



Your Side of the Fence

Summer 2016

A Publication of the Oklahoma Department of Wildlife Conservation's Private Lands Section

The Value of a Photograph

By Mike Sams, Natural Resource Conservation Service Biologist



United States Department of Agriculture

The old adage that a picture is worth a thousand words is certainly true for me. In a world that is constantly changing, pictures can capture changes in habitat over time and help guide management decisions. They can also track and monitor habitat restoration or management activities. As we adapt our management to target a particular habitat type or species, pictures can provide important records, especially when coupled with weather and population data.

The use of pictures to record habitat change is called photo point monitoring. The process is easy and inexpensive, after all, it only takes a few seconds to snap a picture. However, to ensure photo point monitoring works for you there are a few simple rules:

Establish photo points – identify elements of the habitat you are most interested in monitoring and establish camera points for each. Give each a unique identification and record their location on a map, with GPS

coordinates, or with a permanent marker such as a post.

Establish a field of view – When setting up a photo point, make sure you are able to capture the scene within a camera's field of view. Some choose to shoot

photos from each monitoring point in the same direction to avoid confusion. However, directions of photos can be tailored to each point so long as you record the direction the photo is to be taken. If



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details like plant heights or cover are important, consider placing a sized object, such as a yard stick, in the photo.

Decide when to take photos – The frequency of taking photos is dependent on what you are wanting to record. If you wish to record vegetation establishment or changes within a season or year you could take photos weekly, monthly or seasonally. For long term monitoring, annual photos might suffice. If photos are to be taken annually, determine what season best represents what you are trying to record. For example, if quail are of interest spring photos might help record nesting cover conditions. When taking photos annually it is important to take them during the same time each year. As a general rule we attempt to schedule annual photos within 10 calendar days of each other.

Catalog photos – The major drawback to digital photos is they can often get lost among all the other pictures on your computer or maintain a permanent residence on your camera or phone until you need to free up space, which usually results in them being deleted. Establishing a catalog in your computer is a good way to organize and track your photos, but I have learned from experience that it is wise to back everything up. I prefer printing the photos and then keeping them in a notebook with notes on weather, along with a few game camera and hunting pictures to show the fruits of our labor.

By adhering to these simple rules, photo point monitoring might help shed some light on your management efforts. I hope this information inspires you to start recording the successes of your habitat projects.



Brandon Brown ODW

Water Matters

Realistic Expectations from Your Farm Pond

By Ryan Ryswyk, Southwest Region Regional Fisheries Supervisor



In the last issue of this newsletter, we discussed ways to increase the size of farm pond fish. But what can landowners expect when it comes to

their pond? Can each individual fish of every species be trophy size? Realistically, no. As with most things, pond management requires some give and take and pond owners shouldn't expect every fish in the pond to be a lunker.

Growth rates for fish depend on a variety of factors including the amount of nutrients in the pond available for plankton growth, amount of food available to the fish, water temperatures, and even water quality.

The number of fish in your pond is another factor. Too many bass and not enough bluegill can lead to small, slow-growing bass because there simply isn't enough food for the bass to eat. The few bluegill that escape predation by bass will be very large because they do not have to compete with other bluegill for food.

Expected Growth for Oklahoma's Balanced Farm Ponds

	Year 1	Year 2	Year 3
Bluegill	2-3 inches	4-5 inches	5-6 inches
Largemouth Bass	6-8 inches	10-12 inches	12-14 inches
Channel Catfish	7-9 inches	10-13 inches	13-16 inches

Recommended Stocking Rates

A balanced fishery, one with a moderate amount of fish in a variety of size ranges, is recommended for most pond owners. A largemouth bass, bluegill, and channel catfish trio is one of the most common and easiest to manage combinations of fish for Oklahoma ponds.

The Wildlife Department recommends stocking 500 bluegill fingerlings and 100 channel catfish fingerlings per acre in the fall. The following spring, stock 100 largemouth bass fingerlings per acre. Stocking bluegill before stocking bass allows the bluegill to grow and possibly reproduce before introducing the predatory bass.

If large bass is your goal, you may need to accept that your pond may not be able to support a high number of individuals. To reach this goal, you may even need to harvest bass from your pond. A smaller number of bass will reduce competition for food and allow those fish to grow faster. While supplemental feeding of forage fish (fathead

minnows and golden shiners) is an option for growing larger bass, these forage fish may not survive long term. Stocking bluegill sunfish to feed bass is recommended.

