

# Your Side

## of the fence



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## Controlling Aquatic Vegetation

By Josh Johnston, Fisheries Biologist



**T**here is a fine line between not enough and too much aquatic vegetation in your farm pond. Those in the first group look for ways to encourage the growth of vegetation, and those of you

in the latter are constantly trying to get rid of it. Aquatic vegetation, when controlled, can be very beneficial, aiding in dissolved oxygen production through photosynthesis, protective cover for young fish and bank stabilization. However, when in excess, aquatic vegetation can deplete your pond of dissolved oxygen through respiration, block sunlight causing little to no plankton to bloom resulting in a food shortage for young fish, make fishing tough and give your pond an unappealing appearance.

What caused this infestation of vegetation in



Lawn fertilizers are known to assist in the increase of duckweed growth. Photo provided by Texas A&M University.

your pond? An excessive amount of nutrients is present in your pond, allowing the vegetation to grow exponentially. The source of these excess nutrients could be any number of things, including, but not limited to, fertilizer runoff from your yard or pasture, septic tank seepage, cattle, or a resident goose population.

How do you stop the excessive growth of vegetation in your pond? Stop the source of excess nutrients from reaching your pond. You're probably thinking this is impossible because your cows have to have water, or you don't want to stop fertilizing your lawn. If you cannot stop the source of excess nutrients, you have a few options. There are three

methods for control of aquatic vegetation. The first is mechanical control. This refers to actually dragging, pulling, dredging, or digging out the vegetation. This is a good, inexpensive method for controlling aquatic vegetation. However, it is very labor intensive, time consuming and the vegetation usually comes back in a few weeks. The second method is biological control. This refers to the use of one organism to control another organism. Grass carp are a very popular biological control method for aquatic vegetation. Grass carp are relatively inexpensive, they do the work for you and they produce lasting results. But, they are a non-native species,

they are selective feeders and it takes about a year to see results. Grass carp can be purchased from most of the commercial fish dealers across the state. If you choose to go with grass carp, be sure to follow the recommended stocking



Lesser duckweed can become a nuisance in ponds. Photo provided by USDA.

rate for the type of vegetation you are combating (see table 1). Too many grass carp is not a good thing. They can wipe out all of the vegetation in your pond and stir up the sediment resulting in muddy water. The third and final method is chemical control. This refers to the use of aquatic herbicides to control vegetation. Chemical control requires little time, is relatively easy and produces fast results. However, aquatic herbicides can be very expensive, the decomposing plants can deplete dissolved oxygen in your pond, the vegetation generally comes back and some herbicides have health risks associated with them. If you choose to go the chemical control route, always follow the manufacturer's directions on the jug. Also, don't treat the en-

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tire pond at one time. Split the pond into quarters or thirds and treat one section at a time, giving that section a week or two before treating the next section. This will reduce the risk of dissolved oxygen depletion. Different species of aquatic vegetation require different herbicides to achieve the desired effect. So, be sure you accurately identify the species you want to treat and what herbicides are recommended to treat that species (see table 2 below).

Table 1. Common species of aquatic vegetation and grass carp stocking rates needed to control them.

	Grass Carp Stocking Rates
Filamentous Algae	10-20 per vegetated acre*
Coontail	7-15 per vegetated acre
Milfoil	7-15 per vegetated acre
Duck Weed	7-15 per vegetated acre
Water Meal	7-15 per vegetated acre
Water Lily	Will not control
Cattails	Will not control
Water Primrose	Will not control
Pond Weed	7-15 per vegetated acre
Chara	7-15 per vegetated acre
Mosquito Fern	7-15 per vegetated acre

\*Filamentous algae is not a preferred food source for grass carp, but they can control it if stocked heavily (10-20 per vegetated acre).

Table 2. Common species of aquatic vegetation and the aquatic herbicides that can be used to control them. See manufacturer's label on herbicide for application rates.

