

Camp Whispering Pines Natural Area is owned by the Girl Scouts of Southeast Louisiana and consists of 595 acres. It contains many native

groundcover species that occur in younger longleaf stands and a high flatwoods area that supports a superior upland longleaf groundcover community. State-rare species found here are the coco orchid (*Pteroglossaspis ecristata*) shown below, coastal plain false-foxglove (*Agalanis aphylla*), and flat-fruit beaksedge (*Rhynchospora compressa*).



Essentially pure 60-70 year-old longleaf pine forest occurs on several areas, and state-rare species like Bachman's Sparrow and mole kingsnake have been recorded in this area.



A mature shortleaf pine oak-hickory forest with a small stream forest occurs in the floodplain of the Tangipahoa River, along with small "gum ponds". State - rare silky camelia (*Stewartia malacodendron*) have been found here. A mature oak-hickory-shortleaf pine forest containing a series of intermittent drains also



occurs and has the state-rare species, fairy-wand (*Chamaelirium luteum*). The Girl Scout Council of Southeast Louisiana has worked hard over the past 10 years to restore the longleaf pine forest by harvesting loblolly, planting longleaf, and burning regularly.

Cane River Natural Area is owned by Mike and Brittany Smith and is located near the boundary of Catahoula formation and Red River floodplain. Cane River consists of 100 acres and supports an unusual intermingling of significant natural forested habitats representative of west - central Louisiana. Cane River Natural Area is composed principally of various phases of mixed hardwood - loblolly pine forest, including white oak - loblolly slopes, water oak - loblolly flats, and hickory - loblolly hills. A flooded cypress brake occupies a small part of the site that adds scenic variety and important habitat diversity. Mike and Brittany Smith are also working hard towards reforestation of a former pastureland for a number of years.

Gilmer's Delaney Mountain Natural Area is owned by Bill Gilmer and is a good example of a hardwood slope forest with calcareous elements. It consists of steep slopes with areas of old growth, intermittent streams, and narrow ridges. Delaney Mountain forest is both structurally diverse and species. Four state rare species occur on Gilmer's Delaney Mountain Natural Area: Wild Hyacinth (*Camassia scilloides*), Three-lobed Coneflower (*Rudbeckia triloba*),



Bloodroot (*Sanguinaria canadensis*) shown right, and Bloody Butcher (*Trillium recurvatum*) shown left.



West Indian Manatee (*Trichechus manatus*)
By Inés Esperanza Maxit

Natural History Facts: The West Indian Manatee (*Trichechus manatus*) occurs randomly along coastal waters, freshwater inlets, and river mouths throughout the Gulf of Mexico and Caribbean Sea, the southeastern United States, and the northern and eastern waters of South America (Lefebvre et al., 2001). Within the United States, West Indian Manatees are concentrated in Florida during the winter, but can be found in summer months as far west as Texas and as far north as Virginia and the Carolinas. The Florida manatee (*Trichechus manatus latirostris*) is one of the two subspecies of the West Indian manatee, the other being the Antillean manatee (*T. manatus manatus*).



The West Indian Manatee is a large gray or brown aquatic mammal. Adults average about 10 feet long and weigh 1,000 pounds. They have no hind limbs, and their forelimbs are modified as flippers. Manatee tails are flattened horizontally and rounded. Their body is covered with sparse colorless hairs and their muzzles with stiff whiskers. Sexes are distinguished by the position of the genital openings and presence or absence of mammary glands (Husar 1978).

Manatees are wholly herbivorous but they will occasionally feed on



fish (NatureServe 2003). They will consume any aquatic vegetation available to them and sometimes even shoreline vegetation. Captive animals reportedly consume from 30 to 50 kg of food daily. Manatees rest from 2 to 12 hours daily, usually in sessions of 2 to 4 hours, and during cold spells rest may continue

throughout the day. They may rest submerged at the bottom or just below the surface, coming up to breathe on the average of every 3 to 5 minutes (Husar 1978).