While bluegill are the best option for feeding bass, high protein fish food can help channel catfish. Catfish can be fed during the warmer months of the year when they are actively feeding and growing. Never feed more than 15 pounds per surface acre per day because of the risk of reducing the water quality in your pond. A great advantage of feeding catfish is that you often see the fish surface, which allows you to monitor their growth. Find additional information for feeding farm pond fish in the Fall 2008 issue of this newsletter.

As with most activities, farm pond management takes time and patience. Try not to rush the process by overstocking, overharvesting, or overfeeding. Patience will go a long way in having a healthy, balanced pond for you and your family to enjoy.



Jo Ann Bishop

An Update on Salt Cedar Control Efforts

By Weston Storer, Wildlife Biologist at Beaver River WMA



As a Wildlife Management Area biologist, I regularly battle invasive plant species, including the non-native salt cedar. This “water hog” of a

tree poses a serious threat to our state’s waterways, but is especially dangerous in an area that receives less than 25 inches of rain in a typical year.

Land managers have attempted several different control methods over the years: trees have been burned, cut down, sprayed, and a combination of these efforts. But research and field experience has shown this tree often sprouts from the stump after burning, which can double the amount of salt cedar rather than reduce it. Herbicide treatment of the tree’s leafy growth has proven effective, but requires spraying the entire tree. Because salt cedars often form dense thickets, aerial spraying gains the largest results. To date, most managers prefer an initial Imazapyr herbicide treatment, followed by up to two years of continued treatment to confirm tree kill. After this two year period, the

tree carcasses can be mechanically removed, shredded, or piled and burned. Managers should consider the least erosive option for the removal site.

Another control method was the introduction of the Asian salt cedar leaf beetle. Research suggests it may take 4-7 years of leaf defoliation by the beetle to kill a salt cedar tree. While this biological control method takes twice the time of herbicide treatments, it is more cost effective and does not lead to regrowth like other options.

Initial beetle introduction began in the mid-2000s, but have since stopped because a federally endangered bird from New Mexico and Arizona, the southwestern willow flycatcher, has started nesting in the invasive trees. Salt cedars have outcompeted native willows the birds traditionally used, so they have adopted the non-native tree as a primary nesting site. Biologists with the U.S. Fish and Wildlife Service are concerned the beetle may further threaten the bird by defoliating their improvised nesting cover. Most of the salt cedar beetle research funding has been cut and states cannot introduce more beetles. Even so, states are not required to kill any beetles that may be present on the landscape.

The non-native salt cedar (*Tamarix chinensis*), labeled by many locals as a tamarack, was introduced to the United States from Eurasia in the mid-1800s for the nursery trade. By the early 1900s, this tree had been planted in the West to control stream bank erosion. Unfortunately, salt cedars utilize large amounts of water and are not beneficial on the landscape. The leaves excrete salt, leading to the plants’ salty name. When they shed, the surrounding ground increases in soil salinity. This denies most native plants the opportunity to grow in that particular environment.

The beetle has worked its way into Oklahoma by way of Texas through several creeks and river systems. The western half of Oklahoma has seen appearances from the salt cedar beetle in the past few years. Due to the intensive spread of the salt cedar beetles and their impact on other important species, they will continue to be an interesting component to salt cedar control.

Get more information about salt cedar control, including herbicide recommendations in the U.S. Forest Service’s “Field Guide for Managing Saltcedar,” Document TP-R3-16-2.



Landowner Spotlight

Managing the Land with Richard Lindly

By RosaLee Walker, Private Lands Biologist



When Delaware County's Richard Lindly first decided to focus his efforts on habitat management ten years ago, his primary goal was to improve

hunting success. Soon, his goals and motivation shifted to creating a place his family can not only hunt and fish, but also observe wildlife and learn to care for the land.

"The excitement derived from observing wildlife and the satisfaction of providing desirable habitat for many species is what keeps me going. I think we are all called to be good stewards of the land and I hope to pass that down to my children," Lindly said.

