Ohio Pond News

The Ohio State University

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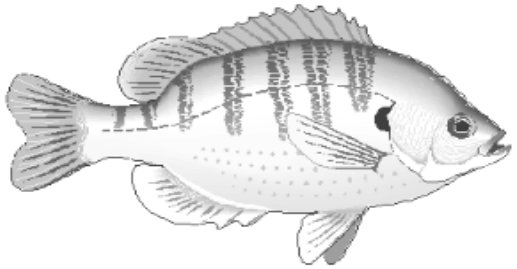


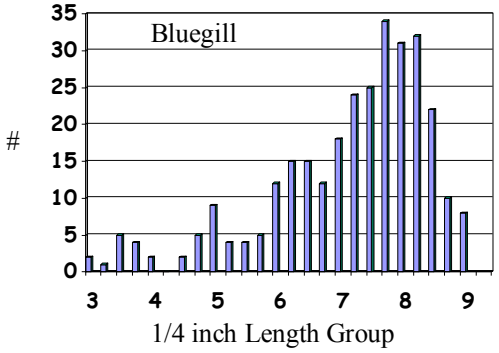
Assessing Your Fish Populations

Pond owners often wonder what the status of their fish populations are in relation to their fishery goals. While there are companies in Ohio that will survey your fish populations, their fee is typically beyond what most pond owners are willing to pay. Can pond owners collect data that will allow assessment of their fish community? The answer is a definite yes, and the best part is they get to go fishing to collect the data.

The data that provides the best information is fish lengths that are collected in a relatively short time period. My recommendation is that these lengths be obtained in the fall of each year when water temperatures still exceed 65 F. The second preferred time period is in spring prior to spawning. The spawning period should be avoided as bass are more difficult to catch and large bluegill tend to be over-represented due to the ease of catching them while on their nests. The pond owner and friends should fish vigorously for two weekends in a row, dividing their time fishing for panfish (bluegills, redear sunfish etc.) and largemouth bass. When I do this, I generally fish for bass in the early morning and late evening when predators are most active. Late-morning and afternoon fishing is dedicated to the panfish. Be sure to use appropriate gear for the species of interest. Bluegill lures and baits are not very good at catching bass, and the opposite also holds true.

Our goal is to catch 200 bluegills and 50 largemouth bass from which to measure lengths. For bluegills, a 12 inch ruler will suffice, but a yard stick will be needed to measure bass. Measurements are done by laying the fish on the ruler or yard stick, making sure the tip of the fish's snout is even with the zero marking. Then compress the tail together and measure the tail's edge to the nearest quarter inch. Record all lengths on paper.

The next step is to generate length frequency graphs. This is accomplished by first determining the number of bluegills in each quarter inch length group and the number of bass in each half inch length group. Then you construct a graph as shown in the accompanying figure.



So what does the graph tell us? In the above example, we know the bluegill population is skewed towards larger fish with relatively fewer small bluegills. If the pond owner is managing for large panfish, the above graph indicates success is at hand. In the summer newsletter, I will present graphs representative of the following fish management strategies: large panfish, large bass, and a balanced fishery. If you elect to measure your fish this spring, you'll be ready to assess status in the next newsletter.

Inside this issue:

Did You Know?

- A key to improving pond health is to prevent pond stratification by forcing deep water to the surface and causing shallow water to move deeper. This is most economically accomplished with a bottom air diffuser system. It is cheaper to move deep water to the surface with air bubbles than move deep water to the surface with a water pump.

Coping With Water Lilies

Various water lily species have become increasingly prevalent in ponds throughout Ohio in recent years, and often reach nuisance levels that cause the owner to consider control measures. There are four species that are commonly found in Ohio: white water lily, yellow water lily, dollar bonnet, and water lotus. The recent increase in ponds in largely attributed to 1) escapement from nearby garden / patio ponds and 2) recommendations from friends that water lilies would be a welcome addition to a pond. While water lilies can provide fish & wildlife benefits, their tendency to spread and take over a pond eventually makes them unwelcome. So what can be done? Once established, these species present control challenges, often requiring several years worth of effort to eradicate them. So, it is wise not to introduce them in the first place, or physically remove the first plants that show up in a pond. This can avoid the cost of herbicides necessary to control them once they become prevalent. Once water lilies are established for several years, extensive root systems makes physical removal impractical. White amur (grass carp) are not a recommended control strategy for water lilies.

