

# Outdoor Oklahoma

SEPTEMBER/OCTOBER 2011 ONLY \$10 A YEAR



## The Fight Against Bobwhite Quail Decline

Also In this Issue:

Seventh Annual Wildlife Expo

2010 Big Game Report

# Panoramas

**A**s we head into what is sure to be another memorable hunting season, this issue of *Outdoor Oklahoma* takes on some important sportsmen's issues.

First, the "Big Game Report" in this issue reminds of the great opportunities we have as big game hunters in Oklahoma, with the chance to hunt whitetail and mule deer, elk, antelope and black bear all within our borders. It also provides information and facts about last year's deer and other big game seasons that may just help you in your quest for your own trophy this fall. We continue to have outstanding deer harvests (more than 109,000 harvested last season for our fourth highest annual harvest on record), and we continue to see greater and more opportunities to hunt big game. In fact, this past year marked the second year for open seasons on both antelope and black bear, and hunters were successful in both endeavors. In Oklahoma, there is not a region of the state that isn't home to a number of avid big game hunters, and there is plenty of big game for them to hunt.

I hope you will take the opportunity to go big game hunting this year. Deer season is of course the most popular and widely available big game season in the state, and deer hunting is a great way to add meat to your freezer. Just as important, it's an opportunity to introduce someone new to the outdoors. One great way to do this is through an antlerless deer hunt during one of several seasons open to doe hunting. Taking a doe helps play an important role in deer management while creating memories for hunters that will last a lifetime. If you know someone who wants to go hunting, there is still time to take them to one of the Wildlife Depart-

ment's hunter education classes. And if you can't make it to one of the many classes held throughout the state, an apprentice-designated hunting license may meet your needs. The apprentice-designated hunting license allows certain hunters to go hunting without hunter education certification under the supervision of qualified mentor hunters. Learn more about it at [wildlifedepartment.com](http://wildlifedepartment.com).

In addition to big game, this issue also takes a look at the status of bobwhite quail in Oklahoma and across the bird's range. The bobwhite quail is an important biological and cultural staple across its range, but especially in Oklahoma, since the state is one of the last great hold-outs in the nation for remaining quality quail habitat. I can attest to this myself, as nobody enjoys quail hunting more than I do. And a good bird dog is a pleasure to share the field with. However, an ongoing gradual decline of bobwhite quail populations has been underway that is yet to be fully understood. In this issue, we will be sharing some of the threats quail face today as well as informing you about some important research efforts underway to address the decline of bobwhite quail. As we seek to better understand the quail, its habitat needs and the influences of the environment on its ability to thrive, we are confident we can all do something in the effort to conserve this iconic symbol of both habitat and the culture of hunting.

Sincerely,



Alan Peoples,  
Chief of Wildlife

# Outdoor Oklahoma

SEPTEMBER/OCTOBER • VOLUME 67 • NUMBER 5  
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## On the Cover

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# Off the Beaten Path

NOTES ON WILDLIFE • OUTDOOR TIPS • READER'S LETTERS • ENVIRONMENTAL NEWS  
COMPILED BY MICHAEL BERGIN

## WILDLIFE DEPARTMENT'S ARCHERY IN THE SCHOOLS PROGRAM NOW ON FACEBOOK



"We felt that Facebook would be the ideal social media platform for this program since it is aimed towards teens," said Justin Marschall, OKNASP coordinator for the Wildlife Department. "This page will allow archers and coaches to

***This page will allow archers and coaches to share success stories.***

share success stories. It will also be a versatile meeting place to share photos and information about practices and upcoming competitions."

The Wildlife Department has been updating sportsmen on Twitter for almost two years and currently has around 700

followers. Additionally, it communicates with thousands of sportsmen through its free Weekly Wildlife News, which is sent to subscribers by e-mail. But with thousands of kids participating in the OKNASP program at nearly 300 schools across the state, Facebook will continue to help the Wildlife Department spread the outdoor traditions for which the state is so well known.

The new OKNASP Facebook page has been active since mid-July, and the Wildlife Department has also set up an agency page that will be monitored. Facebook users can become fans of both of these pages by logging on to Facebook and searching for them by name ("Oklahoma National Archery in the Schools Program" or "Oklahoma Department of Wildlife Conservation").

Coordinated by the Oklahoma Department of Wildlife Conservation, OKNASP is part of the National Archery in the Schools program. The program partners state wildlife agencies, schools and the nation's archery industry to introduce students to the sport of archery. The Archery in the Schools curriculum is designed for 4th-12th graders and covers archery history, safety, techniques, equipment, mental concentration and self-improvement.

About 290 schools across the state are involved in the program, many of which participate in a state shoot each year after a season of practice and competition in their respective schools.

Schools and shooters qualified for the state shoot by first attending regional competitions, and this past year over 1,150 students from about 70 Oklahoma schools turned out at the Oklahoma State Fair Park for the state shoot. Top shooters were awarded prizes and awards and qualified for the national tournament, where they competed against students across the nation in Louisville, Ky.

