

Welcome to the Weeks Bay Pitcher Plant Bog



Parrot Pitcher Plant

Gulf Coast pitcher plant bogs are among the most diverse habitats for flowering plants in North America. The **Kurt G. Wintermeyer Nature Trail** offers visitors easy boardwalk access to the spectacular pitcher plant bog at **Weeks Bay Reserve**.

What is a Bog?

Bogs bring together an unusual combination of water, soil, and environmental conditions, to create a unique habitat. Many of the fascinating plants and animals that make their homes in Gulf Coast pitcher plant bogs are found nowhere else on Earth!

Water (Hydrology)

Bogs are not as wet as other wetland habitats, such as **swamps** and **marshes**. In fact, for a pitcher plant bog to remain healthy, it must be dry enough to **burn** occasionally. The water must be free from salt and nutrients, and the water table must only come up to, or very near to the surface. If the water table is much higher, there will be standing water most of the time, and the habitat will then become a marsh or a swamp.

Soil (Geology)

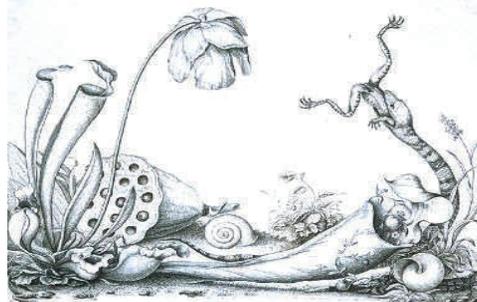
The surface of the bog is **fragile**. Even **footprints** can cause **damage** by compressing the soil and creating areas with standing water. The soil in the Weeks Bay Bog is sandy and porous, and it contains very little organic material. Iron compounds cause the sandy soil to be gray in color, which makes the soil appear to be far richer than it is. In fact, coastal bog soils are **highly acidic** and quite **poor in nutrients**. This acidic, nutrient-poor soil is a key to the specialized plant species that live in bogs. Since there is very little fertility in the soil, many of the bog plants have developed interesting and unusual ways to obtain necessary nutrients.

Carnivorous plants, such as pitcher plants, sundews, and bladderworts, obtain their nutrients by

capturing and “eating” insects and other small creatures. Some bog plants, such as **Waxmyrtle**, *Morrellia cerifera*, have the ability to “fix” atmospheric nitrogen into the soil by making use of special bacteria which grow on their roots. Others, such as the **lilies**, **grasses**, and **sedges** are simply able to get-by with very low nutrient levels. They are well-adapted to the acidic, nutrient-poor soils that make the bog a forbidding place to other plants that are not adapted to these harsh conditions.

The Role of Fire in the Bog

Fire plays a crucial role in the health and survival of a bog. In fact, the bog is a **fire-dependent ecosystem**. Without occasional fires to suppress the tree and shrub layers, the ground will become shaded, and the sun-loving (heliophytic) herbaceous plants will decline and eventually die. Research indicates that before this area was settled by Europeans, naturally-occurring fires passed through coastal bogs 2 or 3 times in an average 10 year period. These natural burns, caused by lightning, occurred mainly in the summer and fall. Since uncontrolled fire is now suppressed for safety reasons, a program of **controlled burning** is conducted by the Weeks Bay Reserve staff. These managed burns safely provide fire, which is a natural and necessary element in the ecology of the pitcher plant bog.



William Bartram's fanciful eighteenth-century drawing of a southern pitcher plant bog.

The Pitcher Plant Bog is a Rare Habitat

Bog habitats are quickly disappearing throughout the country. This makes the Weeks Bay Pitcher Plant Bog more rare and more valuable with each passing day. More than ninety percent of bog acreage along the Gulf Coast has already been destroyed or severely

damaged. Many bog sites have been drained or filled over the years to make the land suitable for agriculture, roads, and construction. Many bog plants are **habitat-specific**, and can survive only in this increasingly rare habitat. One important objective of Weeks Bay Reserve is to preserve this spectacular natural community of plants and animals for the education and enrichment of future generations.

What to Look for When You Visit the Bog

You will see some tall pine trees scattered throughout the bog area. Most of these are **Slash Pines**, *Pinus elliottii* (“slash” is an old-fashioned name for a wetland). Pines are **fire-resistant**, as you can see from the black, charred bark on some of the trees. If you are lucky you may see some interesting birds in these trees, including a large **Red-tailed Hawk**, *Buteo jamaicensis*, which sometimes roosts in the branches of these pines.



Black Swallowtail

During warm weather many **butterfly** species can be seen in the bog. In late summer, caterpillars of the **Black Swallowtail**, *Papilio polyxenes*, feed on the leaves and flowers of the **Water Dropwort**, *Oxypolis filiformis*. The careful observer can find the small swallowtail eggs on the leaves and stems of this plant.

