

Florida

LAKEWATCH



A Publication Dedicated to Sharing Information About Water Management and the Florida LAKEWATCH Program Volume XVII 2000

A Special Thanks to LAKEWATCH Volunteers



JEB BUSH
GOVERNOR OF THE STATE OF FLORIDA

August 21, 2000

Dear LAKEWATCH Volunteers:

I have recently been made aware of your many contributions as volunteers who monthly take water samples for the purpose of analyzing our water supply. The quality, safety, and supply of our water should be of utmost concern to each Floridian.

Each day in the Sunshine State, compassionate and dedicated residents are taking up the cause of volunteerism to help make a difference in their communities. These caring Floridians are continuing a tradition of civic service that has long been one of our state's strengths.

Your contributions have afforded you the opportunity to participate in the life of your community. You are to be commended for your generosity of time and energy. Your tireless efforts are an example to us all.

Best wishes for many more years of dedicated service of diligently monitoring the quality of water in Florida's lakes and coastal waters.

Sincerely,



Jeb Bush

JB/hss



UNIVERSITY OF
FLORIDA

Institute of Food and Agricultural Sciences

A Winning Combination:

Bird Counts and LAKEWATCH Data

Several years ago, LAKEWATCH queried volunteers to see if anyone was interested in collecting long-term bird species and abundance data for their lake. Although a few volunteers responded positively, we were unable to pursue it further due to the rigors of the program.

Fortunately, some folks just won't give up on an idea. With that little amount of encouragement, LAKEWATCH volunteer John Winn took it upon himself to follow through by adding bird identification and abundance data to his monthly water monitoring duties. Needless to say, when he informed us about the bird data he'd been studiously collecting on Lake Alto, in Alachua County, for five straight years, we were impressed.

As a result of John's diligence, LAKEWATCH Program Leader Mark Hoyer was able to team up with him on a collaborative scientific paper entitled *Citizen Monitoring of Aquatic Bird Populations Using a Florida Lake*. It's currently in review by the North American Lake Management Society for possible publication in their peer-reviewed scientific journal. In the paper, Mark Hoyer makes the point that, yet again, citizen volunteers have proven their ability to accurately monitor something that has traditionally been left to professional biologists.

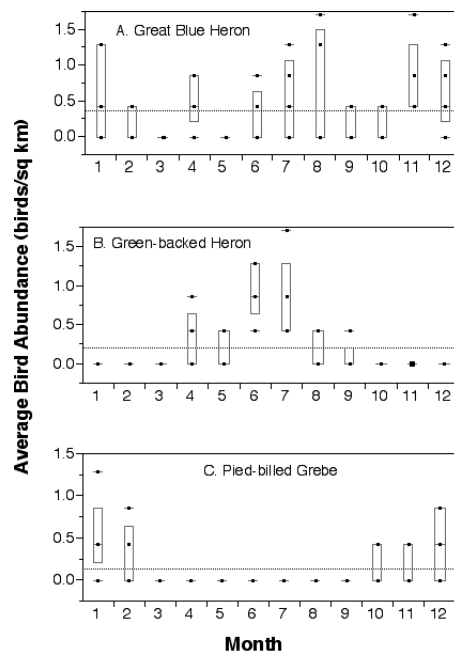
John's methods for identifying and counting birds was fairly simple. Between 9:00 am and 12:00 noon, once a month, for five years (from January 1995 - December 1999), he slowly motored around the perimeter of the lake in a small boat. Birds were identified "to species" with the exception of gulls, terns and crows. As noted in the paper, "care was taken to avoid counting birds twice if they flushed ahead of the boat." Using this approach, John counted 33 species of birds; seventeen of the species were counted every year, and eight were counted during only one year.

The most abundant bird species were the turkey vulture, black vulture, and cattle egret. The least abundant (a count of only one bird in five years) were the common loon, horned grebe and northern harrier.



