Florida
LAKEWATCH
Dedicated to Sharing Information About Water Management and the Florida LAKEWATCH Program Volume XXXVI

Happy 20th Birthday Florida LAKEWATCH

On August 16, 1986 the first Florida LAKEWATCH samples were collected from Lake Santa Fe in Alachua County and Lake Broward in Putnam County. After these first samples LAKEWATCH grew rapidly because the people of Florida have a great love and concern for the water resources in the state. However, Figure 1 shows that the number of samples that LAKEWATCH can process has stabilized at about 4,500 per year. While LAKEWATCH is the countries largest and most successful volunteer monitoring programs it still can only process samples from approximately 600 of the 7,700 lakes in Florida and approximately 150 coastal locations. Yet, calls for assistance come to LAKEWATCH everyday from throughout Florida.

To meet the demands, LAKEWATCH plans to expand the number of lakes and near-shore coastal areas it can process. Current funding and facilities limit expansion. With this in mind, Dr. Daniel E, Canfield, Jr., the staff of Florida LAKEWATCH, and a number of LAKEWATCH volunteers are attempting to expand the program and make it more stable to make sure LAKEWATCH can help the citizens of Florida long into the future. The first step in this process is to build

"A Home for Florida LAKEWATCH".

To do this, LAKEWATCH is seeking help from all who benefit from the program. So please read the letter in this newsletter written by Dr. Canfield to the LAKEWATCH volunteers and help as you can.

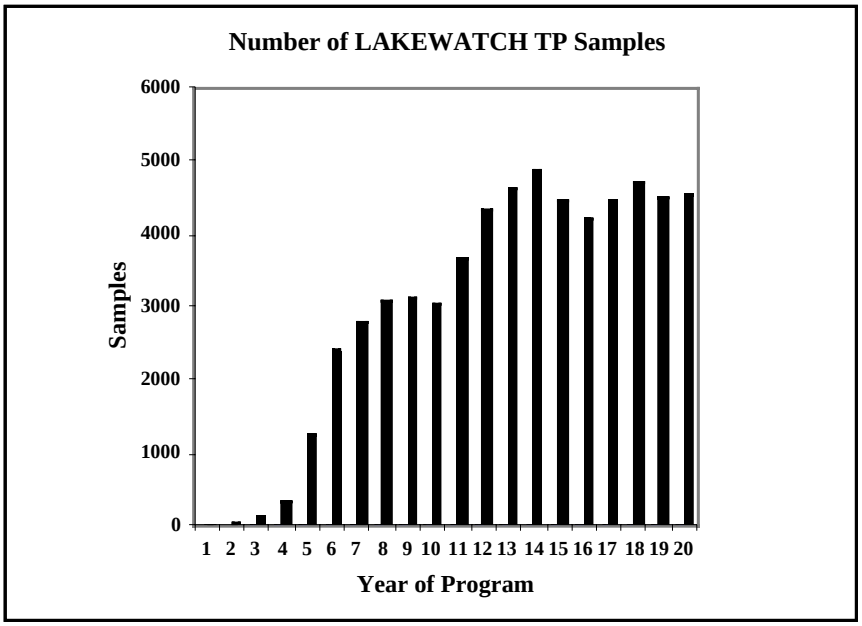

Figure 1. Annual number of total phosphorus samples processed by Florida LAKEWATCH.

A Home for Florida LAKEWATCH
July 12, 2006

Dear LAKEWATCHER:

August 2006 is Florida LAKEWATCH's 20th anniversary! The first water samples were collected by LAKEWATCHERS at Lake Santa Fe (Alachua County) and Lake Broward (Putnam County). Since 1986, LAKEWATCHERS have sampled more than 1000 lakes and numerous near-shore coastal waters in 50 counties. The Florida Legislature in 1991 officially established Florida LAKEWATCH within the Department of Fisheries and Aquatic Sciences at UF/IFAS (Chapter 91-69; s. 240.5329, F.S.; now F.S. 1004.49). LAKEWATCHERS have made LAKEWATCH Florida's largest and the nation's premier citizen volunteer monitoring program. But, we now must look to the future. This is especially true as population growth in Florida put ever-increasing pressure on our water resources!