	Copper Sulfate	Copper Complex	2,4-D	Glyphosate	Diquat	Fluridone	Imazapyr	Endothal	Tri-clopyr	Aqua-shade
Filamentous Algae	X	X			X			X		
Coontail					X	X		X		
Milfoil		X	X		X	X		X		X
Duck Weed					X	X	X			
Water Meal					X	X				
Water Lily			X	X		X	X		X	
Cattails			X	X	X	X	X			
Water Primrose			X	X		X	X		X	
Pond Weed		X			X	X		X		X
Chara	X	X						X		X
Mosquito Fern					X	X				

Again, the only way to truly stop an infestation of aquatic vegetation is to stop the source of excess nutrients. If this is not feasible, hopefully one of the alternative methods above will work for you. Aquatic vegetation can be a real nuisance, and the control of it can seem like a never-ending process. But, choosing the right method and staying on top of it can yield very rewarding results. ■

# Landowner Spotlight

## The Dream Catcher Ranch

By RosaLee Walker, SE Private Lands Technician



**P**aul Strief has been been hunting and fishing since he was about 7 years old. His father was the first person to take him hunting and some of Paul's earliest memories involve

him walking through the woods with his dad. Ever since these first walks in nature, Paul has been passionate about hunting and wants to ensure that the youths of today are also given the opportunity to make some wonderful hunting memories.

As a kid, Paul was given opportunities to hunt in many different places in the United States as well as other countries and now

he and his wife Katie would like to return the favor to other youth by allowing them the privilege to hunt on their property. The Dreamcatcher Ranch in Atoka County is "where dreams come true" for many youth that would otherwise not have the opportunity to hunt and enjoy the outdoors. Paul said that "Youth hunts are why we do what we do." Paul and Katie are heavily involved with hosting youth hunts on their 900-acre ranch. Typically, the youth accompanied by one adult, are invited to spend a weekend at the Dreamcatcher Ranch. The guests are treated to a nice big steak dinner on Friday night and then allowed to hunt all day Saturday.

The younger generations are progressively becoming more interested with indoor activities such as video games or television. Paul wants to offer youth the opportunity to be involved with outdoor activities. He would like to see more youth become passionate about and involved in an outside interest. Giving the youth a chance to understand and enjoy the outdoors is a gift that both Paul and Katie believe is very important and crucial for future generations of outdoor enthusiasts.

To maintain and create quality wildlife habitat on their ranch for youth and their family and friends, they are involved with state and federal habitat programs. Paul stays knowledgeable about what habitat practices are the most viable to improve his wildlife habitat by reading wildlife management

magazines and being involved with WHIP and DMAP. They are currently working on eradicating eastern red cedar, conducting prescribed burns, and installing food plots for wildlife. Since his involvement with the habitat programs, they have seen an increase in the number of bucks on the property. With each passing year he sees more and more large bucks on the ranch. Last year with the help of DMAP, they were able to harvest 18 does from their ranch and have been averaging 18-22 does per year.

Paul's belief and dedication to the continuance of hunting and wildlife habitat management for present and future generations is why he was chosen as this issues outstanding landowner. ■



*Paul and his wife Katie work hard on their ranch to offer youth hunts. Photo by RosaLee Walker.*

# Wildlife Matters

## How Accurate is Aging Deer on the Hoof?

By Ken Gee, Senior Wildlife Researcher - Ag Research, The Noble Foundation

**A**s managers and sportsmen become more aware of the importance of age in antler production, selective harvest management programs become increasingly popular. The use of physical characteristics to estimate ages of deer in the field is often the basis of harvest decisions. This aging technique is commonly referred to as “aging on the hoof” (AOTH). AOTH receives a lot of press; however, prior to a study by the Noble Foundation, there have been no scientific evaluations of this aging method.

To evaluate the method, we developed a quiz consisting of photographs of 70 wild, known-age, antlered male, white-tailed deer ranging in age from 1.5 to  $\geq 7.5$  years. We administered the quiz to 108 deer biologists who use AOTH. The results are given in Table 1. The average percentage of correct estimates was 36 percent, with a range of 15 to 56 percent.

The yearling age class had the highest accuracy rate (62 percent), but accuracy was less than expected by the deer biologists. Specific year-class accuracy rates for deer  $\geq 2.5$  ranged from 15 to 43 percent. In addition to low accuracy rates, there was also significant overlap among year-classes. For example, 2, 16, 20, 17, 12 and 9 percent of the 3.5-year-olds were incorrectly estimated to be 1.5, 2.5, 4.5, 5.5, 6.5 and  $\geq 7.5$  years old, respectively. Similar overlap was found for other age classes.