Green-backed heron

Joe Richard



Using the graph above, we can see seasonal patterns emerge from John Winn's data. It seems the great blue heron is a year 'round visitor, while another local species, the green-backed heron, mostly utilized the lake during Spring and summer months. The Pied-billed grebe's migratory visits are also evident.

However, John's data reaches beyond traditional bird counts, which typically occur once or twice a year, and provide a snapshot only of bird species and abundance for a single day. Instead, his monthly monitoring efforts provide valuable information about seasonal trends in populations of individual bird species (see graph), including migratory patterns that can

be compared from year to year.

In addition, we can look at whole bird populations on Lake Alto over a five year period. For example, using the data, we were able to determine that 1998 was the year with the lowest bird abundance during that time frame. Surprisingly, this was the year Florida experienced a tremendous amount of rain. One possible explanation is that large amounts of rain created new wetland areas for the birds to utilize.

The highest number of birds were counted in 1997 — the driest year of the study. It's thought that when normal wetland or marsh areas dried up, the lake became an aquatic refuge for birds.

Which brings us to another important factor that makes these data even more unique. John's monitoring efforts represent one of only a handful of studies that have examined the use of lakes by aquatic birds. It seems the majority of studies done in Florida have taken place in marsh and wetland habitats.

With a reported loss of 74% of these habitats, the importance of lake systems to aquatic bird populations may be increasing. It certainly warrants the need for further study. Without sufficient lake/aquatic bird data, no one knows just what role Florida lakes provide for these animals.

Now that John Winn has proven that this type of work can be done by volunteers, LAKEWATCH plans to build on his example by dedicating future staff time toward the collection and organization of monthly bird count data.

Beginning July 1 of 2001, if current funding levels are continued, we will be gearing up to work with interested volunteers to gather bird data on as many LAKEWATCH lakes as possible.

Anyone interested in participating in this project is encouraged to contact:

Florida LAKEWATCH
7922 NW 71st Street
Gainesville, FL 32653-3071
Phone: 1-800-LAKEWATCH (800-525-3928)
E-mail: lakewat@ufl.edu

LAKEWATCH Expands to Coastal Waters

Thanks to LAKEWATCH's hard-earned reputation for collecting reliable water chemistry data, legislators were convinced this past legislative session that the same level of success could be achieved for Florida's saltwater environments. As a result, funding has been made available to expand our scope to include monitoring of estuaries, bays, and offshore waters around the state.

The new saltwater component is being called **Project COAST** (Coastal Assessment Team) and volunteers will be sampling the same LAKEWATCH parameters (i.e. total phosphorus, total nitrogen, total chlorophyll and water clarity), plus a few additional ones that are significant to marine environments such as salinity and color.

Dr. Tom Frazer, Assistant Professor at the Department of Fisheries and Aquatic Sciences, will be co-directing the coastal monitoring efforts along with LAKEWATCH director Dr. Daniel Canfield.



Dr. Tom Frazer

While Dr. Frazer's coastal marine research may be new to LAKEWATCH volunteers, it has been an on-going project since 1996. With funding provided by both the Suwannee and Southwest Florida Water Management Dis-

tricts, Tom and several research biologists began gathering preliminary water chemistry data along Florida's Gulf of Mexico coastline, from Weeki Wachee to Steinhatchee.

Now that Project COAST has earned legislative support and funding, he and his staff will be teaming up with LAKEWATCH to train and assist volunteers along more than 1350 miles of the Florida coastline.