If these species become abundant, chemical control is the only option to eliminate them or reduce them to a significantly lower abundance. 2,4-D granules (*Navigate, AquaKleen, Aquacide*) are an effective control chemical on early growth, and should be applied prior to leaves reaching the surface. Fluridone products (*Sonar, Avast!)* is another chemical capable of controlling these species. Glyphosate products (*Rodeo, Accord, Eagre, Glyfos, Shore-Klear*) are the mostly commonly used chemical to control water lilies. They should be applied as the flowering stage wanes and always should have an aquatically-labeled surfactant added to the mixture to enhance uptake. Glyphosate products are sprayed on the floating leaves, so it is important to spray on calm days to avoid having wave action wash off the chemical too quickly after application.

The above chemicals are all systemic herbicides, meaning they kill both the vegetative and root parts of the plants. Their use will in some cases eliminate any future growth, but more commonly reduce water lily abundance in succeeding years.

Feeding Your Fish

(Note: This article originally ran in 2004 but recent interest and questions on feeding fish in private ponds indicates a need to revisit this topic. An updated version is provide here.)

Feeding fish has become increasingly popular with the usual reasons being “I want my fish to grow faster” and “I like watching the fish eat”. Bluegills and redear sunfish will quickly learn to eat artificial feeds in just a few days. Channel catfish will also learn to come once feed has hit the water. Largemouth bass, on the other hand, are a different matter. It is tough to get them on artificial feed unless they were raised on feed as youngsters. Even then, many will prefer to eat natural food items in ponds they’ve been stocked into. The pond owner is probably wise in focusing on feeding his/her sunfish and catfish. However, feeding pond fish is not without its disadvantages. Let’s first look at advantages of feeding fish and then the disadvantages.

Feeding bluegills and catfish will definitely increase their growth rate, with the actual increase depending how much feed is provided. In Ohio, a bluegill typically reaches 8 inches in about five years. Feeding bluegills can trim two years off of that timetable. However, keep in mind that all bluegills will not reach 8 inches at the same time. This is because some will eat more than others and that male bluegills grow considerably faster than females. Many females may never reach 8 inches. Both male and female catfish grow well on artificial feed.

What is the problem with feeding fish in a typical farm pond? Simply put, feeding fish provides another nutrient source that the pond may not be able to handle. Excessive nutrients in most Ohio ponds quickly leads to a problem with aquatic plants, especially filamentous algae. Essentially, a pond can only handle a certain nutrient level without providing the pond owner with a lush growth of plants and algae. If the owner is only feeding a handful of feed each evening, a problem may not arise. Much more than that will likely cause a problem. The pond will let the owner know by the abundance of plants and algae.

Here are a few tips for pond owners who wish to feed their fish:

- A good bubble aeration system can help mitigate the effects of adding nutrients via feeding. Aeration is a necessity if feeding exceeds 15-20 pounds a day.

Feeding Your Fish Continued . . . .

- If feeding is done only for the enjoyment of watching fish eat, limit feed to a few handfuls or so every other day.
- If feeding is done to grow big bluegills and catfish as fast as possible, let the fish eat all they can in 15 minutes. Then stop.
- Feed size can be ¼ - 3/8 inch in diameter, anything larger and bluegills may struggle to eat it. Catfish can easily eat pellets up to one-half inch.
- Feed only in May – September, when water temperatures exceed 65 F. Do not feed during cold weather.
- It is recommended that harvest occur in ponds where fish are being fed. This helps remove nutrients from the system.