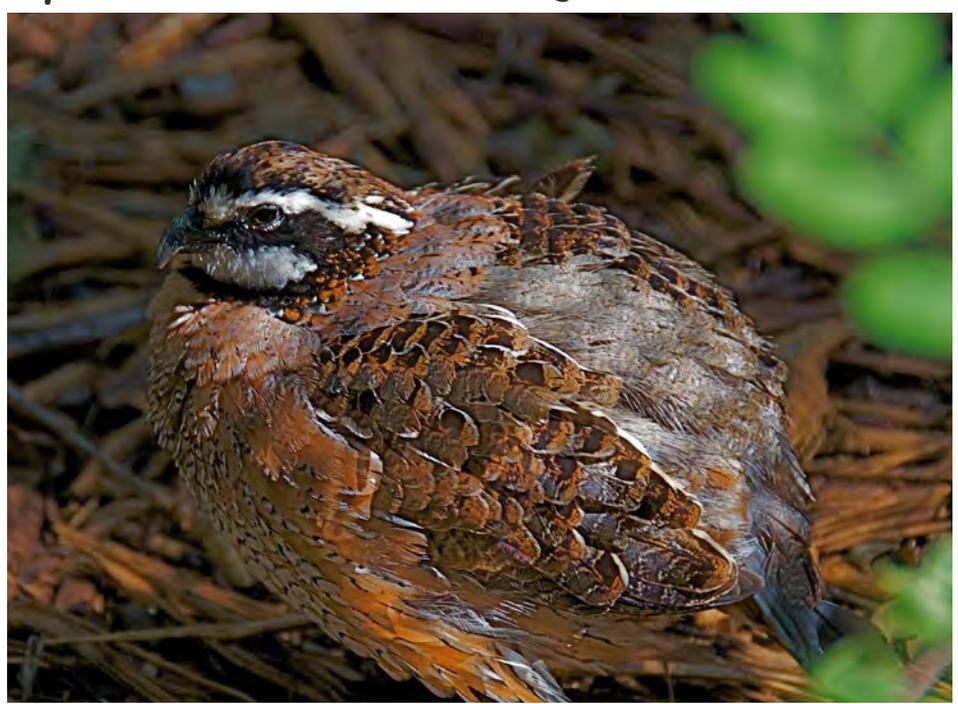
To help achieve these goals, Lindly applied for the Wildlife Department's Wildlife Habitat Improvement Program (WHIP) and received funding to make habitat improvements on his property. Since management efforts started a few years ago, he has started seeing habitat improvements and wildlife benefits.

"We are seeing more wildlife and hope to attract turkeys soon," Lindly said. He wants to improve the habitat to be able to support as many different wildlife species as possible, especially white-tailed deer, wild turkey, and northern bobwhites.

"The biggest thing lacking on my property was diversity in the habitat." With the assistance of WHIP, Mr. Lindly has created firebreaks and created wildlife openings on his property.

Prescribed burns have followed, improving the diversity in plant species as well as plant height. Where it was once closed canopy forest, Mr. Lindly has now opened the forest to allow sunlight to reach forest floor. The sunlight and open ground has promoted growth of native vegetation, providing cover as well as food for wildlife. These improvements should help the Lindly family exceed their wildlife management goals.

"I think we are all called to be good stewards of the land and I hope to pass that down to my children."



Tech Note

Using Camera Surveys to Understand Your Deer Herd

By Erik Bartholomew, Big Game Biologist



Trail cameras are a useful tool for managing white-tailed deer; one of the best tools managers can use to better understand

their herd. Done correctly, these surveys can estimate the number of deer per acre, the buck-to-doe ratio and recruitment. Keep in mind, this survey is designed to establish trends and *estimate* deer numbers. Trail camera surveys do not provide a complete census of your herd.

This survey assumes that:

- Deer on your property are attracted to bait sites.
- The attractiveness of the bait is similar each year.
- Bucks and does are equally attracted to the bait site.
- Every unique buck photographed is identified accurately.
- A majority of deer using the property are photographed.

Surveys can be conducted before or after hunting season. Pre-season surveys start in late summer (mid-August to mid-September) when buck



Corn is the most readily available bait used for trail camera surveys, but milo and rice bran are less attractive to non-target species.

antlers are nearly full grown and fawns are moving with does. This time of year is best for determining harvest rates for the upcoming season. Another option is to conduct surveys after hunting season to determine how many deer are remaining on the property. This should be done in January, before antlers begin to drop. Combining the surveys can give a picture of what is happening with your deer herd year-round.