Much of the inaccuracy of the AOTH method can be attributed to two factors. A lack



All of the deer in these photos are 3.5-year-olds, but they share few physical similarities. Photos provided by The Noble Foundation.

of quantitative estimation criteria makes consistent application difficult and very subjective. Variability of characteristics within specific year-classes also hurts accuracy. For example, all of the deer in the photos are 3.5-year-olds, but they share few physical similarities.

Using AOTH to make year-class specific management decisions may not yield desirable results. However, using AOTH to identify

some age groups may have some management utility. For example, our data indicate that if the management goal is to protect deer  $\leq 3.5$  years old, placing AOTH deer  $\leq 4.5$  years old off limits for harvest will protect 100, 94 and 62 percent of the 1.5-, 2.5- and 3.5-year-olds, respectively. The downside is that 38 percent of the 3.5-year-olds with the most promising size and antler quality are placed at risk. Placing AOTH deer  $\leq 5.5$  years old off limits will protect 79 percent of the 3.5-year-olds. Results in Table 1 may help you determine where to draw the line for harvest management.

*The Samuel Roberts Noble Foundation is an independent, nonprofit institute headquartered in Ardmore, Okla. Founded in 1945, the Noble Foundation conducts direct operations, including assisting farmers and ranchers, and conducting plant science research and agricultural programs, to enhance agricultural productivity regionally, nationally and internationally. ■*

Table 1. Percent distribution of “Aging on the Hoof” age estimates by age-class

Estimated Ages	Actual Ages							
	1.5	2.5	3.5	4.5	5.5	6.5	$\geq 7.5$	
1.5	62%	7%	2%	0%	0%	0%	0%	<div style="display: flex; justify-content: space-around; font-size: small;"> <span style="color: red;">■</span> % under aged</div> <div style="display: flex; justify-content: space-around; font-size: small;"> <span style="color: yellow;">■</span> % correct</div> <div style="display: flex; justify-content: space-around; font-size: small;"> <span style="color: green;">■</span> % over aged</div>
2.5	34%	43%	16%	6%	2%	2%	2%	
3.5	3%	32%	25%	25%	19%	19%	16%	
4.5	0%	12%	20%	30%	31%	27%	20%	
5.5	0%	3%	17%	18%	25%	20%	16%	
6.5	0%	1%	12%	11%	14%	15%	16%	
$\geq 7.5$	0%	2%	9%	11%	10%	18%	31%	



# Oklahoma Prescribed Fire Council

All of Oklahoma’s wildlife habitat areas, or ecosystems, adapted in the presence of natural and, in the last 10,000 years, man-made fire. All of the plants and animals in those habitats had adapted to, or even depended upon, fire as a primary factor in shaping their food supplies, reproductive strategies and general survival mechanisms. With the strong fire suppression that man has implemented in the last 50-100 years, these habitats have become dramatically altered, making them unsuitable for many of the native animals that formerly existed there. Grasslands experienced woody vegetation encroachment and open woodlands became closed canopy forests.

It is critical that managed or “prescribed” fire be implemented back onto the Oklahoma landscape to create the habitat necessary for survival or restoration of the full suite of plants and animals that represent our state’s wildlife diversity heritage. This rejuvenation of the natural landscape can also significantly improve hunting success, provide additional revenue for landowners and create a natural setting that reduces the natural fuel buildup which results in catastrophic wildfires.

Improved wildlife habitat, more revenue potential for landowners, improved safety for people, livestock and property, improved hunting opportunities – a winning combination for every Oklahoman! It is for these reasons that the Oklahoma Prescribed Fire Council is determined to facilitate a dramatic increase in the use of prescribed burns by private rural landowners throughout the state.

Charter members of the Oklahoma Prescribed Fire Council include the Department of Natural Resource Ecology and Management of Oklahoma State University, Oklahoma Department of Wildlife Conservation, The Nature Conservancy, U.S. Fish and Wildlife Service Ecological Services, Oklahoma Association of Conservation Districts, Oklahoma Conservation Commission: District Employee Association, Samuel Roberts Noble Foundation, Oklahoma USDA Natural Resources Conservation Service and the Oklahoma Department of Agriculture, Food and Forestry.

\*For more information about the Oklahoma Prescribed Fire Council, log on to [oklahomaprescribedfirecouncil.okstate.edu](http://oklahomaprescribedfirecouncil.okstate.edu).

