

Your Side

of the fence



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Identifying Pond Weeds for Effective Control

By Gene Gilliland, Central Region Fisheries Supervisor



One of the most common questions biologists with the Oklahoma Department of Wildlife Conservation get from pond owners is “How do I kill these weeds in my pond?”

To answer that question properly we first have to know what kind of plants you are dealing with.

Biologists recommend managing the aquatic plants to maintain a healthy balance. Treatment options may include biological control measures (grass carp), mechanical removal (raking), chemical treatments (herbicides) or winter draw-downs. To determine which treatment method is likely to be the most effective it is necessary to identify the kind of plants you have in your pond.

Aquatic plants can be divided into four categories. These categories are Algae, Floating-leaved Plants, Submerged Plants, and Emergent Plants.



Filamentous algae suggests excessive phosphorus in a water system. Photo from Texas A&M University.

Algae comes in three basic forms. The first is the planktonic algae which are microscopic plants floating in the water column. These plants tint the water green. They are the base of the food chain for almost everything else in your pond. A healthy pond will have a slight green tint, with visibilities of around 18 inches or a little more. Pea-soup green water however, where you can't see more than a few inches into the water, is a potential problem. When overabundant algae begins to die and decompose, that process uses oxygen and fish kills can result.

The second form of algae is the thin, stringy or hair-like filamentous algae which has a slick, slimy feel. It starts growing in the early spring. As the season progresses, clumps break loose from the bottom and float to the surface to form large mats. Filamentous algae is a symptom of excessive phosphorus in the system. If it starts growing on the lake bottom, there is too much phosphorus in the sediment. If it starts

growing on surfaces such as plant stems, tree limbs of brush in the water then the excess phosphorus is dissolved in the water.



Muskgrass, also known as skunkweed, is known by its smell. When crushed the plant takes on the strong odor. Photo from Texas A&M University.

The third form of algae resembles a rooted plant in having structures that look like branches and thin leaves. This form of algae is called Chara and can be distinguished from other plants by the lack of roots and by its characteristic smell. It is often called muskgrass or skunkweed because of the odor when it is crushed. It also has a crunchy or gritty texture.

Floating-leaved plants may or may not be attached to the bottom with roots or stems. Some are free-floating on the water's surface and are blown about the pond by wind and washed up on the shore by wave action. Most of these are very small like duckweed and water meal. Some exotic plants commonly sold for water gardens such as water hyacinth and water lettuce are also free floating. These plants have roots that hang underneath and absorb nutrients directly from the water column.

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Other floating-leaved plants are rooted to the bottom and send stems to the surface where leaves unfurl and lay flat (white water lily) or in some cases may be held above the surface (American lotus). Some floating-leaved plants have stiff, fibrous stems while others have soft



American pondweed is one of the favorite meals for ducks and other wildlife. Photo by Graves Lovell, Alabama Department of Conservation and Natural Resources, Bugwood.org.

stems and a mixture of submersed and floating leaves such as American pondweed.

Submersed plants are rooted in the pond sediments. Their stems and leaves are below the water surface. The shape of the leaves can vary from broad to almost threadlike. Some are bushy and grow in clumps while others are stringy and look almost like flooded grass. Many produce seed heads or flowers that are above the surface. Most submersed plants have stems and branches that are not very stiff. When taken out of the water, they are typically limp and have little body. Examples of these

types of plants are Eurasian watermilfoil, sago pondweed, and southern naiad. Coontail on the other hand has a stiffer stem and leaf structure that will maintain its shape out of the water.

Emergent plants are rooted along the shoreline in moist soil or in the shallow margins of the pond. Most of them grow in water less than one or two feet deep. Leaves are typically above the water's surface with only the fibrous stem in the water.

Most emergent plants have a tough, waxy outer cuticle that protects them from drying out. This waterproof sheath makes these plants particularly difficult to treat. Because the stems are fibrous and may be growing in very shallow water or on the shore, grass carp are not effective in controlling these weeds. Mechanical or chemical treatments are in order but even then, effective control may be difficult. Cattails, smartweeds, and water primrose are common examples of emergent plants.

More detailed information and photographs of many common species of pond weeds can be found on the Texas A&M University Extension Service website <http://aquaplant.tamu.edu>. Another way to identify a weed is to take several clear digital photographs that show the plant's structure and shape, and e-mail them to your nearest



The water primrose is a great home for many invertebrates that are a tasty meal for wildlife. Photo from fosc.org.

