November 2005

The Istokpoga Newswire

Friends of Istokpoga Lake Association, Inc.

Aquatic Plant Management on Lake Istokpoga

By Beacham Furse, Aquatic Resources Conservation Manager Lake Istokpoga/Southern Lake Wales Ridge Project

One of the most common questions we get about management of Lake Istokpoga is "Who treats the "weeds" on the lake?". Often, people will just say "they" or "the state" treats plants on the lake. However, there are three agencies responsible for aquatic plant management on lakes in Highlands County. The Florida Department of Environmental Protection's (FDEP) Bureau of Invasive Plant Management is responsible for the "control, eradication, and regulation of noxious aquatic weeds", such as hydrilla, water hyacinth, and water lettuce, under the authority of the Florida Aquatic Weed Control Act (Florida Statute 369.20). The Highlands County Operations Department Aquatic Weed Program (HCAWP) works as a contractor for FDEP to manage and control water hyacinth, water lettuce, and other aquatic weeds which creates problems in Highlands County. The FDEP and HCAWP also work in coordination on the management and control of hydrilla in Lake Istokpoga and other Highlands County lakes. So, where does that leave the third agency, the Florida Fish and Wildlife Conservation Commission?

Management of cattail, pickerelweed, and other invasive aquatic plants not generally targeted for management by FDEP or HCAWP is part of the Florida Fish and Wildlife Conservation Commission's (FFWCC) Aquatic Habitat Management Program for Lake Istokpoga. Since water level regulation was implemented on Lake Istokpoga in the early 1960's, the lake's littoral communities have undergone a dramatic change. The inability to flood the lake and its floodplain to historical levels, lack of sufficient seasonal and annual fluctuation, maintenance of a rigid water level regime (i.e., same water level during the same time of year on an annual basis), and inadequate management of invasive aquatic plants has encouraged expansion of cattail, pickerelweed, and other aquatic plants in Lake Istokpoga. Extensive bands of dense cattail allow the development and expansion of tussocks and tussock precursors (e.g., pickerelweed, water primrose, burhead sedge, water hyacinth, etc.) by reducing wind and water movement throughout littoral areas. This lack of water movement limits flushing of detritus on which tussocks may form. Dense monotypic stands of cattail, pickerelweed and other tussock-forming species not only displace more diverse aquatic vegetation communities, but also increase the deposition of organic detritus on the lake bottom. Although some animals exploit tussock and tussock precursors for nesting, foraging, and protective areas, the associated loss of diverse native littoral plant communities and sandy benthic substrates reduces the function of this shallow-water habitat.

FFWCC's Aquatic Habitat Enhancement Program is broken into three components with the primary goal of the program being enhancement and management of Istokpoga's aquatic habitat for the long-term benefit of fish and wildlife and the people who utilize those resources. The three

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Special points of interest:

- *Mark you calendar for the Lake Istokpoga Management Committee meeting on December 8th*
- *Be sure to visit our Web site*
- *Be sure to attend our general Meeting on November 17*

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program components include:

a) mechanical removal or consolidation of tussock and associated organic sediments;

b) establishment of native aquatic plant species through natural recolonization or revegetation with desirable native aquatic plant species;

c) management of future tussock formation through control of invasive aquatic plants with herbicides and aquatic harvesting.

Management plans are formulated each year by the FFWCC Aquatic Resource Manager for Lake Istokpoga (that's me, Beacham Furse). These plans are reviewed by a multi-discipline team of FFWCC biologists (experts in wetland ecology, non-game wildlife [wading birds, ospreys, snail kites, etc.], game wildlife [alligators, waterfowl, etc.], and fisheries). Each plan is then presented to the Lake Istokpoga Management Committee, a citizens' advisory group formed to advise the Highlands County Board of County Commissioners concerning management of Lake Istokpoga. Technical advisors invited to participate in this group include, but are not limited to, FDEP, Highlands County, South Florida Water Management District, U. S. Fish and Wildlife Service, U. S. Army Corps of Engineers, and Audubon of Florida.

In spring 2001, the FFWCC conducted an aquatic habitat enhancement drawdown on Istokpoga, in which 1,308 acres over 21 miles of shoreline were scraped of tussock and organic material. These enhanced areas provide sandy substrate on which diverse native plant communities are encouraged to grow. However, pickerelweed, as the primary aquatic plant invader in these sites, becomes dominant and creates monoculture stands, which begin to exclude other native plants. Also, since 1998, the FFWCC has maintained a seasonal aquatic harvester program around Big Island, Bumblebee Island, and Henderson's Cove to control tussock expansion and reestablish productive littoral habitat. This program is limited, however, by water depths at the machinery can effectively operate and high program costs (>$5,000 per acre). An aquatic plant management program, which includes herbicide management of invasive plants and revegetation with desirable native species, is necessary to provide more diverse habitat, which promotes more diverse fish and wildlife utilization.