Manatees can be found in shallow, slow-moving rivers, estuaries, saltwater bays, canals and coastal areas. Throughout most of the range, they seem to prefer rivers and estuaries to marine habitats (Lefebvre et al. 1995). They are not averse to traveling through dredged canals or using quiet marinas. Apparently manatees are not able to tolerate prolonged exposure to water colder than 20°C (68° F). During winter cold periods, manatees aggregate near natural and industrial warm-water refugia (Reynolds and Wilcox 1994,; USFWS 2001). When water temperatures are warm, manatees disperse throughout their range. Manatees prefer waters at least 1-2 m in depth but along the coast they are found often in water 3-5 m deep; they usually avoid areas with strong current (NatureServe 2003).

The reproductive rate for manatees is low. Female manatees are not sexually mature until 5 years old, and males are mature around 9 years of age. Females mate with a number of males during their 2 to 4 week estrus period, and then they go through a pregnancy estimated to last 12 to 14 months (O'Shea and Ludlow 1992). One young, rarely two, is usually born in spring or early summer. Young are born in the water. Sheltered bays, coves, and canals are important for reproductive activities (O'Shea and Ludlow 1992). Newborns weight between 11 and 27 kg (60 lbs) and may measure over 1 m in length. Immediately

after birth calves swim with the flippers only, not learning the use of the tail for several days. Suckling occurs under water. Calves may nurse for a period of 1 to 2 years.

Although manatees are essentially solitary, they occasionally are mildly social. Groups of 2 to 6 animals are often reported but these groupings are thought to be ephemeral (Husar 1978). The only lasting relationship is between a cow and her calf. Several bulls may pursue an estrus cow for up to a month, but no bonds are formed. Manatees are usually silent whether alone or in a group, and vocalizations appear to be emitted due to fear, aggravation or play (Husar 1978).

Status and Threats: Manatees are an endangered species protected under the Endangered Species Act of 1973. Manatees are also protected under the Federal Marine Mammal Protection Act of 1972. Both of these laws make it illegal to “take” (i.e., harm, harass, injure, kill, etc.) manatees. Manatees are also protected under the Florida Manatee Sanctuary Act. In Louisiana, Florida manatees hold an endangered status (December 20, 1989) and taking or harassment is a violation of state laws. The Manatee Recovery Plan was developed as a result of the Endangered Species Act. The recovery plan is coordinated by the U.S. Fish & Wildlife Service (USFWS) and sets forth a list of tasks geared toward recovering manatees from their current endangered status.

The manatee population was probably more abundant in the 18th or 19th century than today. Initial population decreases probably resulted from over harvesting for meat, oil, and leather. Today, there are approximately 2,600 West Indian manatees left in the United States (Florida Marine Research Institute 2004). West Indian Manatees have no natural enemies. The greatest natural threats are exposure to cold temperatures, hurricanes, and poisoning from red tide (*Karenia brevis*). The manatee’s low reproductive rate, combined with loss of habitat and high rates of mortality, often due to human-related causes, threaten this animal’s survival. Watercraft collisions account for approximately 25% of all manatee deaths and are the single greatest cause of human-related mortality (Ackerman *et al.* 1995). Other causes of human-related manatee mortalities include being crushed and/or drowned in canal locks and flood control structures; ingestion of fish hooks, litter and monofilament line; entanglement in crab trap lines; and vandalism. Ultimately, however, loss of suitable habitat through incompatible coastal development, particularly destruction of seagrass beds by boating facilities is the most serious threat facing manatees today (U.S. Fish & Wildlife Service 2004).

Manatee Conservation Efforts in Louisiana: Manatee sightings have been on the rise in southeastern LA. Between 1929 and 1994, there were only 19 manatee reported sightings in Louisiana. However, that number has increased since the mid-1990’s, especially in and around the Lake Pontchartrain basin. Current records indicate 93 manatee sightings in Louisiana for the years 1995-2003. According to surveys conducted in Florida during the winter, the manatee population seems to be slowly increasing since 1991 (Florida Marine Research Institute 2004). This increase in the manatee population is due largely to conservation efforts in Florida, including protecting habitat and enforcing boat speeds zones. The population rise in Florida may explain the increase in manatee sightings in and around the Lake Pontchartrain Basin. Other reasons that may explain this increase in sightings records are: (1) Lake Pontchartrain has experienced recent water quality improvements and



an increased abundance of the *Rupia maritima* grassbeds (Poirrier 2002); and (2) An increased public awareness of this species and of the importance to report manatee sightings to the LDWF.