You will see large populations of **grasses** and **sedges** throughout the bog. These are the most numerous plants in the bog. In fact, some biologists call this habitat a “**grass and sedge bog**.” **White-topped Sedge**, *Rhynchospora latifolia*, is one sedge species in the bog that is quite beautiful and easy to identify. These plants have showy, green-tipped white bracts that resemble flowers. The true flowers are the small yellowish structures in the center of the bracts.

You may see some scattered patches of low-growing, small-leaved, yellowish-green plants. These are **Sphagnum Mosses**. (over)

Sphagnums are more numerous in other areas, particularly the northern U.S. and Canada. In some bogs the sphagnums grow and accumulate for centuries, to form thick layers that are harvested and sold as **peat moss**. Sphagnums are **non-vascular** plants; they are far more primitive than flowering plants, producing spores instead of seeds for reproduction.

As you look out across the bog, you will see some tall, white-colored tubular leaves. These are the “pitchers” of the **White-topped Pitcher Plant**, *Sarracenia leucophylla*, one of the true glories of the Weeks Bay Bog. Though they are numerous in our bog, White-topped Pitcher Plants are rare in the sense that they naturally occur in a **very restricted range**, from around Appalachicola, Florida, along the coastal plain, to near the Louisiana state line. Because this pitcher plant is so pretty, with its white pitchers and large crimson flowers, it has been **overcollected** or even **eradicated** in many areas.

The tubular leaves of pitcher plants are **death traps** for insects and occasionally other small creatures. Inside the hollow tubes there are stiff hairs which point downward. These hairs, called cilia, make it easy for insects to crawl down into the tube, but difficult to crawl back up and out. Insects eventually die and fall into a pool of liquid which is at the bottom of the tubes. This liquid contains enzymes which digest the insects, and the pitcher plants absorb minerals and nutrients from their decomposed prey.



Purple Pitcher plant

One of the most unusual-looking of the three pitcher plant species in the bog is the **Purple Pitcher Plant**, *Sarracenia purpurea*. One humorous local name for this pitcher plant is “frog britches!”

Near the boardwalk you may see the tall, slender, pale-green leaves of another carnivorous plant, the **Gulf Coast Sundew**, *Drosera tracyi*, which has lovely pink flowers in the spring. Sundews produce a sticky substance on their leaves to capture gnats,

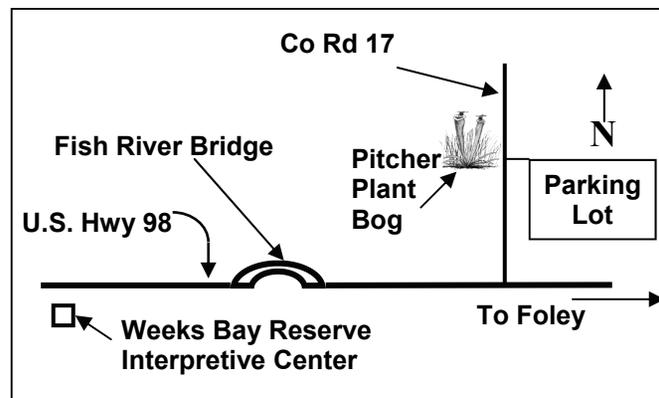
midges, and other small insects which land on them.

Pine Lily, *Lilium catesbaei*, is an uncommon southeastern wildflower with large, brilliant red flowers in August and September.

If you tour the bog in the spring or summer you may see one or more of the six native **orchid** species which have been identified so far in the bog. The pink-flowered **Rose Pogonia**, *Pogonia ophioglossoides*, flowers in the spring. The larger, magenta-colored **Grass-pink Orchid** *Calopogon tuberosus*, blooms in late spring. **Yellow-fringed Orchid**, *Platanthera ciliaris*, grows to three feet tall, with a large, many-flowered mass of golden-colored flowers in midsummer. There are probably other orchid species in the bog which have not yet been discovered.

Directions to the Pitcher Plant Bog

The bog is located on County Road 17, one quarter mile north of U.S. Highway 98. Look for the signs. **Please park in the parking lot on the east side of County Road 17.** (Map is not drawn to scale)



Weeks Bay National Estuarine Research Reserve
Alabama Department of Conservation
and Natural Resources
Lands Division, Coastal Section
11300 U. S. Highway 98
Fairhope, AL 36532

This brochure was printed with generous financial support from the **Baldwin County Soil and Water Conservation District**, 207 Faulkner Dr, Suite 107, Bay Minette, AL 36507.

Weeks Bay Pitcher Plant Bog

and the
Kurt G. Wintermeyer Nature Trail



Thomas Meehan, 1879

WHITE-TOPPED PITCHER PLANT
Sarracenia leucophylla

A Very Special Place . . .