It is my hope that you believe in Florida LAKEWATCH as much as I do. Florida LAKEWATCH has always had and will continue to have in its mission working with the volunteers *first*! LAKEWATCHERS have through the sampling of their lakes provided themselves an "insurance policy" so if a change or changes were to occur at the lake it would be documented. The LAKEWATCH team has developed a database that is used by many groups and is a tremendous asset to international, national, state, regional and local water resource

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managers and researchers, lake homeowners associations, educational institutions, consultants, and the general public. Together, we have solved problems at individual water bodies, we have addressed not only water quality issues, but also aquatic plant management problems and fisheries problems and we have developed lake management plans for lakes. The LAKEWATCH team has also influenced public policy. Now, I believe that the present LAKEWATCH team needs to take a bold step to help insure that Florida LAKEWATCH will be there for future Floridians.

Florida LAKEWATCH needs a better "home" that can improve program services now and in the future. Florida LAKEWATCH staff members and facilities are currently scattered amongst multiple buildings and sites. The present facilities cannot be expanded to meet growing demands. Florida LAKEWATCH needs a permanent "home" where it can improve program services now and in the future. New facilities will increase communication, create efficiencies and enhance the ability of staff members to deliver services to the citizens of Florida. Plans have been developed for a 10,000 square foot complex on the UF/IFAS Millhopper site that will greatly expand current opportunities for research and delivery of services and permit much needed future expansions over the next 20 years. The new facilities will include a bacteriological laboratory, a toxic algal laboratory, a fish tissue laboratory and a general fisheries laboratory, all of which will provide state of the art resources needed to continue critical water quality analyses. The facilities will provide office and laboratory space needed to attract internationally recognized eminent scholars to assist with addressing the issues raised by the LAKEWATCH team. A pavilion will permit Florida LAKEWATCH to continue its award-winning youth education program, *Fishing for Success*. Training youth to be future LAKEWATCHERS is a critical part of our mission. And lastly, the construction of a large conference room will finally provide a site where LAKEWATCHERS can meet to provide their insights and experiences on specific issues to each other and directly communicate their concerns to assembled scientists.

The vision for a new "LAKEWATCH HOME" is an exciting prospect. On July 9th, I met with leaders from various statewide LAKEWATCH groups. This group of dedicated volunteers agreed to help raise $1,000,000. This money will be matched dollar for dollar by the Florida Legislature resulting in a total building fund of $2,000,000. This money will not only build a facility for future LAKEWATCH activities, but it will also show the State that Florida's citizens are willing to do what it takes to be good stewards of the water resources of Florida.

So, I am writing to ask for your help. Construction costs are significant, but our goal is very reachable if we all work together. LAKEWATCHERS can contribute individually and/or each LAKEWATCHER can reach out to their lake neighbors and others in their community that benefit from healthy water resources. Each of you probably knows other individuals or groups in your communities that might contribute. I hope you will contact them, or work with our Director of Development – Josh McCoy at 352-392-1975 to determine the best course of action. Often it is not what you know, but whom you know! With networking, creativity and hard work, we can make this happen.

Florida LAKEWATCH is housed within the Institute of Food and Agricultural Sciences at the University of Florida. All contributions to Florida LAKEWATCH are tax deductible and should be made payable to the University of Florida Foundation, Inc. Please include a note or a memo on the check indicating that you would like this gift designated to the Florida LAKEWATCH building fund. Josh is also able available to discuss non-cash gifts as well.

Please mail any donations to:

IFAS/SHARE Development Office
1001 McCarty Hall D
PO Box 110170
Gainesville, FL 32611-0170
Attention: Josh McCoy

For the 20 years that Florida LAKEWATCH has been in existence, the LAKEWATCH group has worked hard to gather the funds needed to keep the program alive. I have never asked volunteers for more then their time to take water samples. However, funds are becoming ever more difficult to obtain and now I need your help! I look forward to working with you on this great endeavor. With your help, Florida LAKEWATCH will successfully obtain a needed stability that will serve current and future LAKEWATCHERS for many years to come!