Orders are now being taken for special packages of tree and shrub seedlings selected for wildlife habitat improvement. Be sure to order via the online store or you can request a paper order form by contacting the Forest Regeneration Center at 800-517-FOREST.

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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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New Subscription

Discontinue

## Conserving Habitat Along the Canadian River

by Gene T. Miller, Regional Biologist, National Wild Turkey Federation

**S**ince 2009, private landowners, state and federal biologists, range managers, foresters and hunters have been working on a big project to conserve wildlife habitat, specifically riparian habitat along the Canadian River. Areas along the river to be worked on start in Ellis, Roger Mills, and Dewey Counties, and continuing eastward. Targeted removal of invasive woody species like Eastern red cedar, salt cedar, and Russian olive is being conducted with cost share assistance available from USDA Natural Resources Conservation Service (NRCS) and the Oklahoma Department of Agriculture - Division of Forestry Services.

This invasive woody plant war is bigger than all of us put together. In fact, even though these riparian areas like the Canadian River only occupy eight percent of the landscape in a place like western Oklahoma or the Texas Panhandle, they hold lots of wildlife. But many of these places in western Oklahoma are being threatened by a rapid advance of woody plants that thrive in “wet” places; therefore, organized efforts like this one along the Canadian are meant to provide incentives to landowners wishing to “turn the tide” against water-consuming plants that, if left unchecked, not only change the water situation for the worse in terms of people, livestock, and wildlife, but eventually eliminate native plant communities along those water courses. For example, can you imagine streams in western Oklahoma that once had cottonwood, hackberry, soapberry, roughleaf dogwood, aromatic sumac, and native sand plum and beautiful openings full of native grasses and wildflowers that are now solid cedar brakes? Unfortunately, it’s happening every day.

The NWTF is working in concert with state and federal

agencies on both sides of the Texas-Oklahoma state line in a landscape effort to conserve these productive riparian habitats under an umbrella program known as the Southern Great Plains Riparian Initiative...and it’s all about working with private landowners in a voluntary way through providing monetary incentives and technical guidance. We are trying to help publicize these incentives and services whenever possible.

To learn more about the South Canadian River Floodplain Management Area Local Emphasis Area in Ellis, Roger Mills, and Dewey Counties contact one of the local USDA-NRCS Field Offices. Information is also available from the Oklahoma Department of Agriculture - Division of Forestry Services at 800-517-3673.

Before I close, let me also mention a fledgling organization that is of, by, and for landowners along the Canadian River in the Texas Panhandle and western Oklahoma. It is

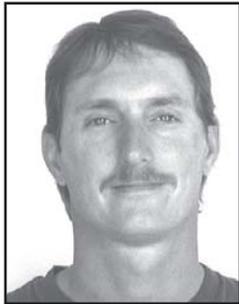
the Canadian River Weed Management Area (an association), and has been supported thus far since 2009 by a handful of very dedicated volunteers...farmers and ranchers, perhaps even some of you who are reading this. Please stay tuned to YSOF, your local SWCD, FSA, and Cooperative Extension newsletters, and local papers in western counties along the Canadian River this fall and winter, because we intend to invite folks to come out to some local meetings and help us grow this organization into a stand-alone group capable of applying for grants and funding to “fight the good fight” against invasive woody plants in that region. We’ll be there to support you and provide technical services, but it will be yours to run and grow through the years. Please share this with your friends, and contact me if I can be of any assistance or give a program to your local group. As a native Texan, it’s good to be on “Your Side of the Fence.” ■



*Invasion of salt cedar and eastern red cedar along the Canadian River. Photo provided by the National Wild Turkey Federation.*

## Channel Catfish Spawning Structures

By Gordon Schomer, Durant Hatchery Manager



**C**hannel catfish are one of the most common species of fish found in North America. They can be found from southern Canada to north-eastern Mexico and are most numerous in the United States

east of the Rocky Mountains although they have been widely introduced into the western United States and are more common there now. Channel catfish can be found in variety of water habitats such as rivers, lakes, and ponds.

Channel catfish are cavity spawners and require a chamber to deposit eggs. In most rivers and lakes channel catfish will normally find natural or manmade structures to use for spawning. Natural structures may include undercut or holes in banks, rootwads or log jams, rock ledges, hollow logs, or other such semi-dark secluded areas. Man made structures in private lakes and rivers could include such things as brush piles, large rip rap or between boulders.

