 1/25 of an inch wide. The abdomen has shortened considerably but is still held straight out and is used for swimming. At this stage the crab may either swim or crawl, having developed some true legs. The megalops stage lasts from six to nine days, molts once, and produces the first crab stage, which is less than one-eighth of an inch wide between the lateral spines. Early crab stages seek protection and food in estuaries around coastal marshes. During their second summer, at the age of 12 to 14 months, the crabs mature and mate.

New Exhibits on Display

Come to the Interpretive Center and see the following new exhibits: a Civil War exhibit mapping troop movements during the Campaign of Mobile in March—April 1865, with artifacts from the Union camp at Danelley's Mill by the Fish River; past and present research in the Weeks Bay watershed; and terrestrial and marine geology of the Weeks Bay watershed. Other new displays include a collection of eggs of regional birds, fossilized manatee bones and teeth, an alligator skull, live snakes, and new habitat models of brown pelicans, ospreys, and loons.

Research Fellowships Awarded

Two outstanding students have been awarded Weeks Bay Research Fellowships. Paul Wimberley of the University of Alabama was awarded a graduate student fellowship to assist his research "Investigating the Benefits of Best Management Practices in Controlling Non-Point Source Pollution in the Weeks Creek Watershed." Paul's work will involve water quality sampling to look at potential pollution runoff from agricultural areas. Dana Wolfe of the University of South Alabama was awarded an undergraduate student fellowship for her project "Lithification of Tertiary Sediments in the Weeks Bay Watershed: Its Causes and Its Impacts on the Cultural History of Baldwin County." Dana's project looks at the unique rock formations of the Weeks Bay area.



Swamp Chestnut Oak
Quercus michauxii

Educational Update

The school year is at a close, and those involved with the educational programs can take a pause to reflect on the year, gather their thoughts, and look toward the future. The demand from various groups to visit the Reserve has been ever increasing. Some 4,000 students visited this school year, learning about the value of coastal resources in general and estuaries in particular.

When students are asked what activities they like the most, one hears comments such as "Touching the sharks," "Seeing the snake stick out its tongue," "Feeling the horseshoe crab," "Hearing the woodpecker in the swamp," or "Walking on the boardwalk." Children visiting the Reserve discover their own special moments within an educational framework providing dissemination of knowledge, freedom to ask questions, and hands-on experiences. Students are encouraged to use their senses in making observations and guided through information allowing them to formulate individual ideas. Students who consider the value of coastal habitats through personal experiences could carry this concept throughout their lives.

The educational programs have been greatly enhanced through the efforts provided by various volunteers. Since January, a program to train volunteers has moved from classroom discussions to learning on the job. Volunteers have helped with the Touch Lab, Trail Walks, and Seining Activities. Those most closely involved with the educational program have been Bob Murphy, Danna Murphy, Billie Bentley, Carey Bentley, Harry Larsen, Jane Jeffers, Dr. Caterina Kenworthy, and Pat Duncan. Only with the help of these volunteers could the quality programs at the Reserve have touched so many people.

The first student boat trip was launched this spring. Ms. Scanlon's fifth-grade class from Bayside Academy boarded the 32-foot pontoon boat for a morning of exciting explorations of Weeks Bay estuary. Touring the Fish and Magnolia Rivers provided students with a waterside view of the swamp, salt marsh, and estuarine habitats. Turtle, fish, and bird activities were the morning topics, followed by a picnic lunch and water activities at Beckwith Lodge in the afternoon.

With the summer at hand, things might appear to settle down but only on the surface. Summer camps sponsored by the Baldwin County Board of Education will be visiting the Reserve in the month of June. Programs will continue to be developed encouraging hands-on and self-discovery activities at the appropriate grade level. Teacher workshops are planned for August. These will target teachers of grades 6 - 12 and be sponsored by the Alabama Department of Environmental Management. Scheduling of fall classes will begin in September. It is expected that student contact numbers will grow from 4,000 to 6,000 in the 1994 - 95 school year.

Education at Weeks Bay National Reserve has been very successful through the cooperative efforts of many

individuals. Programs are both fun and informative, a delicious recipe for the mixing of creative ideas, respect for the environment, and coastal concepts, giving everyone much food for thought.

The Weeks Bay Collection

There has been an ongoing effort, beginning in early 1993, to develop a representative collection of the flora and fauna occurring in the Weeks Bay region. This includes the aquatic and terrestrial organisms of the Weeks Bay region as well as the drainage basins leading into Weeks Bay. This collection will be used to support basic research relating to the Reserve area as well as providing resource materials for the educational program. We are planning a more active involvement in the interfacing of the research and educational programs. At this time, the collection is very thin in all taxonomic categories, with approximately 500 species catalogued. To a great extent, this limited number reflects our initial concentration on developing the educational component. With the education program running smoothly, we will be taking a more aggressive approach to the collection. Obviously, there is much to be done. However, collections are a long-term investment that requires a long-term commitment.

The Weeks Bay Reserve Foundation is a nonprofit membership organization incorporated in 1990. Its purpose is to support the Weeks Bay National Estuarine Research Reserve with financial and volunteer assistance.

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

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