

## FEATURE ARTICLE

Scott Witte, CGCS, Cantigny Golf Club



# Somethin's Fishy at Cantigny

*Water features are some of the most attractive areas on golf courses. What lies beneath the water on our golf courses is often a mystery. Believe it or not, this is an easy mystery to solve with the help of the Illinois Department of Natural Resources (IDNR).*

For the past two years, the IDNR has been performing the "FREE SERVICE" of helping me inventory my fish populations. Since Cantigny Golf is a Certified Audubon Sanctuary, I wanted to make sure our ponds have a diversity of wildlife at good population levels. Vic Santucci, District Fisheries Biologist of the IDNR, has been a great resource, helping us begin the process of understanding what lies beneath the surface of our 11 ponds.

Some of the benefits that clubs may enjoy from healthy fish populations may include:

- Great sport fishing for members, employees, and guests.
- Habitat enhancement for birds such as herons, egrets, etc.
- Mosquito predation.
- Balanced wildlife ecosystems that integrate avian, mammalian, fish, and amphibian species.

At a relatively low cost, superintendents have a tremendous opportunity to take advantage of these great benefits.

The first step in the process of beginning a fish inventory is to fill out the paperwork. The IDNR has an application form that needs to be filled out ONE YEAR in advance. The application is only two pages long and is relatively painless to complete. It is called "The Application for Fish Management Services" and can be obtained from the Illinois Department of Conservation – Division of Fisheries.

Once you have taken care of the paperwork, IDNR will contact you and set up a date for "Electrofishing." **Electrofishing** uses electricity to safely stun and catch fish without causing them any permanent harm. It is a scientific survey method commonly used to sample fish populations. It determines abundance, density, and species composition. When performed correctly, electrofishing results in no permanent harm to fish, which return to their natural state as little as two minutes after being stunned.

The electrofishing unit that we used was a boat-mounted model—sometimes called a stunboat.



*The IDNR staff beginning their Electrofishing in the Cantigny Clubhouse pond.*

Stunboats use two or three electrodes to deliver current into the water in order to stun the fish. The current runs from the anode to the cathode, creating a high-voltage potential. When a fish encounters a large enough potential gradient, it becomes affected by the electricity. Pulsed DC current is usually applied, which causes "galvanotaxis" in the fish. **Galvanotaxis** is an uncontrolled muscular convulsion that results in the fish swimming toward the anode. At least two people are required for an effective electrofishing crew: one to operate the anode and another to catch the stunned fish with a dip net.



*Scott Witte, CGCS and stand-in "Dip Netter" scoops the stunned fish.*

*(continued on page 9)*

All stunned fish are scooped up and put into the holding tank in the middle of the boat. The holding tank is half-full of fresh pond water and holds the fish until they are measured, identified, weighed, counted, and documented.



*The DNR weighs and measures each fish*



*Two Large Mouth Bass get their weigh-in*



*A specimen Hybrid Sunfish shows off his colors.*

The IDNR crew also measures pond depth with sonar, pond size with GPS, and pond clarity with a Secchi disk.

The Secchi disk is named after Fr. Pietro Angelo Secchi, an astrophysicist, who was asked to measure transparency in the Mediterranean Sea by Commander Cialdi, head of the Papal Navy.

In April 1865, Secchi used white disks to measure the clarity of water in the Mediterranean. Various sizes of disks have been used since that time, but the most frequently used is an eight-inch-diameter metal disk painted in alternating black and white quadrants. The Secchi disk is used to measure how far a person can actually see into the water. Water clarity is of course directly linked to the sustainability of any fish population. The disk is attached to a waterproof measuring tape. It is lowered into the lake by unwinding the tape until the observer loses sight of the disk. The disk is then raised until it reappears. The depth of the water when the disk vanishes and reappears is the Secchi disk reading. It is recorded to the nearest foot.

Based on the data collected, recommendations are made on nutrient management, proper aeration, and the introduction of native aquatic plants and buffer areas. A detailed list of the fish population gives the DNR a basis for their recommenda-

tions. It is quite possible that your pond already has a healthy balance. If it does not, the DNR will give you guidelines for harvesting or restocking fish.

One example of a restocking scenario here at Cantigny is our #2 Lakeside pond. The electrofishing produced only ONE large bass in a two-acre pond.



*One Large Mouth Bass was the only fish stunned in this pond which alerted us to a problem.*

The only other creatures that we stunned in this pond were a couple hundred bull frog tadpoles. It was determined that heavy ice and snow cover caused a fish kill in that pond several years back and the population never recovered. Because this pond was almost completely void of fish, it was a very good candidate for "pond restocking."