Sincerely,

Daniel Canfield, Jr.,
Professor of Limnology
Founder and Director of Florida LAKEWATCH

Featured Bird

Boat-tailed Grackle
(Quiscalus major)

The Boat-tailed Grackle is a member of the Blackbird Family (Icteridae) and it is frequently observed near Florida water bodies. They are common residents along the Atlantic and Gulf coastal areas from New Jersey south and west to Louisiana and Texas and are also found inland in peninsular Florida. They favor freshwater and saltwater marshes but can also be found on mud flats, beaches, farmlands, roadsides, city streets, plazas, stockyards, garbage dumps, and MacDonald's parking lots.

Male and female Boat-tailed Grackles differ in color and size. The noisy males are hard to miss when they are perched on power lines and telephone poles. Their voice is a loud, sharp, harsh jeeb-

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Aquatic Plants

Aquatic plants are diverse and include flowering vascular plants, mosses, ferns, and macroalgae. Every water body contains aquatic plants. The plants may be so small that they are not easily visible to the naked eye (algae) or may be larger and easily seen by the naked eye (macrophytes). The area in a water body from the shoreline outwards toward the open water where rooted aquatic plants occur is called the littoral zone. There are four major groups of aquatic plants that can be found in the littoral zone. These four plant groups are known as emergent, floating-leaved, submersed, and free-floating plants.

Emergent plants are usually perennials that are typically rooted with their bases submersed below the water and their leaf portions emerging above the water's surface. Some common emergent plants include maidencane, torpedograss, bulrush, and cattails.

Floating-leaved plants are rooted in the bottom with their leaves floating on the water surface. Waterlilies and spatterdock are representative species of the floating-leaved plants. The plant's leaves are attached to roots or rhizomes by a tough, flexible petiole that is the part of the leaf that attaches the leaf blade to the rhizome or stem tissue.

Submersed aquatic plants usually are found growing completely underwater. Submersed plants include muskgrass, stoneworts, pondweeds, tape-grass, and hydrilla.

Free-floating aquatic plants are those that float on or just under the water's surface. These plants are not usually rooted to the bottom except during times of drought when most of the water has dried up. Free-floating plants include small ones such as duckweed and mosquito fern to larger varieties such as water hyacinth and water lettuce.

Biology of Aquatic Plants

Many factors determine the distribution of aquatic plants in a water body. Some of these factors are light availability, nutrient concentrations (total phosphorus and total nitrogen), bottom substrate characteristics, size and shape of the water body. While these environmental characteristics determine plant distribution and abundance, the plants themselves can influence many environmental and biological interactions. The following paragraph will deal with a few interactions to help understand the role these plants play in a water body and therefore help in the decision making process for aquatic plant management.

Aquatic plant beds can increase water clarity by reducing water turbulence and allowing suspended particles to settle out. Aquatic plants also can reduce wave action therefore protecting the shoreline from erosion. However, these mechanisms do increase the accumulation of sediments.

When planning aquatic plant control the relationship between aquatic plants and water clarity must be discussed. If water clarity decreases from an aquatic plant removal project, people may decide the plant problem was not as bad as the reduced water clarity. This usually will not occur in a water body with less than 30% of the surface area covered. However, if the water body had 50% or

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1 Pontederia cordata
2 Nuphar Luteum
3 Hydrilla verticillata

Volunteer Bulletin Board

Attention!

We have a new water collection center in Pasco County. It is located in the Land-O-Lakes Community Center. *PLEASE CALL BEFORE YOU COME TO DROP OFF YOUR SAMPLES! Contact either Cindy or Mandy at 813-929-1229 on Monday–Friday from 8am-5pm to let them know when you will be coming and they will show you where the freezer and supplies are located. There is the possibility for evening water sample drop-offs. Contact Cindy or Mandy for a current evening schedule (subject to change).