**\*Use of, and/or placement into lakes and reservoirs of waters of this state any container, including but not limited to drum, cans, tubs, boxes or barrels which can attract, entice, or lure fish into an open cavity within the container is prohibited.**

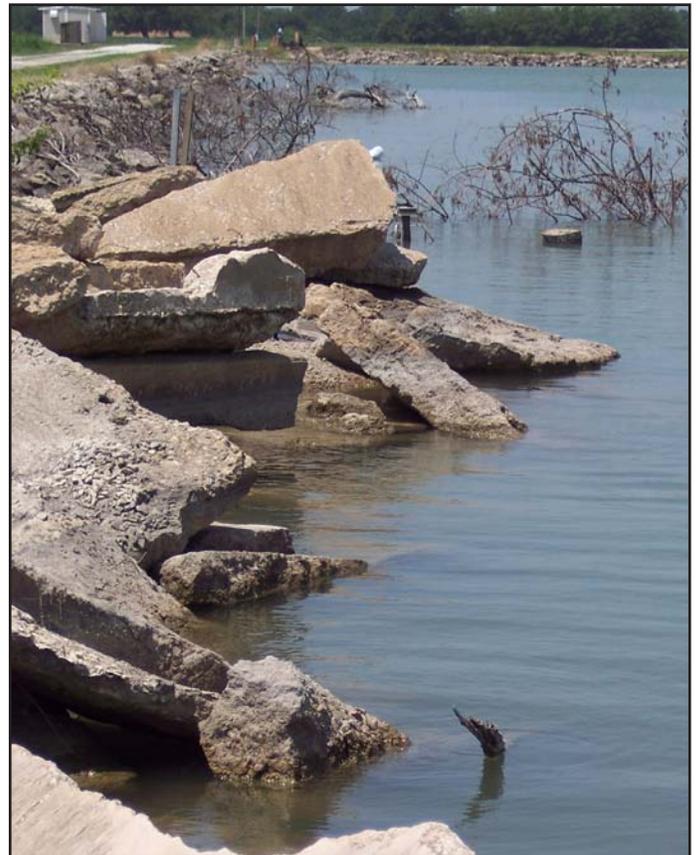
In typical pond situations the available natural spawning habitat tends to be very limited or non-existent. Suitable spawning structures would need to be added to a pond if the pond owner or interested person wishes for any spawning activity to take place. Structures such as old water heaters, 15-20 gallon or larger barrels (plastic or metal work well), large milk cans, large piping, or even wooden boxes with side openings make for good nesting cavities. Any type of movable structure used needs to be weighted or staked down so it will

not move around in a current, wave action, or during windy or stormy weather.

There are a few things to keep in mind when placing artificial spawning structures, such as barrels and piping in a body of water. The first and probably one of the most important is that the container needs to have a large enough opening to allow the male and female catfish to enter and exit it. If the main section of the container is a little larger than the opening itself, then it allows the male a little more room to care for the eggs until they hatch. Having one end of the container open and the other end closed off also allows the male to protect the eggs and fry better and can help keep excessive silt from constantly entering the container. Try to point the opening of the container away from the bank or at least towards a direction where the least amount of silt can enter the container.

Whether in a river, lake, or pond an adult male channel catfish will start looking for a suitable spawning structure when the water temperature starts approaching 72F, typically May-June in Oklahoma. The spawning water temperature range is generally between 72-82F. Male channel catfish have been known to fight to the death over spawning structures, so placing several spread out in 2-3 feet or deeper water will help to alleviate some of the competition for the structures. On fish farms, where broodstock are much more crowded in an effort to maximize production, as much as 15% mortality can occur from males fighting and post spawning stress factors.

Successful channel catfish spawning can add many more fish to a pond situation, even with bass and bluegill preying on the young catfish fry and fingerlings. Pond owners with ponds, that do not have any other fish species in them except for channel catfish, may not want to add spawning structures, unless they plan to limit the number of spawning structures they put out or are constantly removing adult channel catfish from the population. Overcrowding could occur and the smaller fish may be stunted and may never reach a catchable size. However, for the correctly managed pond, adding a few spawning structures can be a very rewarding way to maintain your existing channel catfish population as the adults are caught out by you and your grandkids. ■



*Piled rocks and concrete provide spawning structures for catfish in many reservoirs. Photo by Gordon Schomer.*



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