ODWC biologist for positive identification. This is much easier and cleaner than trying to bring in a plastic bag or bucket full of wet plants. But the easy way is to simply contact the Biologist that is in your area. The list of area biologists can be viewed to the left of this page. It even tells you the region! For more information simply log on to wildlifedepartment.com. ■

Landowner Spotlight

Managing a Small Suburban Property for Fish

By Glen Gebhart

I am a retired fisheries biologist who spent his professional career working in research and extension at Oklahoma State University and Langston University. Twenty three years ago I bought seven-and-a-half-acres of land just outside of Stillwater. The land had a one-and-a-half-acre pond and a silted in quarter-acre pond on it. I cleaned out the quarter-acre pond and built a half-acre pond just above the main pond. I put a six inch turn down bottom drain in that half-acre pond so that I could drain fish directly into the bigger pond. I sampled the main pond and found bullhead catfish, stunted crappie and stunted green sunfish so I decided the best action was to eliminate all the fish and start over with more desirable species.

Even though I had done fish pond management myself, I immediately started talking with the fisheries biologist at the Oklahoma Department of Wildlife Conservation to get additional ideas on how to manage those ponds for great fishing. I was willing to aggressively feed and manage the fish so I decided to go a couple of steps beyond the typical largemouth bass, bluegill, and channel catfish stocking that works best for most ponds. John Stahl convinced me that hybrid bluegill would work well in a fed pond situation. I had a fish free pond so I was able to stock 7 male bluegill and 14 female green sunfish and produce thousands of hybrid bluegill offspring. I stocked 150 fingerling channel catfish and fed all those fish for the next two years.

I wanted to grow a few trophy largemouth bass for fishing excitement and considered stocking Florida largemouth bass. I talked with Gene Gilliland and decided it was best not to risk a winter kill or not even getting true Florida bass so I stocked about 15 large fingerling northern largemouth bass. See Gene's article in the Winter 2008 Newsletter for more on this topic. As those bass grew and reproduced, I aggressively harvested small bass in order to produce a few trophy bass. John Stahl had said that hybrid bluegill would not produce enough forage for bass and I eventually decided that even in my



There is a known difficulty for stocking hybrid striped bass in a farm pond, although they are worth the efforts when fishing. Photo provided.

limited bass situation (and some years not so limited), I needed more forage fish. I stocked a number of adult bluegill in order to get a reproducing population of bluegill which I was able to do.

About every four years, I will clean out one of the small ponds and produce another crop of hybrid bluegill to partially grow out and then stock in the main pond. This avoids the problem of the largemouth bass and bigger channel catfish eating a large percentage of fish if they are stocked at a small fingerling size. I have tried growing and stocking a number of other forage fish including fathead minnows, golden shiner minnows, gambusia (mosquito fish), and goldfish. The only one that has been able to survive long term in my pond is the gambusia and they may also help keep down the mosquito population. Even with three ponds surrounding my house, I have fewer mosquito problems than my neighbors in town.

I have tried stocking one other fish and that is the hybrid striped bass. They are difficult and expensive to buy. They are sensitive to transport and can not take much handling

especially in hot weather or when they get larger. They have to be fed an expensive, high protein (36 - 45 %), high fish meal pelleted feed that has to be special ordered. They will die like flies (and draw flies) if you ever have a low dissolved oxygen problem during the hot summer time or fall overturn. They are a blast to catch, especially when you get one of those three to five pounders. They are probably not worth all the cost, hassle, and risk involved in growing them.

The bottom line is that I have a pond or fish garden where I can always catch a dinner of fish, and do so a couple of times per week. I can also have family and friends over for great fishing. I harvest about 400 to 500 fish per year out of the pond and feed about 700 to 1,000 pounds of fish feed a year. I have helped other people set up similar systems and found that it only works well for the person who is willing to actively feed and manage the system, but it shows what has been possible for me and some of my fishing fanatic friends. ■

Habitat Matters

Growing Season Burns

By Mike Sams, Private Lands Senior Biologist



It's greening up and you've surrendered your burning plans to yet another year. Time and weather have been unfriendly companions as they once again failed to come together for you this winter. Sound familiar? Weather

parameters needed for dormant season burns can be scarce in Oklahoma and aligning those windows of opportunity with free time for you and a few good friends is a real obstacle for those of us looking to use fire.

John Weir of Oklahoma State University analyzed 14 years of weather data on burn opportunities in Payne County. Burn opportunities were defined as at least three consecutive hours, between 8am and 6pm of which temperature remained between 35-110 degrees F, relative humidity between 20-80 percent and wind speeds between 4-15 mph. As many of you might have guessed January – March were the most restrictive when trying to conduct a burn affording on average 15.4 opportunities/month.