The address is:
Land-O-Lakes Community Center

Directions:
From the intersection of Highway 54 and Highway 41, go north on Highway 41 for about 3 miles and the Land-O-Lakes Community Center will be on your left.

Operating Hours:	Monday–Friday from 8am-5pm
Contact Person:	Cindy or Mandy
Phone:	813-929-1229

Youth Education

Students in the Dunnellon Middle School's Promoting Awesome Watershed Stewardship (PAWS) program have been acknowledged for their commitment in taking an active role in monitoring water quality sampling sites along the Rainbow River. The PAWS program was selected as the youth/youth group recipient among the 2006 National Award Winners in Take Pride In America, a nationwide partnership inspiring Americans to volunteer in caring for their public resources. Take Pride In America is an initiative of the U.S. Department of the Interior that rewards exceptional volunteer service by individuals and groups with awards and appreciation certificates.

Congratulations to the students, teachers, assistants, and community partners for fostering a program that encourages young people to participate in environmental stewardship. Great job! Students in the PAWS program under the guidance of co-teachers Sande Haynes and Joe Acaba joined the Florida LAKEWATCH program in 2002 and have maintained sampling through successive school years with new students and teaching assistants.

Florida LAKEWATCH is currently working with similar school programs in the state. We are committed to our cooperative partnerships as they entail considerable time and commitment from all involved in our education efforts throughout the state. Again, our LAKEWATCH caps are off to a group of young volunteers in the Dunnellon Middle School PAWS program for being acknowledged nationally for their voluntarism and stewardship.

We Miss You Julie!!

Dear LAKEWATCHER:

I am writing to you to say good-bye. I have taken a new position in the panhandle of Florida. I am working with a group similar to LAKEWATCH but on a local level. I have been with LAKEWATCH for the last 13 years—first as a graduate student and then ultimately as a Regional Coordinator. I wish each of you the best! Keep up the sampling—you are creating a legacy for your children, grandchildren and the State!

Sincerely,
Julie Terrell

And We Welcome Sky Notestein!!

Hello LAKEWATCHERS,

As a lifelong naturalist and resident of Florida, I am excited about joining the LAKEWATCH team. I have found the enthusiasm of LAKEWATCHERS contagious and look forward to being your partner in the management of our shared natural resources. My environmental interests are broad; I hold degrees from the University of Florida, having earned a BS in Wildlife Ecology and Conservation (1997) and a MS from the Department of Fisheries and Aquatic Sciences (2001). For the past six years I have worked in the spring's coast region of the state where I was able to gain knowledge in both marine and fresh water ecosystems. Particular interests to me are the ecology of the plants and wildlife inhabiting aquatic systems. I'm looking forward to meeting the diverse network of citizens and water bodies that comprise LAKEWATCH. Feel free to contact me at: skynote@ufl.edu.

Best regards,
Sky Notestein

jeeb-jeeb-jeeb while their song is a variable series of sharp notes and harsh guttural trills. Male Boat-tailed Grackles are glossy purple black with a bluish iridescence on the body and a greenish iridescence on the wings and tail. Males are usually larger than females, averaging from 16”-17” in length, and are much noisier. Females are less conspicuous and might even be mistaken as being a different species of bird when compared to males. Females are cinnamon brown with very little iridescence and average from 12”-13” in length.

Males and females both have long tails and long narrow black beaks. The eye color of the Boat-tailed Grackle varies from region to region. Along the Atlantic coast north of Florida they have straw-colored eyes while Florida birds have dark eyes. Grackles west of Florida to eastern Louisiana have light eyes, but those located further west have dark eyes.

These birds are omnivorous and are known to eat crabs, insects, shellfish, plant roots, seeds, lizards, frogs, grain, and turtles. They have been observed feeding from the ground, chasing insects in the air, and feeding in the water. Sometimes they follow farm machinery and capture insects flushed from the plowing and mowing activities. Boat-tailed Grackles are also known to consume food scavenged from humans picnicking or eating outdoors.