The LNHP believes that the strength of the conservation of manatees and their feeding habitat (sea grass beds) rests on the participation of the public, especially recreational anglers. A primary cause of manatee mortality and damage to sea grass beds stems from heavy boat traffic. Public awareness can protect manatees and promote healthy sea grass beds which in turn support numerous species of fish and shellfish. In 2003, LNHP has launched two educational projects to increase awareness among Louisiana’s coastal residents concerning the presence of manatees and sea grass beds.

U.S. Fish & Wildlife Service Section 6 Funds were used to produce 50 plastic signs (12’x 19’) warning of the presence of manatees in the area, 500 bumper stickers (“*This vehicle slows for Louisiana manatees*”), and 5,000 pamphlets with brief information on the natural history of the manatee and recommendations of what to do if a manatee is seen. Thirty-seven signs have been posted in marinas and Wildlife Management Areas in and around the Lake Pontchartrain basin. Manatee pamphlets were sent to each marina in the area to be available to the public.

LNHP is also inviting charter boat operators to participate in the **Manatee/Sea Grass Beds Registry Program**. This voluntary program will have a direct benefit to charter boat operators because it will aid in the protection of some of their favorite fishing grounds and could serve as excellent public relations tools for their company. By participating in this program, boat operators receive a Certificate from the LNHP that they can display on the boat. The certificate acknowledges that the participating boat operator reduces boat speeds when he sees a manatee or a sea grass bed, and will agree to contact LNHP to give the location of the sighting. LNHP does not seek any additional information concerning the charter boat operator’s fishing activities.

Literature Cited

Ackerman, B.B., S.D. Wright, R.K. Bonde, D.K.Odell, and D.J.Banowitz. 1995. Trends and patterns in the mortality of manatees in Florida, 1974-1992. pages 223-258 in T.J.O’Shea, B.B. Ackerman, and H.F.Percival, editors. Population biology of the Florida manatee. National Biological Service Information and Technology Report 1. Washington, D.C. 289pp.

Husar, S. L. 1978. *Trichechus manatus*. Mammalian Species No. 93:1-8

Florida Marine Research. 2004. News & Information. www.floridamarine.org.

NatureServe. 2003. NatureServe Explorer: An online encyclopedia of life [web application]. Version 1.8. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: March 19, 2004).

Lefebvre, L. W., M. Marmontel, J.P. Reid, G.B.Rathbun, and D.P. Domming. 2001. Status and Biogeography of the West Indian manatee. Pages 425-474 in C.A. Woods and F.E. Sergile, editors. Biogeography of the West Indies: new patterns and perspectives. CRC Press LLC, Boca Raton, Florida, USA.

O’Shea, T. J., and M. E. Ludlow. 1992. Florida manatee *Trichechus manatus latirostris*. Pages 190-200 in S. R. Humphrey (editor). Rare and Endangered Biota of Florida. Volume I. Mammals. University Press of Florida, Gainesville, Florida. xviii + 392 pp.

Poirrier, M. A., C. Franze, and J. Sinclair. 2002. Lake Pontchartrain Grassbed Restoration. Final Report. Louisiana Department of Wildlife and Fisheries and the National Fish and Wildlife Foundation, Shell Habitat Program.19 pp.

Reynolds, J.E.III, and J.R.Wilcox. 1994. Observations of Florida manatees (*Trichechus manatus latirostris*) around selected power plants in winter. Marine Mammal Science 10:163-177.

U.S. Fish and Wildlife Service, Division of Endangered Species.2004. Species Account. <http://endangered.fws.gov/a/saa0c.html>