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Invasive aquatic plants are controlled with aquatic herbicides to encourage recruitment of native plant communities and increase the diversity of aquatic plants throughout the lake. Invasive species targeted include, but are not limited to, pickerelweed (dense growth), cattail (dense growth), burhead sedge, water primrose, water hyacinth, and waterlettuce. A long-term maintenance program has been implemented in coordination with the HCAWP and FDEP to maintain diverse vegetation communities and prevent formation of tussocks. As part of FFWCC's aquatic plant management program, dense stands of cattail, pickerelweed, and other tussock precursors are managed with herbicides by helicopter or airboat (only a quarter to one-half of the target plants within each treatment area are actually treated) to leave bands of cattail and pickerelweed, which allows other native plants to develop and are better utilized by fish and many wildlife species. In some areas, dense cattail and pickerelweed stands are left available for use by wildlife as nesting, roosting and protective habitat. Bulrush (buggy-whips), maidencane, knotgrass (Kissimmee grass), spikerush, and other "desirable" native vegetation are not sprayed. The active ingredients in the herbicides used in the aquatic plant management program are glyphosate and 2, 4-D Amine. These are the same active ingredients used in herbicides homeowners use to treat weeds in their yards; however, the herbicides used to manage aquatic plants are specifically tested and approved by the U. S. Environmental Protection Administration for use in the aquatic environment (In other words, the "Round-up" or "Weed-B-Gone" you use in your yard should **not** be used to treat aquatic plants behind your house.).

For more information about aquatic plant management or lake ecology, you may contact Beacham Furse at (863) 462-5190 or Gary Warren at (352) 392-9617.

Getting to Know: Kristen Veazey

Note: Kristen is a new law enforcement officer with the Florida Fish and Wildlife Conservation Commission and works on Lake Istokpoga

101 Whiskey. That's what I have to tell dispatch every time I put my boat in the water. My name is Kristen Veazey and I'm an officer with the Florida Fish and Wildlife Conservation Commission. I've been assigned to this area for almost a year now and patrol Istokpoga a couple of times per week. I was born in Kentucky and moved to Ocala when I was three. While working towards my degree in zoology, I was employed at a reptile park where I worked with snakes and alligators until I was hired by Florida Fish and Wildlife. I go out on Istokpoga to check on licenses, live wells, and make sure all the required safety equipment is on board. I've been on the lake recently checking alligator and duck hunters and who knows what I'll come across tomorrow. I enjoy the lake and look forward to meeting you. Please contact me at anytime for assistance. To report violations call 1-888-404-FWCC

> Look for Kristen out on Lake Istokpoga. Be sure to say "Hi" to her.

Annual Dues Time

Well, it is that time once again to pay your annual dues. You can just come to our November 17th general meeting and renew while you are there, or you can mail them in. Keep in mind that if you pay your dues early we will not have to spend the money to send you a "Reminder Card". And, if you come to our meeting to renew you can save $.37 because you won't need a stamp.

Many of our members have elected to pay for more than one year when they renew. We hope you will also consider this option.

Friends of Istokpoga Fall Meeting

The Friends of Istokpoga Lake Association, Inc. will hold our fall general membership meeting at the Lorida Community Center in Lorida, Florida, on Thursday, November 17, at 7:00 PM. It is the start of a new season on Lake Istokpoga. We would like to see you and all your neighbors and friends at this kick off meeting for the 2005 & 2006 season.

The speakers for the evening will be **Mr. Clell Ford** the Highlands County Lakes Manager and **Mr. Beacham Furse** of the Florida Fish and Wildlife Conservation Commission. Mr. Ford will give a presentation on the Lake Istokpoga watershed phosphorus pollution problem. Mr. Furse will speak about the aquatic weed spraying activities on the lake and what the Florida Fish and Wildlife Conservation Commission are trying to accomplish with there spraying activity.

This will be a very informative meeting. So please attend the meeting and support the Friends of Istokpoga. Bring your friends neighbors and anyone you know who are interested in keeping Lake Istokpoga pristine for now and latter generations to come. We need your help and support, so be there on November 17th.

There will be refreshments served beginning at 6:45 PM. There will also be a membership table where you can pay your 2006 dues. So come out and meet with your board of directors, neighbors and others for the good of our Lake Istokpoga.

Have You visited the website lately?

While we believe our newsletter is a valuable communication tool for us and our members, we also believe our website is equally valuable, and unlike the newsletter, it can give you information in a much more timely manner.

So when you are wondering what is going on with the lake, or if there are any meetings going on to help protect the lake, check out our website. Another big advantage to our website is that it doesn't cost us to put up-to-date information out there and if you already have email and Internet Service, it doesn't cost you anything either.