This species tends to nest in large colonies in the same locations from year to year. Boat-tailed Grackles may be unique among North American songbirds because the sexes remain separate and apart for most of the year, coming together only during nesting season. They have an odd mating system known as “harem defense polygyny.” Females cluster their nests in close proximity while the males compete to defend the entire colony and to mate. Many males may be attracted to the breeding colonies but only a few high-ranked dominant males get to breed with the females in a breeding system that is similar to that used by many deer. But this is not the whole story by a long shot! Although the dominant male may get up to 87% of the copulations in a colony, DNA analysis has shown that he may actually be the father of only about 25% of the young in a colony. DNA testing has revealed that the majority of young Boat-tailed Grackles are fathered by non-colony males in areas away from the colonies!

The Boat-tailed Grackle lays 2-5 pale blue eggs marked with brown spots and scrawls in a cup formed from vegetation and mud that hangs from 2’-10’ high in marsh grasses, cattails, saw grass and wetland shrubs and is positioned to be safe from predators. The female incubates the eggs for about 13 days until the babies hatch. It has been reported that fledglings that fall into the water can swim well for short distances and use their wings as paddles! Possible predators include alligators, snakes, and birds of prey. Rats have even been known to eat the eggs and nestlings. There have been cases reported of many Boat-tailed Grackles that are known to have died from pesticide poisoning.

They have been observed in an unusual behavior known as “anting”. This is where a bird disturbs an ant mound with its feet or belly and then allows ants to crawl up its body and spray their defense chemicals. These chemicals are believed to kill or repel parasites residing in the bird’s feathers. When’“anting,” the Boat-tailed Grackles may look like they are shivering because the ants are climbing on their skin. Sometimes they will even pick up an ant and rub it on their feathers to achieve the same result.

Featured Fish

Dollar sunfish
(*Lepomis marginatus*)

The dollar sunfish is a small sunfish that is somewhat common in Florida. It is native to the southeastern United States being found from East Texas and Southeast Oklahoma across to the Atlantic and down through Florida.

Dollar sunfish are five inches or less in length and have a compressed body. The earflap is black with green spots, is angled

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greater of is surface area covered and the plants are removed it is highly probable that the water clarity will decrease.

Dissolved oxygen levels may vary over a 24-hour period in a water body that has dense stands of submersed aquatic plants or high concentrations of algae. During the day oxygen is produced by the plants however, the plants and other organisms use up the oxygen at night. Thus, oxygen depletion is possible in water bodies with large amounts of aquatic plants or algae and can contribute to fish kills. Low dissolved oxygen concentrations have a greater chance of occurring during several days of cloudy weather.

The frequency of low dissolved oxygen and other interactions between fish and aquatic plants are variable. The relationships vary because of differences in the aquatic ecosystems, plant abundance, fish species composition and geographic area. For example, there are some fish species like the bluespotted sunfish and warmouth whose abundances usually increase as plants increase in the water body. Some species such as the gizzard shad decrease in numbers as the amount of plants increase in a water body while the numbers of other species, including the largemouth bass, may not change at all.

The presence of aquatic plants can increase the structural complexity of lake ecosystems, providing refuge for prey species and interfering with the feeding behaviors of predator species. The behavior of small or juvenile fish is strongly influenced by their exposure to predators. For example, if small fish are safe from predators they can forage more effectively without fear of being eaten. The visual and physical barriers of the plant stems and leaves decrease the foraging efficiency of predators and as a result, they may grow more slowly in habitats with more plant structure.

These are only a few of the important relationships that exist between aquatic plants and fish populations. However, these relationships give little insight into how aquatic macrophytes affect fishing. Some anglers enjoy fishing in aquatic plant beds and some do not, but most anglers agree that too many plants can impede fishing and boating activities.

Interactions between aquatic plants and other forms of wildlife, such as aquatic birds, are also highly variable. These interactions vary because of differences in aquatic systems, plant forms, species composition, and geographic area. Some bird species increase in abundance, like the ring-necked duck, while others species like the double-crested cormorant decrease in abundance as aquatic plant abundance increases in a water body.