LAKEWATCH volunteers who have already been monitoring brackish or near-coastal waters will be contacted by their regional coordinator and introduced to the new sampling requirements for Project COAST. (We are currently in the midst of conducting these training sessions.) If you don't hear from us, there will be no change in your sampling protocol. However, there



Joe Richard

Volunteer Barbara Toland records Secchi depth measurements and weather observations in the Sugarloaf Key area, near Key West. Her saltwater monitoring efforts which will now be included in the Project COAST component of our program.

will be a few changes at collection centers around the state:

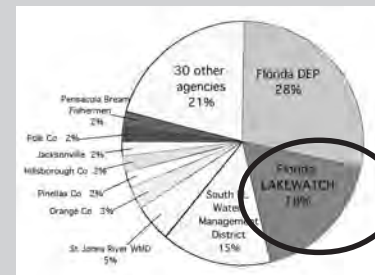
- For starters, freezer space will now be shared with slightly larger sample bottles. The larger bottles are to be used by saltwater samplers, as they will need more water for laboratory analysis. LAKEWATCH volunteers should continue to use the 250 ml bottles they've used all along.
- Secondly, supply bags with blue data sheets are to be used by volunteers monitoring saltwater. Lake samplers should continue to use supply bags with white data sheets.

It's an exciting time for Florida LAKEWATCH/Project COAST. With a large and growing database for freshwater lakes, the expansion to coastal waters was a natural progression.

We look forward to working with Project COAST volunteers as we continue to build on one of the largest and most successful water monitoring programs, and databases, in the country.

Thank you all for your hard work and dedication in monitoring Florida's precious waters —be they fresh or salt!

We're not the only ones taking notice of your accomplishments:



Florida's Department of Environmental Protection presented us with this graph recently, documenting agencies and/or organizations involved in water monitoring activities throughout the state. When you consider that 42 separate entities are involved, LAKEWATCH's 18% of the pie is significant.

Soon after, it was brought to the attention of Governor Jeb Bush who wrote a letter of appreciation for LAKEWATCH's outstanding contribution to water monitoring. (See front cover.)

We are proud indeed and want you to know that we couldn't do it without you. We also want you to know that the data you collect are used on a daily basis by people throughout the state, country, and even internationally. Scientists, water managers, city and county planners, environmentalists, anglers, farmers, realtors, businesses, students, and citizens like yourself have found LAKEWATCH data to be invaluable for making informed decisions about Florida waters.

Keep up the great work!



UNIVERSITY OF FLORIDA

Institute of Food and Agricultural Sciences

Volunteer Bulletin Board

New Miami Dade Collection Center

Volunteers in Miami-Dade County now have two collection center locations:

The Deering Estate

1601 SW 72nd Avenue
Miami, FL 33157.

Contact: Alice Warren-Bradley
Phone: 305/ 235-1668 x 228

Tropical Park

7900 SW 40th Street
Miami, FL 33155

Contact: Sally Timberlake
Phone: 305/226-8315

Leon County UF/IFAS Collection Center Temporarily Closed February - May 2001

Due to repairs and improvements being made at the Leon County Extension Office, the freezer will be unavailable for about 4 months (February thru May 2001). Supplies will be available in a modular unit at the south end of the extension building, but there will be no freezer space available. We apologize for the inconvenience and thank you for your cooperation. During the interim, samples can be taken to:

Wakulla County Extension Office
84 Cedar Avenue
Crawfordville, FL
Phone: 850/926-3931

MaClay State Garden Park
3540 Thomasville Road
Tallahassee, FL
Phone: 850/487-4115

Missing a great newsletter?

You've probably seen copies of *The Volunteer Monitor* on our "free literature" table at LAKEWATCH regional meetings; but just in case, we thought we'd introduce you. *The Volunteer Monitor*, now in its twelfth year of publication, highlights a wide variety of watershed-monitoring

Fresh or salt?

With the addition of coastal monitoring to our program, we now have two different sets of sample bottles at some collection centers throughout the state.

◆ If monitoring freshwater lakes or rivers, please continue to use kits with the smaller, original sized bottles and accompanying white data sheets.

◆ Supply bags with larger bottles and blue data sheets are for saltwater monitoring only.



Joe Richard

Questions? Don't hesitate to call us at 1-800-LAKEWATCH (1-800-525-3928).

activities conducted by volunteers across the nation including: water chemistry, benthic macro-invertebrates, vegetation, and even exotic invaders of the plant and/or animal kind.