Vic Santucci gave me three different fish community options from which to choose. I chose to stock 2200 fingerling bluegill (1-2 in. long), 220 fingerling largemouth bass (2-3 in. long), and 220 fingerling channel catfish (2-3 in. long). It is absolutely imperative that these ratios be followed closely. They are scientifically proven to foster balanced populations. If the ratio is not correct, stunted fish populations may result.

I placed my fish order through the Kane-DuPage Soil and Water Conservation District. The total cost of restocking this pond was \$781.

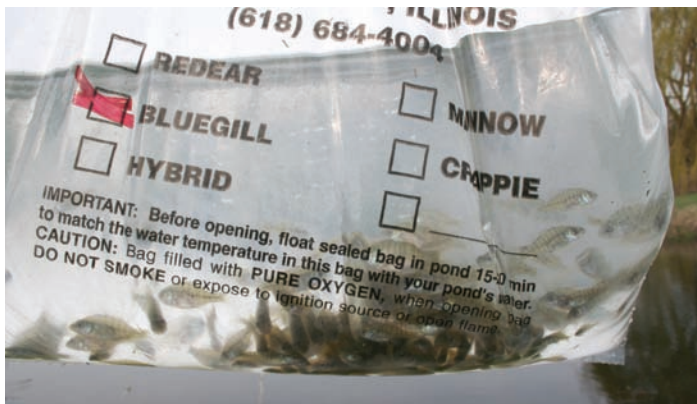


*The Logan Fish Farm on Wheels during fish pick-up day.*



*Counting out channel catfish for Cantigny. The Bluegills came in bags of 250 for \$55 per bag.*

*(continued on page 11)*



*Bluegill fingerlings up close and personal.*



*Jeremy Duncan releases 250 Bluegills.*

I needed 9 bags to reach the recommended level of 2200, a total of \$495.00. The Catfish were 55 cents each (\$121) and the Bass were 75 cents each (\$165).



*Jeremy Duncan and Patrick Maksymiu pour in 220 Largemouth Bass.*



*Some willing...some not so willing Bass dive into their new pond.*

My long term goal is to inventory and monitor all 11 ponds at Cantigny Golf. I plan to continue doing two ponds per year until all are completed. With the help of the IDNR, this Certified Audubon Sanctuary golf course will always have "Somethin' fishy going on!"

If you are interested in doing fish inventories for your ponds, contact your local Fishery Biologist and fill out your application this fall to get slated for 2009! I have listed your local contacts below. Happy Fishing! **-OC**

### **IDNR Contacts for fish inventories:**

- DuPage and McHenry Counties –  
Vic Santucci – 815-675-2386, ext. 315
- Cook and Lake Counties –  
Frank Jakubicek – 815-675-2386, ext. 314
- Grundy, Kendall, Will, and Kankakee Counties –  
Rob Miller – 630-553-6680.

### **Kane-DuPage Soil and Water Conservation District:**

Kane-DuPage SWCD  
2315 Dean St.  
Suite 100  
St. Charles, IL 60175  
630-584-7961 ext.3

### **Searching TGIF**

For more information on this topic visit the Turfgrass Information File (TGIF). The TGIF is a bibliographic computer database, free to all MAGCS members, that provides access to all published materials that report on aspects of turfgrass and its maintenance.

To enter the TGIF, log into magcs.org, scroll the mouse to Resources, click "On Course Archives," and then click "Full Database Search Now!"

Once logged in, enter keyword "Golf Ponds" for related information on this featured article. Below are four related articles:

- "5 Tips for healthy water: Follow these guidelines to improve the ecological health and aesthetics of ponds of lakes on your golf course." DeVictor, Darcy. 2007. *Golf Course Management*. June. 75(6): pp. 70-74, 76.
- "Using golf courses to bolster amphibian communities: University of Missouri scientists provide amphibian management guidelines for ecologically minded superintendents." Semlitsch, Raymond D.; Boone, Michelle D.; Bodie, J. Russell. 2007. *USGA Green Section Record*. July/August. 45(4): pp. 7-11.
- "Pond deterioration through summer." USGA Green Section. 2008. *USGA Green Section Record*. July/August. 46(4): p. Back cover.
- "Brian Mores, Inverness Golf Club." Anderson, Brad. 2007. *On Course*. March. 60(10): pp. 7-8.