When are Aquatic Plants a Problem?

If aquatic plants interfere with a particular use of a lake then they may be considered a problem. Because lakes cannot be all things to all people, the aquatic macrophyte abundance within a given lake may be a positive or negative factor depending on one's intended use of that lake. Thus, defining the primary use of the lake is the first step when determining if there is an aquatic plant problem.

Aquatic Plant Management

What are some of the problems that aquatic plants can cause in your lake?

Aquatic plants can:
1. Fill in canals and lake bottoms with decomposing organic matter and can increase organic sedimentation.
2. Physically block lake access and boat movement on a lake with both living or dead plant materials. These blockages can also restrict water movement, causing either flooding or low water depending on which side of the blockage one is located.
3. Cause navigation problems that range from minor to severe for swimmers, water skiers, and other recreational water users.
4. Provide a refuge for mosquitoes linked to diseases such as equine encephalitis and West Nile virus. Aquatic plants may also harbor organisms required for the cycle of parasites that can cause swimmer's itch.
5. Contribute to severe oxygen depletion killing many organisms that live in a water body, including fish.

If you think you have an aquatic plant problem, first determine what federal, state, or local agencies are responsible for aquatic plant management in that water body. The Florida Department of Environmental Protection (FDEP) Bureau of Aquatic Plant Management should be contacted to determine what assistance is available and what an individual can legally do to control aquatic plants on their water body. Problems affecting the use of public-access lakes will normally be the responsibility of public agencies. Decisions concerning perceived whole-lake problems on private lakes should be addressed through a lake homeowner's association after recommendations from public agencies.

Aquatic Plant Control

Methods that may be considered for aquatic plant management include physical removal, habitat alterations, biological controls, and herbicides. Each method has pros and cons concerning effectiveness, cost, and impact on the lake system as well as lake use.

Physical removal of aquatic plants can range from hand removal to mechanical harvesting. Generally this removal method is only effective for a short duration. Physical removal is expensive because after you remove the plants you must dispose of them somewhere. Aquatic plants are heavy and contain approximately 95% water thus requiring lots of energy to remove the plants. Therefore, the physical removal technique is better suited for spot treatments in a water body rather than a whole-lake treatment.

The use of herbicides for controlling aquatic plants can be very effective but with relatively short-term results (usually

only 1-2 years of control). The use of herbicides in most water bodies requires a permit from the FDEP. Other factors to consider are that herbicides vary in their effectiveness for controlling different aquatic plant species and treatment rates need to be carefully determined. Application techniques for administering some aquatic herbicides also require special training. If herbicides are deemed a viable solution, you may need to hire somone who is licensed to apply herbicides to control aquatic plants that are causing problems. Like physical removal, aquatic plant control strategies using herbicides can range from spot treatments to whole-lake treatments, but herbicides are generally the better choice for whole-lake treatments.

Some biological controls include releasing herbivorous insects and stocking fish that eat aquatic plants. The most common biological control for aquatic plant control is the grass carp. These fish primarily eat succulent submersed plants such as hydrilla. The State of Florida requires a permit to stock these fish, which can be obtained from the Florida Fish and Wildlife Conservation Commission (FFWCC). When stocked at high densities, the grass carp can be a very effective and long-term form of biological aquatic plant control. However, be aware that grass carp have the potential to eat all the vegetation in your lake, even desirable species that are not causing problems. Thus, you should only use grass carp when the complete control of aquatic vegetation is an acceptable management objective.

There are several strategies for controlling aquatic plants and the considerations can be complicated. Before beginning control, you should formulate an aquatic plant management plan with the help of aquatic plant management experts. Contacting the FDEP Bureau of Aquatic Plant Management would be a good start.

This article is from a chapter of *Living at the Lake,* A handbook for Florida Lakefront Property Owners (SP247) written by Marilyn Bachmann, Mark Hoyer and Daniel E. Canfield, Jr., in 1999. This book can be purchased from UF/IFAS bookstore by calling 1-800-226-1764 or online at: IFASbooks.ufl.edu.