Subscriptions are free and it's also available online at:

www.epa.gov/owow/volunteer/vm_index.html

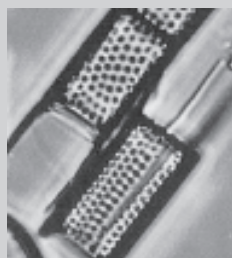
The River Network

550 SW 6th Avenue, Suite 1130
Portland, OR 97204-1535
Phone: 503/241-3506
E-mail: volmon@rivernetwork.org.

Oops...

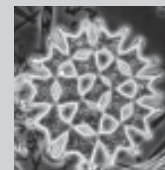
The photo illustration used for the paleolimnology article on page 3 of the last issue (Vol XVI), was in fact, a *Pediastrum*—a green alga. Please excuse the confusion.

The photograph shown here depicts a true diatom, *Aulacoseira granulata*, a species commonly found in Florida lakes. As mentioned in that same article, the glass-like shells of diatoms often



Aulacoseira granulata
— a species of diatom

remain in lake sediments and can be identified and aged hundreds, even thousands of years later. Such information provides valuable clues about the history of a lake's water quality over time.



Pediastrum — a green alga.

Permits, etc.

Did you know that you need a permit to construct a dock, remove muck, or plant aquatic vegetation? There are permitting requirements for some lake activities that you should know about. The good news is that the Florida Department of Environmental Protection maintains a web site that helps clarify such things. Check it out:

http://www.dep.state.fl.us/officsec/ombud/permit_c.htm

If you don't have access to the internet, you can call the main office in Tallahassee for more information: 850/488-0130.

Note: You can also refer to *Living At The Lake*, a handbook for Florida lakefront property owners. The book is available thru the UF/IFAS publications office for \$15. For more information call: 800/226-1764.



Joe Richard



Filtering Problems?

Are your algae filters clogging with just a few squeezes of the hand pump? If so, you may need a smaller graduated cylinder; this would enable you to

measure and pump less water for your algae sample. Remember, we only need you to pump enough water through the filter to leave some green color on the surface of the filter. The important thing is that you've accurately measured and recorded the amount of water filtered.

If your lake is experiencing larger concentrations of algae than in the past, you may need a different sized graduated cylinder. Unsure? Call:

1-800-LAKEWATCH (1-800-525-3928).



Photo courtesy of John Yocum.

Ray Blomdahl with 10-pound, 14 ounce bass caught on Lake Riley last year.

Attention Anglers!

We hope you've been enjoying this fine weather and getting out to your favorite fishing spots. If so, we're also hoping that you've been able to fill out your LAKEWATCH Angler Diaries. Once completed, we do ask that you mail the diary back to us as soon as possible—or leave it at your local collection center. A replacement diary will be sent upon request. For more information, call your regional coordinator at:

1-800-LAKEWATCH (1-800-525-3928).

We need your inactive sampling materials!

If you are an inactive LAKEWATCH volunteer who still happens to have sampling materials, we



need your help! We need those materials back so that we can add new volunteers to the program. If you are no longer using any of the items shown in the photo above, please bring them to a collection center as soon as possible. Not sure where the nearest collection center is? Please call:

1-800-LAKEWATCH
(1-800-525-3928)



May 21 - 24, 2001

12th Annual Meeting of the Florida Lake Management Society

Mark your 2001 calendar!

The Florida Lake Management Society (FLMS) was created in 1988 with the goal of promoting the protection, enhancement, conservation, restoration, and wise management of Florida's freshwater resources, while also providing a forum for education and information exchange.