The most surprising thing to me was that on average half of the days (15.4) presented burn opportunities. That can't be right, can it? A further look into the analysis reveals that the average length of burn opportunity during January – March was a mere 3.5 hours. The vast majority of opportunities were only 3

hours long. In my experience many of those opportunities start in the morning with relatively high humidity giving way to high winds with heavy gust. High winds were determined to be the culprit in reducing grassland-burning opportunities in a similar study by OSU researchers analyzing data from 1994-1998.

If you're like me these small windows of opportunities that give way to high winds are not ones I consider. Throw those out and factor in wind direction needs and in my experience you can likely count monthly opportunities on a single hand.

the weather patters from late winter through summer provide improved burning conditions. Weir found in his analysis that during this time not only does the number of opportunities increase but also their length.

Once thought of as being destructive to wildlife, in particular ground nesting birds, most biologists discouraged growing season burns. However, recently many biologists have embraced these burns as an opportunity to increase the number of acres treated with fire and to elicit a different vegetative response.



Smoke management is especially critical when planning for growing season burns. Photo by John Weir.

For those of us struggling to stay on top of our burn rotation it maybe time to open up the playbook with growing season burns (April – July). In like a lion and out like a lamb,

Incorporating growing season burns into a comprehensive burn program will increase forage and cover diversity as vegetative responses vary with fire seasons.

Studies have shown the threats to wildlife are not as severe as once thought. Very few nest and animals actually succumb to the fire itself. A bigger threat to populations of many species is habitat degradation from the lack of fire.

The ability of many species of ground nesting birds to re-nest following disturbance can mitigate nests loss. Since many upland game birds avoid nesting in rank

herbaceous cover it is recommended that growing season burns be concentrated in these areas. Burning prior to mid-May in other areas can limit burn conflicts with incubating bobwhites. Conducting smaller burns will also mitigate the temporary loss of cover which can affect survival of upland birds and their young.

Growing season burns have some distinct advantages for novice burners as they are typically slower moving and have reduced in-

cidences of escape from wind-carried embers. These advantages are a result of higher relative humidity's often associated with the growing season.

However, because the relative humidity is consistently higher during the growing season and burns consume green vegetation, smoke emission is higher. All burn plans should take into consideration smoke management; this is especially critical when conducting growing season burns.

Another element of special consideration with growing season burns is heat. Heat of the fire coupled with the air temperature can kill mature trees under heavy fuel loads. It can also be hazardous for those conducting the burn. Proper hydration is especially critical while working on a growing season burn.

Growing season burns are not a one-size-fits-all practice but rather a nice complement to a comprehensive burn program. They provide more opportunities to use fire safely and in smaller units while having the side benefit of increasing vegetative diversity. So, don't pack away your drip torch just yet. ■



The warmer air temperatures associated with growing season burns coupled with the heat from the fire can be effective at setting back brush encroachment. Photo by John Weir.

Free Subscription to Your Side of the Fence

Your Side of the Fence is a FREE publication produced three times a year by the Oklahoma Department of Wildlife Conservation for Oklahoma landowners. It is our mission to provide practical information for managing wildlife on your property and address issues that affect you, the landowner. This is your opportunity to tell us what you think. What would you like to learn more about? Do you have any questions for any of our ODWC professionals? Are we doing a good job of providing useful, practical information? Please let us know. If you would like, send your advice to the editor.

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Oklahoma's Conservation Reserve Enhancement Program

by Gina Levesque, Oklahoma Conservation Commission

Cleaner water. Less soil erosion. Enhanced wildlife habitat. Streambank stabilization. All of these are goals of Oklahoma's Conservation Reserve Enhancement Program or CREP. CREP is a USDA Farm Service Agency (FSA) program coordinated by the Oklahoma Conservation Commission. It is an offshoot of the well known Conservation Reserve Program (CRP). CREP focuses on restoration and protection of riparian or streambank areas that are degraded and have little or no vegetation. CREP conservation agreements on riparian buffers are for 10-15 years. Each year, landowners receive rental and management payments for acreage enrolled in the program. Putting vegetation back onto these areas and removing agricultural activities from them is a passive restoration method that has tremendous benefits. CREP is a win-win situation for all stakeholders both landowners and wildlife.

Restored riparian areas help to slow run-off during high rainfall events allowing excess nutrients time and other pollutants to be absorbed into the earth before reaching a stream system. Slowing the velocity of run-off has the added benefit of reducing erosion of streambanks. By re-vegetating riparian areas with deep rooted species, such as trees, streambanks are held in place during rain events, armored against erosion from run-off and increased flow volume from streams. These assets reduce erosion and keep more of a landowner's property in possession of the landowner instead of floating down the waterway and adding to sediment loads.