Featured Fish Continued

upward and has a light green margin. Non-breeding fish are olive on the back with orange and brown flecks and pale yellow to white on the lower sides and belly. Breeding males are bright red with blue green spots and have large green specks on the earflap.

Dollar sunfish are found in lakes, swamps, springs, creeks and small to medium sized rivers. In these habitats they are usually associated with brush and vegetation and can be found in habitats with either sand or mud bottoms.

Dollar sunfish feed on a variety of items across their habitat. In Florida, their main diet consists of aquatic insects while in Tennessee other food items such as detritus, filamentous algae, and terrestrial insects were included.

Dollar sunfish spawn from April to September in the St. John's River but may spawn earlier in southern Florida. An aquarium hobbyist, Robert Rice, in the article' *"The dollar sunfish (Lepomis marginatus) as an aquarium species""*observed that dollar sunfish need a chilling period at 60˚F or lower before they would spawn. Once the temperature reached 74˚F they spawned consistently until the temperature reached 80˚F when all spawning ceased.

In a study of 60 Florida lakes sampled between June 1986 and June 1990, dollar sunfish were found in 33% of the lakes sampled. This suggests that dollar sunfish are relatively common in Florida however, they were never collected in great abundance in any of the lakes sampled.

In lakes where they were collected, lake surface area ranged from 22 acres to 13,788 acres and average depth ranged from 2 feet to 19 feet. Some lakes had 100% bottom coverage of submersed aquatic plants while other lakes were very sparsely covered with submersed aquatic plants (<1%). Some lakes where dollar sunfish were collected had very large amounts of planktonic algae with chlorophyll concentrations > 100 µg/L and Secchi disk visibility < 2 feet. However, other lakes were low in algae and were quite clear with chlorophyll concentrations < 2 µg/L and Secchi disk visibility > 16 feet. This study of 60 Florida lakes showed that dollar sunfish were found in a broad spectrum of lake types and water chemistries.

While dollar sunfish are not commonly thought of as sport fish due to their small size, they have potential as an aquarium species. In the article mentioned earlier, Robert Rice observed that dollar sunfish in an aquarium would feed on a variety of food sources including frozen crawfish, raw oysters, worms, and live insects. He also noticed that males "establish a hierarchy for everything from feeding to breeding" while females "float between territories with little effects." Mr. Rice goes on to suggest that this species is well suited for the aquarium and that due to the small mouth size of the dollar sunfish, an aquarist would be able to keep darters, shiners, and madtoms in a community tank with dollar sunfish with few problems.

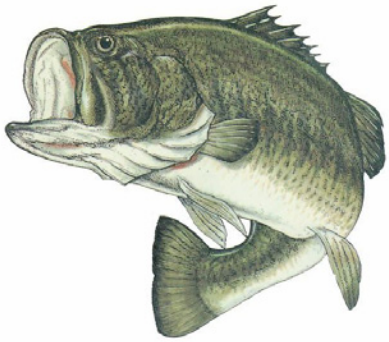
Lake Griffiin Fish Stocking

If you are looking for a good fishing location then Lake Griffin in Leesburg, Florida might be your destination. In the last two years since December of 2004, Florida LAKEWATCH has transferred a total number of over 9,200 Florida largemouth bass greater than eight inches in length from non-fished, private waters into Lake Griffin. This fish transfer is part of a research/demonstration project to determine if high numbers of larger-sized Florida largemouth bass could be successfully collected from private waters, transported, and stocked into Lake Griffin to assist in restoring the economic vitality of Lake Griffin's largemouth bass fishery.