To that end, symposiums are held each year to provide presentations of interest to scientists, water resource managers, and also the lay public. In fact, one of the stated goals of these conferences is to facilitate a "technology transfer" from professional scientists and resource managers to shoreline property owners about how they can protect and enhance their local waters. It also provides an excellent opportunity for

professionals to receive input from citizens. Attendance for the 2001 symposium is expected to be high as Tallahassee is notoriously hopping with academic, governmental, and citizen activity.

Of special interest to LAKEWATCH volunteers: are the optional half-day pre-conference workshops that are scheduled for Monday May 21. At least one of these workshops will be dedicated to volunteer monitoring and LAKEWATCH staff will be helping to organize the session. The format will give citizens a rare opportunity to discuss issues of concern, as well as share their successes in lake management. We are encouraging volunteers to attend, as both participants and/or speakers.

Workshop fee: \$35.

General sessions begin on Tuesday May 22. Registration for the entire conference is \$100 per person. A late fee of \$25 will be added to registration fees after April 21.

Volunteers are also welcome to present a paper at the general session. Provide the title, author's name, address, and 250-word summary to:

Mike Scheinkman 850/921-9918
E-mail: scheinkman_m@dep.state.fl.us

For more about the conference or workshops, call:

Sean McGlynn 850/570-1476
E-mail: mcglynnlabs@cs.com

Countless Ways to Use LAKEWATCH Data

The TEAM Approach:

A Management Plan In Action

The TEAM[®] Approach is a lake management concept that brings citizens, scientists, and water management professionals together for the purpose of developing realistic community-friendly lake management goals.

It's a fresh change from the traditional command and control approach, and it's currently being "test driven" by a small but active group of citizens in Citrus County.

For two years, they've worked with scientists and water management professionals to discuss and develop a management plan for the Tsala Apopka Chain-of-Lakes. The effort was funded cooperatively by Citrus County and the Southwest Florida Water Management District, and one year after the final report was completed, progress is rolling right along. At least four recommendations from the final report are now being put into action:

1 The first recommendation was to establish the Lake Tsala Apopka Basin Recreation & Water Advisory Board, an elected five-member advisory board with representatives from each of the major "pools"

from the Tsala Apopka Chain-of-Lakes system, namely Floral City, Inverness, and Hernando. Two at-large members were elected from the general community, along with two alternate or substitute members. The group is challenged to keep things moving forward, as changes and issues arise. By meeting on a monthly basis, they'll receive citizen and professional input on emerging issues, as well as report on progress being made on current projects. (Two members, Jack Isaacs and Frank Robinson, are former LAKEWATCH volunteers.)

2 Muck removal is now one of the top priorities, as recent drought conditions (i.e. low water levels) are ideal for such activity. Mr. Tom Dick, with Citrus County's Aquatic Services division, says they're hoping the project will take shape within this fiscal year. The board is currently working to acquire the necessary permits from Florida's Department of Environmental Protection and the U.S. Army Corps of Engineers.

3 The third recommendation awaiting action is an aquatic plant restoration

project, currently being discussed with the Florida Fish and Wildlife Conservation Commission. It's hoped that during this time of low water, aquatic weeds such as cattails and some types of invasive grasses can be removed from the littoral shelf area around the lake system.

4 So how does LAKEWATCH data play into all this? According to Mr. Dick, the need for monthly LAKEWATCH data was unanimously agreed upon early in the recommendation process. And so monitoring remains a top priority, with possibly a few parameters added to the repertoire.

As LAKEWATCH Program Leader Mark Hoyer said recently, "These projects are a good start for a management plan that will continue to evolve through the years, with plenty of adjustments along the way. That's why it's imperative that volunteers continue to monitor these lakes." Anyone interested in assisting with monitoring should contact the LAKEWATCH office at:

1-800-LAKEWATCH (1-800-525-3928).