Setting Up a Trail Camera Survey

- Make a grid layout across a map or aerial photo of the property. The total acreage will determine the size of each block. We recommend having at least one camera per 100 acres for properties less than 1,000 acres in size. For larger

properties, one camera per 160 acres is sufficient. (Cameras can be rotated to different areas to limit the number of cameras needed.) Within each block, select a site near the center of the survey area with ease of access and deer activity in mind (two-track roads, deer trails, etc.). Identify each grid with a number or letter. This ID can be painted on a nearby tree or board in the photo background to help with sorting photos.

- Locate the camera 12 to 20 feet from the bait. Try to center the bait pile in the camera's field of view. Camera brands have varying effective ranges so check the manufacturer's suggested distances. Set the camera delay for a minimum of 5 minutes to reduce the

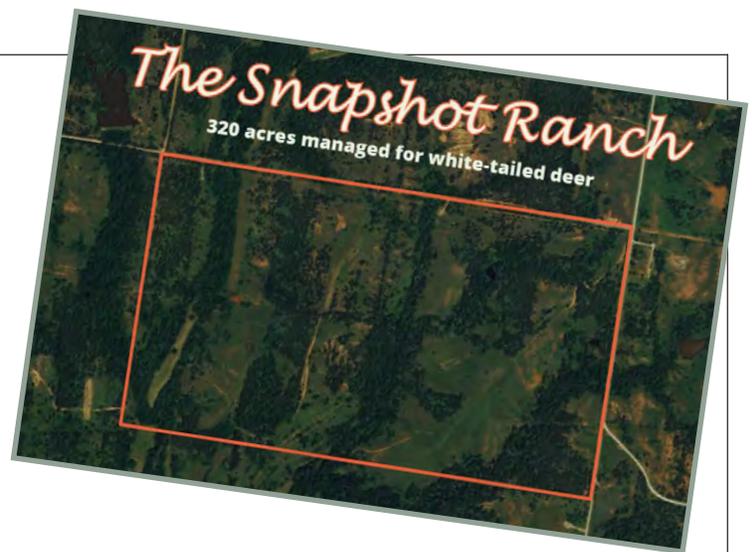
number of images you have to sort later.

- Run the survey for 10 to 14 days. In research studies, 85 percent of deer on a property were photographed in 10 days. Ninety percent of deer on a property were photographed in 14 days. When trying to manage expenses, 10 days is sufficient.
- After the survey period, sort your images and count the number of bucks, does, and fawns. Fawns are all deer younger than 1 year old, including buck fawns. Study the photos closely to count the number of unique bucks based on antler characteristics. This will help determine deer density. If you have 100 buck photos and can positively identify 10 individuals, the ratio of unique bucks to total bucks is 10:100, or 10 percent. This "unique buck ratio" can then be applied to the number of does and fawns recorded. (If 300 images of does are taken, applying the 10 percent ratio would yield an estimated 30 does. $(300 \times 0.10 = 30 \text{ does})$)

Survey Tips

- Avoid timing your survey when natural food sources (acorns) are readily available.
- Orient your camera in a northern or southern direction to avoid harsh sunlight affecting the photo quality.
- Set your cameras at waist height to get the best photo of the deer.
- Check pictures the day after you install you camera. If no deer were observed, consider pre-baiting the site.
- Consistency is key. Use the same location every year, during the same time period.

Putting a Trail Camera Survey Into Practice



The Snapshot Ranch Trail Camera Survey Results

	Site 1	Site 2	Site 3	Total Photos	Unique Deer
Bucks	75	150	100	325	15 <small>(15/325=0.05)</small>
Does	100	120	170	390	20 <small>(390 X 0.05=19.5)</small>
Fawns	100	75	100	275	14 <small>(275 X 0.05=13.75)</small>
Total Number of Deer:	49				
Deer Per Acre:	1/6.5				
	<small>49 deer per 320 acres, $(320/49=6.5)$</small>				
Deer Per Section:	98/mi²				
	<small>6.5 deer/acre, 640 acres/section, $(640 \text{ acres}/6.5 \text{ deer per acre} = 98)$</small>				
	<small>OR</small>				
	<small>49 deer/320 acres, 640 acres/section, $(49 \times 2=98)$</small>				
Buck-to-Doe Ratio:	1 : 1.33				
	<small>15 bucks : 20 does, $(20/15=1.33)$</small>				
Doe-to-Fawn Ratio:	1 : 0.7				
	<small>20 does : 14 fawns, $(14/20=0.7)$</small>				

Learn how to apply this survey in your deer herd management efforts by contacting me at

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