The primary source of fish was from private waters located on the property of Orlando International Airport. Access to the property was obtained through the efforts of Orange County Commissioner Bob Sindler. With the assistance of John Metcalf, wildlife manager for the Orlando Airport Authority, the airport authority provided access to restricted areas throughout the transfer program. Additional sources of fish included ponds under control of the Department of Fisheries and Aquatic Sciences at the University of Florida and phosphate pits owned by Mosaic Phosphate Mines in Polk County, Florida. Due to concerns expressed by the Florida Fish and Wildlife Conservation Commission (FFWCC) regarding possible genetic contamination by northern strains of the largemouth bass, the fish populations at each donation site were genetically tested. Largemouth bass populations from all donation sites were confirmed to be Florida largemouth bass.

The major objective of this research/demonstration project was to stimulate angler interest in fishing at Lake Griffin. Over the past two winters, the total number of largemouth bass stocked into Lake Griffin measuring greater than 14 inches was over 2,700. Over 1,000 of these 2,700 fish exceeded 17 inches in length. Individual fish weights were estimated from fish lengths and ranged from 2.1 pounds to 11.3 pounds. The fish transfer project generated considerable excitement amongst viewers of the release events and generated positive news stories in the printed press and television.

For research purposes, all largemouth bass stocked into Lake Griffin had their left pelvic fins clipped as a mark for future identification. This procedure does not injure the fish and allows professional biologists to distinguish stocked largemouth bass from Lake Griffin largemouth bass. In May 2006, Florida LAKEWATCH sampled the largemouth bass population in Lake Griffin using electrofishing and captured a total of 15 marked largemouth bass from 7 of 12 sampling transects. Approximately 10% of the total bass caught by Florida LAKEWATCH were largemouth bass transferred and stocked into Lake Griffin. The Florida Fish and Wildlife Conservation Commission also used electrofishing to sample the largemouth bass in Lake Griffin and collected 19 marked largemouth bass from



http://www.droppinaline.com/

13 of 29 sampling transects. About 10% of the bass caught by the FFWCC were largemouth bass stocked into Lake Griffin. This limited fish sampling study demonstrated that many of the 9,200 largemouth bass released into Lake Griffin had survived, were found distributed throughout the lake, and comprised a significant percentage of the fish surveyed by professional fisheries personnel.

Another method used to mark largemouth bass in this study was with orange-colored fish identification tags that were printed with the telephone number of Florida LAKEWATCH. In addition to fin clipping, these tags were also inserted into 3,589 largemouth bass stocked into Lake Griffin during the winter of 2005-2006. The incidence of tag reporting provided some indirect information for a preliminary assessment of potential economic return. No monetary rewards were offered to encourage anglers to report capture of tagged fish. Between January 1, 2006 and June 19, 2006, anglers placed 218 phone calls to Florida LAKEWATCH reporting catches of tagged fish released into Lake Griffin. It is important to note that when monetary rewards are not offered, as few as 10% of fish caught are typically reported. This information, as well as reports from local fish camp owners, demonstrated that anglers were catching a substantial number of the stocked largemouth bass.

Another way of looking at potential economic value of the largemouth bass transfer project to the local community is to assess the monetary value of the transferred fish. The State of Florida has assigned a replacement dollar value and recreational replacement dollar value for different sizes of largemouth bass (Florida Administrative Code 62-11.001). For bass released into Lake Griffin during the winter of 2005-2006, the replacement value in 2005 dollars was $86,875 while the recreational replacement value was $144,325. Adding in the values for bass released into Lake Griffin during the winter of 2004-2005, raises the total replacement value since 2004 to $162,353 and the total recreational replacement value to $278,147.

The fish transfer/stocking project into Lake Griffin has now finished its second year. Florida LAKEWATCH feels that it has been successful in providing quality fish for angler to catch in Lake Griffin while other remedial actions are taking place to improve the aquatic environment so that future quality fish populations may sustain themselves. We are very appreciative to the Lake County Water Authority for the funding for this project.

Florida LAKE WATCH

This newsletter is generated by the Florida LAKEWATCH program, within UF/IFAS' Department of Fisheries and Aquatic Sciences. Support for the LAKEWATCH program is provided by the Florida Legislature, grants and donations. For more information about LAKEWATCH, to inquire about volunteer training sessions, or to submit materials for inclusion in this publication, write or call:

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