✪ **TEAM is an acronym for "Together for Environmental Assessment and Management."**

Featured Fish:

Sailfin molly ~ *Poecilia latipinna*

If you've ever spent time mucking about with a dipnet in the shallow end of a lake or pond, you may have already met the sailfin molly and just didn't know it. At first glance, it may appear very similar to other minnows as it is small in size (generally no larger than a couple of inches in length), and its body is cylindrical in shape and gray in color. However, closer examination most certainly sets the sailfin molly apart from its fresh/brackish water brethren.

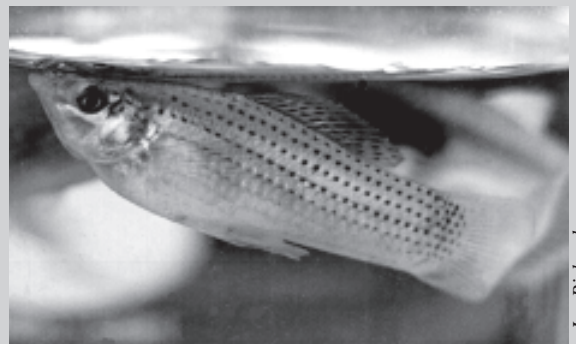
The sailfin molly's most visible claim to fame is its large sail-like dorsal fin, complete with shimmering golden flecks of color. Along its side, dark spots adorn each tiny scale, giving it a mottled appearance. This handsome little fish also retains its colors quite well, making it an ideal aquarium species.

And while you won't hear about them on your favorite Saturday morning fishing program, the sailfin molly holds an important place in the food web as a forage fish for several top predators including the largemouth bass. The mollies themselves feed primarily on algae, aquatic plants, organic detritus,* and mosquito larvae. However, their reproductive habits are perhaps the most distinctive trait. Unlike most other freshwater species, sailfin molly females give birth to live young. Males and females actually mate and the female then carries developing eggs. The eggs are hatched internally, and live young emerge from the female.

In Florida, research suggests that sailfin mollies tend to occur in hardwater, nutrient-rich lakes with a moderate to large amount of aquatic plants. They also inhabit both fresh and brackish coastal waters from southeastern North Carolina to the northwestern side of the Yucatan peninsula in Mexico.

*Detritus –decaying plant and animal matter.

Note: Much of the information used here was excerpted from the *Handbook of Common Freshwater Fish in Florida Lakes*, by Mark V. Hoyer and Daniel E. Canfield, Jr. LAKEWATCH data was an integral part of the research for this publication.



Joe Richard

Do You Know Your Regional Coordinator?

Thanks to legislative support, we've been able to expand our LAKEWATCH/Project COAST staff right along with the increasing number of lakes and coastal waters being monitored. We now have six regional coordinators assigned to specific regions of the state so that we can provide individualized attention to volunteers. Please take a moment to see who your regional coordinator is, as things may have changed from a few months ago. (They will probably change again, as the program continues to grow). We hope this doesn't inconvenience you in any way. It's just our way of providing an equitable division of regions for the coordinators. Please feel free to contact any of these individuals if you should need assistance. Call 1-800-LAKEWATCH (1-800-525-3928).



Julie Terrell

- Bay
- Calhoun
- Citrus
- Dixie
- Escambia
- Franklin
- Gadsden
- Gulf
- Holmes
- Jackson
- Wakulla
- Walton
- Washington
- Jefferson
- Leon
- Levy
- Liberty
- Madison
- Okaloosa
- Santa Rosa
- Taylor



Claude Brown

- Alachua
- Baker
- Bradford
- Clay
- Columbia
- Duval
- Flagler
- Gilchrist
- Hamilton
- Lafayette
- Marion
- Nassau
- Putnam
- St. Johns
- Suwannee
- Union
- Volusia



David Watson

- Brevard
- Indian River
- Lake
- Orange
- Seminole



Eric Schulz

- Hernando
- Hillsborough
- Pasco
- Pinellas
- Sumter




Dan Willis

- Broward
- Dade
- Glades
- Hendry
- Highlands
- Martin
- Monroe
- Okeechobee
- Palm Beach
- St. Lucie



Jeanette Lamb

- Charlotte
- Collier
- De Soto
- Hardee
- Lee
- Manatee
- Osceola
- Polk
- Sarasota



We'd also like to introduce you to our water sample courier, **Dee LaRose**, who is entrusted with bringing your samples back to the water chemistry laboratory here in Gainesville. She's a great asset to the program as she seems to be able to tackle any job we give her — and with a smile. Be sure to say hello if you should see Dee at your local collection center.