Our web address is on page 6 just under our address. Be sure and check it out.

Annual Dues Notice

Annual Dues Expire December 31, 2005

We want to remind you that your dues are due by January 1, 2006. We hope you will renew your membership before then.

For only $7.00 for an individual member or $12.00 per family per year you can help the environment and continue to receive our valuable newsletter about your lake. Bottom Line: We Need you!

Send your payment now, and you will not miss a single issue of the Istokpoga Newswire.

For more information call (863) 219-0082 and leave your phone number.

Make your check payable to: Friends of Istokpoga

Mail your check payable to:

Friends of Istokpoga
P.O. Box 578
Lake Placid, Fl 33862

Or,

Bring your payment to our general meeting on November 17, 2006 at the Lorida Community Center, Lorida, Florida. *See page 3 for more information about our general meeting.*

CHIRONOMIDS: FRIEND OR FOE?

Prepared by Beacham Furse, Gary Warren, and Karen Whall, Division of Habitat and Species Conservation Florida Fish and Wildlife Conservation Commission

How many lake homeowners and anglers are tempted to pull their hair out dealing with those little mosquito-looking bugs flying around their porch screens or around their heads while they try to fish in the "weeds"? Well, those "bugs" belong to a group of aquatic insects called chironomids (pronounced ki'-rô-nô-m̃ ds). They are related to other insects in the Order Diptera, including the house fly, horse fly, fruit fly, and mosquitoes. Chironomids are also called "blind-mosquitoes" or "chizzy-winks". They look like mosquitoes, but, unlike mosquitoes, **they do not bite**. This group of insects is found in standing and running water all over the world. Only the adult form lives above water; most of their life cycle is spent as immature forms (larvae and pupa). They live in a wide variety of habitats in lakes, rivers, ponds, ditches, estuaries, and even the open sea. They undergo several changes as they grow (metamorphosis). Chironomids only feed during their immature stages, eating small particles of plant and animal matter found in the water column, on aquatic plants, and in the bottom soils. Just as humans have hemoglobin in our red blood cells to carry oxygen from the lungs into the body, larvae of some chironomid species possess a type of hemoglobin in their blood to help them get oxygen from the water. These larvae are often sold as bait called "bloodworms".

Once chironomids pass through the larva and pupa stage, they emerge as adults. The number of adults that emerge depends on the species of chironomid, predation upon larvae and pupae, water temperature and the type of water. Shallow, shoreline areas of lakes (littoral areas) have more stable conditions compared to rivers. Adult chironomids may emerge multiple times during the year in these areas. Depending on the species, adults may live several hours to several days and do not feed. They live to mate and lay eggs for the next generation. The adults die after mating and laying eggs.

Chironomids are not only an important food resource for virtually all fish species (providing a critical forage link between juveniles and adults) and many wildlife species, but also play an important role in the decomposition and nutrient cycling processes. The adult midges that prompt most complaints from lake residents perform the most important function of all - propagating the species. Chironomids are also used by environmental protection agencies as indicator species for water quality assessment and the impact of contaminants in fresh water environments. Changes in chironomid species composition or the number of certain chironomid species will indicate changes in water quality and will forecast the effects of poor water quality on other organisms. Chironomids may help determine the source of contaminants that enter fresh water because their body parts can be deformed by contaminants. This biological record can help identify the extent of a pollution source in many water bodies.

They look like mosquitoes, but, unlike mosquitoes, **they do not bite**.

Although adult chironomids may be a nuisance at times because of their numbers, control options are very limited. Pesticide treatments used to control the numbers of adult midges can have devastating consequences not only to chironomids, but also to populations of non-target keystone insect species. These consequences are evident in many systems throughout the state. Many biologists believe that aerial spraying for mosquitoes has nearly eliminated many insect species from freshwater systems in urban Tampa. One non-intrusive control method that has met with some success is placement of bright lights in unpopulated areas near lakefronts. If homeowners and business owners then dim their lights in a corresponding manner, midges are drawn to the brighter lights, thereby reducing the numbers affecting shoreline residents.

Many fish and wildlife species simply could not survive without chironomids as a major part of their diet. It is a good sign for anglers that, when chironomids are abundant, fish should also be plentiful. Many lures, especially for fly-fishing, are designed to mimic the chironomid pupa. Although it may be difficult to remember how valuable they are when they swarm in large numbers on banks, boats, and shorelines, chironomids serve as both a vital link in the food chain and a barometer of the health of our environment.

For more information about aquatic insects or lake ecology, you may contact Beacham Furse at (863) 462-5190 or Gary Warren at (352) 392-9617.

Friends of Istokpoga Lake Association, Inc.

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