Many wildlife species use riparian areas as corridors for travel preferring to remain under the cover of vegetation rather than risk detection in the open. Migratory birds, such as the cerulean warbler, Bell's vireo and prothonotary warbler, depend on them for reproduction. Aquatic species depend upon the shade provided by vegetated riparian zones to cool

the water where they live and reproduce; high water temperatures often make certain areas uninhabitable to these species. Other species that benefit from restored riparian zones include those of interest to hunters such as the Northern bobwhite and white-tailed deer.

CREP also provides monetary benefits to landowners. Landowners receive a one time sign-up incentive payment of \$100 per enrolled acre. Lease payments are based on two main criteria: 1) whether the stream is seasonal or perennial and 2) current rental rates for marginal pasture land within the county. Rental rates are multiplied by 150 percent and then by the amount of enrolled acreage to arrive at the annual payments. Actual payments for each landowner will be calculated by FSA. Restrictions on buffered areas are intended for their protection. CREP participants must agree to total exclusion of livestock from the riparian zone and no haying activities within the zone. Although certain activities are prohibited, others such as hunting, fishing and hiking are still allowed by terms of the agreement.

Cost-sharing on installation of best management practices directly related to the program is also available for 50 percent of the established rate. When installation of all management practices is complete, a one time incentive payment of 40 percent of the cost of installation will be paid to the producer (which is in addition to the 50 percent, for a total cost-share of 90 percent). Best management practices for which cost-share is provided include tree planting, riparian fencing, watering tanks, wells, and stream crossings.

The Oklahoma Conservation Commission currently offers CREP in the Eucha/Spavinaw and Illinois River Watersheds in Adair, Cherokee, and Delaware counties in Eastern Oklahoma. In the future, we hope to offer CREP for landowners in the Fort Cobb and Sugar Creek Watersheds in Washita and Caddo counties.

For more information about CREP or to enroll, please call Gina Levesque, Oklahoma Conservation Commission CREP Coordinator at (918) 541-5086. ■



CREP fences livestock out of riparian areas and provides alternative water supplies and winter feeding facilities in upland areas. Photo provided by the Oklahoma Conservation Commission.

The Hooking Accident

By Julia Matlock, Assistant Hatchery Manager



Here's the scene: It is a beautiful day, just perfect for fishing and that is just where you are. Out on the pond bank with your kids, spouse, grandkids or your best fishing

buddy. All is right with the world, the line goes tight. It's the big one you have been trying to catch and then the fish gets away. However, you now have the lure headed straight at you. The next thing you know is one hook on the treble is now stuck in you or one of your fishing buddies.

What do you do? Here are some tips for dealing with this situation. How you deal with the hook will depend on how deeply the barb has penetrated the skin and the location. If it is around sensitive areas such as eyes, nose, ears, mouth or the groin area seek medical attention. The hook should be taped or secured to prevent it from moving around and ice if available can be applied to numb the area. Hooks in less sensitive places can be removed by the "string-yank method".

The string-yank is very effective. Your "patient" needs to be sitting or lying down depending on location of hook using a flat surface to stabilize the area. A six to twelve inch length of strong line (20lb test or more) should be looped and passed under the eye of the hook, and then up to the top of the bend of the hook. The next step is very important for a painless extraction; press the eye of the hook down until it touches the skin. Then with a quick, strong yank on the loop, pull up and away from the hook eye. Care should be taken that the hook does not impale someone else so have any others that are helping to stand back. If you are using small hooks (4/0) or less, forceps or long needle nose pliers will also



Having children fishing with you means you should use the safety suggestions listed. It is also the way to keep the kids interested in fishing-take them often. Photo by Lesley B. McNeff.



The string-yank is the best way to remove a hook from the fisherman's body. Photo by Chris Cantellay.

work in place of the string.

Basic first aid involves cleaning the wound, using antibiotic ointment and bandaging the area.

Observe the area for a few days if pain persists, swelling or redness develops seek medical attention. A tetanus booster is also recommended within 72 hours, if you have not had one in the last

ten years. If this method does not work, seek medical attention. Do not attempt to push the hook through and out of the skin again, then cutting the barb off. This will cause pain and damage nerves and blood vessels.

A great day on the water shouldn't be ruined by a hook accident. Here are some suggestions that should make a difference:

- 1) Carry a first aid kit
- 2) Wear a hat (it is easier to get a hook out a hat than your head)
- 3) Wear sunglasses
- 4) Consider using barb less hooks-especially if you have small children fishing with you.

And now, Happy Fishing. ■



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