Autumn Musings on Peanut Pond

by Nadine Foley

We couldn't resist this lovely essay about Peanut Pond in Lake County, written by LAKEWATCH volunteer Nadine Foley. We know you'll enjoy it as much as we did.

It's been a hot, dry year and we are witnessing much of what that cycle in the weather brings to Florida. It means lower lake levels, fires, and hot stretches, which tax anything exotic. But, it also is a good thing in many ways. If you'll notice, the native plants are doing very well. Here at Peanut Pond, our lake is down again, although my neighbor, Yvonne Rice and I have seen it even lower two other times in the 35+ years we've lived here.



Mark Hoyer

Now the lake sports a golden necklace all morning long with thousands of yellow-eyed grasses blooming in the sun. Next down from the necklace is a band of new delicate green grass creeping down as the water lowers. A final band of white sand provides a feast of freshwater clams for the wading birds. We aren't worried. The lake will be up again, filling the grasses and there will be new habitat for the fish, frogs, snails and everything else. Let the lake go up and down, please.

A hot, dry stretch was perfect construction time for "Big Mama" gopher tortoise as she gained energy from the sun to dig a big new tunnel, sand flying at a fierce clip for days. She is nicely settled in now and ready for whatever the weather. Meanwhile, the sun has ripened her fruit treats on the passion vines and prickly pear cactus. In spite of heat and drought, all the wild cherry trees, blackberries, elderberries and other native fruits produced ample crops for the birds and animals.

The palms and palmettos had put out their bloom spikes then just waited awhile during the dry weather. After a nice half inch of rain, within two days, their blooms opened into dazzling plumes of sweet scented flowers laden with nectar. The pollinators got busy and the bee keeper was happy this year.

The wind blew down an old snag oak that had served woodpeckers for many years. Some red-bellied woodpeckers had already fledged one family this year out of the old tree and we knew there were baby birds in a nest hole again. Well, they had taken a wild ride down alright, but the babies were still peeping inside. So, we cut off a five-foot length with the nest in it, propped it up vertically, and hoped for the best. As we walked down the hill, one of the parents flew back in the hole and undeterred by misfortune they have raised their babies and launched them out.

Nature is resilient — stand back and take in the big picture.



It's that time of year...

Please be sure to deliver all remaining year 2000 water samples to the nearest collection center as soon as possible, or no later than December 31.

P.S.

Thank you for your hard work and dedication in monitoring Florida's precious waters. May you enjoy a happy and safe holiday season!

— the Florida LAKEWATCH Crew

Dear Friend of Your Lake,

Do you have a concern about your lake and an interest in its future? If you have access to any type of boat, can spend two hours each month on your lake, and are willing to monitor for at least a year, you might be eligible for the Florida LAKEWATCH volunteer program.

Florida LAKEWATCH is currently the only research program gathering monthly data for such a large number and wide variety of Florida's lakes. This would not be possible without the help of volunteers. Participants in the Florida LAKEWATCH program receive:

- a free newsletter subscription
- use of sampling materials
- training in monitoring procedures
- periodic reports and an annual report
- access to lake experts (limnologists)
- invitations to LAKEWATCH activities.

For more information contact:

Florida LAKEWATCH

7922 NW 71st Street

PO Box 110600

Gainesville, FL 32611

1-800-LAKEWATCH (525-3928)

E-mail: lakewat@ufl.edu

<http://www.ifas.ufl.edu/~lakewatch/index.htm>



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