Finally, the process of training these fish is fairly easy. Bluegills are near the surface late in the evening looking for something to eat and this is when the training process should occur. The first evening, throw a handful of pellets out and step back. A few will eat that night. The next night a few more will join in and eventually after several weeks, the fish will come to the dock or shoreline as you walk up. Catfish will also show up in a similar fashion, although not as fast as sunfish.

Feeding fish can be fun, but the owner must be ready and willing to accept a possible plant problem and to control those plants if need be. Rarely can a pond handle the nutrients from feeding fish without producing a lush growth of green material. Not convinced? Ask an aquaculturist who grows fish in ponds and feeds them.

Pond Factsheet Update

Available

Placing Artificial Fish Attractors in Ponds and Reservoirs: OSUE Factsheet A-1.

Pond Measurements: OSUE Factsheet A-2.

Controlling Filamentous Algae in Ponds:

OSUE Factsheet A-3.

Chemical Control of Aquatic Weeds: OSUE Factsheet A-4.

Muddy Water in Ponds: Causes, Prevention, and Remedies: OSUE Factsheet A-6.

Understanding Pond Stratification: OSUE Factsheet A-7.

Winter and Summer Fish Kills in Ponds:

OSUE Factsheet A-8.

Planktonic Algae in Ponds: OSUE Factsheet A-9.

Fish Species Selection for Pond Stocking:

OSUE Factsheet A-10.

Cattail Management: OSUE Factsheet A-11.

Algae Control with Barley Straw: OSUE Factsheet A-12.

Ponds and Legal Liability in Ohio:

OSUE Factsheet ALS-1006.

Ice Safety: OSUE Factsheet AEX-392.

Farm Pond Safety: OSU Factsheet AEX-390.

Notifying the Ohio EPA Prior to Applying Aquatic Herbicides: OSUE Factsheet A-13.

Duckweed and Watermeal: Prevention & Control:

OSUE Factsheet A-14.

When to Apply Aquatic Herbicides: OSUE Factsheet A-15.

Pond Dyes and Aquatic Plant Management:

OSUE Factsheet A-16.

Benefits & Problems of Aquatic Plants in Ponds:

Factsheet A-17.

Note: these factsheets are available at ohioline.osu.edu.

2009 Pond Clinic Schedule

These are currently the pond clinics scheduled for 2009. If you want a pond clinic scheduled in your county during 2009, contact your county OSU Extension or SWCD office and let them know of your desire. They are always appreciative of folks who offer their pond as a clinic site.

April 28, Tuesday - Monroe County

April 29, Wednesday - Ashland County

May 14, Thursday - Franklin County

June 13, Saturday - Delaware County

June 18, Thursday - Van Wert County

Sept. 22, Tuesday - Farm Science Review—numerous presentations

Sept. 23, Wednesday - Farm Science Review—numerous presentations

Sept. 24, Thursday - Farm Science Review—numerous presentations

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Filamentous Algae Fact Sheet Revised!

I have recently revised OSU Extension's fact sheet titled "*Controlling Filamentous Algae in Ponds*" to reflect the new products available for algae control as well as changes in water use restrictions. Additionally, I've added a new section on using algaecides safely, trying to emphasize label reading and container disposal. All algaecides legally allowed to be used in Ohio have their labels on the Internet. So I encourage all pond owners , after reading the new fact sheet, to spend an evening reading the labels of products they are considering. An evening of reading cannot only enhance the safe use of algaecides, but could also potentially save the pond owner money by clarifying what product controls what and the correct application rates for various algae species. This new fact sheet should replace the old version on http://ohioline.osu.edu in April.

I'm also finished revising the fact sheet *"Chemical Control of Aquatic Plants"* which is currently being reviewed. This is a major revision, going from four pages to six pages. Most of the added material focuses on planning prior to application. Look for this new version to be available sometime this spring.

Visit Ohio State University Extension's WWW site "Ohioline" at ***http://ohioline.ag.ohio-state.edu***

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