Teachers interested in learning more about the OKNASP program or in starting the program at their school should contact Marschall, at (405) 522-1857 or [jmarschall@odwc.state.ok.us](mailto:jmarschall@odwc.state.ok.us).

## AVOID COMMON DOVE SEASON MISTAKES WITH CHECKLIST APPROACH TO DOVE HUNTING

**WHITE-WINGED DOVE**



With dove season now underway, law enforcement officials with the Oklahoma Department of Wildlife Conservation remind hunters to be sharp regarding season regulations.

Dove season runs Sept. 1 through Oct. 31 and Dec. 24-Jan. 1 statewide.

Full details and regulations for dove hunting are available in the current "Oklahoma Hunting Guide," available free online at [wildlifedepartment.com](http://wildlifedepartment.com) or at any location where hunting licenses are sold.

Law enforcement officials hoping to help well-meaning sportsmen stay on top of their game suggest hunters read the "Hunting Guide" in full for details on general regulations and license requirements, but especially those portions that pertain to the species they plan to hunt. Additionally, working over a mental or written checklist of common violations before each hunt may serve to remind hunters of mistakes to avoid.

"When hunters make a check list before season and follow it, they will be much better prepared," said Robert Fleenor, law enforcement chief for the Wildlife Department. "Going out at the last minute and not being prepared is the biggest problem."

The following is a basic checklist to help avoid some of the most common dove season mistakes:

**MOURNING DOVE**



**EURASIAN COLLARED DOVE**



- Obtain the appropriate hunting license as well as the Harvest Information Program (HIP) permit.
- Use appropriate shotgun plug. Taking migratory game birds such as doves with a shotgun capable of holding more than three shells in the magazine and chamber combined, unless otherwise provided, is prohibited. Fleenor said even well meaning hunters who remember to plug their shotguns should still ensure that the plug they use limits the magazine to two shells.
- Obtain landowner permission before hunting on private property.
- Do not shoot across or from roadways. Shooting from or across any public road, highway (or right-of-way) or railroad right-of-way is prohibited. Public roadways are defined as any governmental or corporate roadways where vehicular traffic is not restricted and the roadway is routinely used by the general public.
- Know your doves. Identification of species is a key to hunter success.
- Know you limits. The daily limit for dove is 15, which may consist of any combination of mourning, white-winged and fully dressed Eurasian collared doves ("fully dressed" describes those birds without a head or fully feathered wing naturally attached to the carcass). However, there is no limit on Eurasian collared doves provided that the head or one fully feathered wing remain naturally attached to the carcass of all such birds while being transported to their final destination. ✕✕

# 2011 Oklahoma Wildlife Expo: Seven Years of Celebration

OKLAHOMA

WILDLIFE EXPO  
2011



**FAMILY FUN  
& FREE  
SEP. 24-25**

STEVE WEBBER

**W**hen family and friends come together for a weekend of sampling just about every aspect of Oklahoma's outdoors, it's bound to be fun, especially if it is free. The annual Oklahoma Wildlife Expo is all of the above.

Slated for Sept. 24-25 at the Lazy E Arena just north of Oklahoma City, the seventh annual Wildlife Expo is a chance to learn about almost every hunting and fishing-related activity in the state — and in an atmosphere where families can enjoy everything there is to see and do together at no cost.

Visitors to the 2011 Oklahoma Wildlife Expo will have a chance to catch a fish, shoot a bow and arrow or shotgun, ride a mountain bike, float in a kayak, pet an alligator and even sample wild game meat and camp cooking.

“The wildlife Expo is a unique, one-of-a-kind experience for the whole family,” said Rhonda Hurst, Expo coordinator for the Wildlife Department. “Where else can you go spend the day actively participating in everything from tossing an atlatl to paddling a kayak? You can touch native reptiles and see bats up close. You can catch a fish or shoot a bow. You can

learn about wildlife from birds to worms and how to conserve Oklahoma's resources for future generations. You are sure to find your favorite outdoor activity as well as discover some new ones, and the best part is that it's free!”

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OUTDOOR OKLAHOMA



The Expo features archery and firearms ranges, a stocked fishing pond, bird watching areas, mountain bike trails, ATV test ride courses, Dutch oven cooking seminars, and even an indoor pond used for kayaking and sporting dog demonstrations. The event also features free wild game samples, live wildlife, and booths and activities that provide information, learning opportunities and recreation. Though admission and activities at the event are all free, visitors can shop at the Expo's Outdoor Marketplace, a large area where vendors will be showcasing their outdoor-related goods and services.

Hosted by the Oklahoma Department of Wildlife Conservation in partnership with a range of other state agencies, businesses, organizations and volunteers, the Expo is designed to generate interest in the outdoors while providing hands-on learning opportunities. Those who attend are invited to catch a vision for wildlife conservation and the role that Oklahoma's outdoor traditions play in passing the outdoors from generation to generation.

Expo hours will be from 8 a.m. to 6 p.m. Sept. 24-25. The event draws thousands of people every year for a weekend of outdoor recreation and education.

—*Michael Bergin, associate editor*

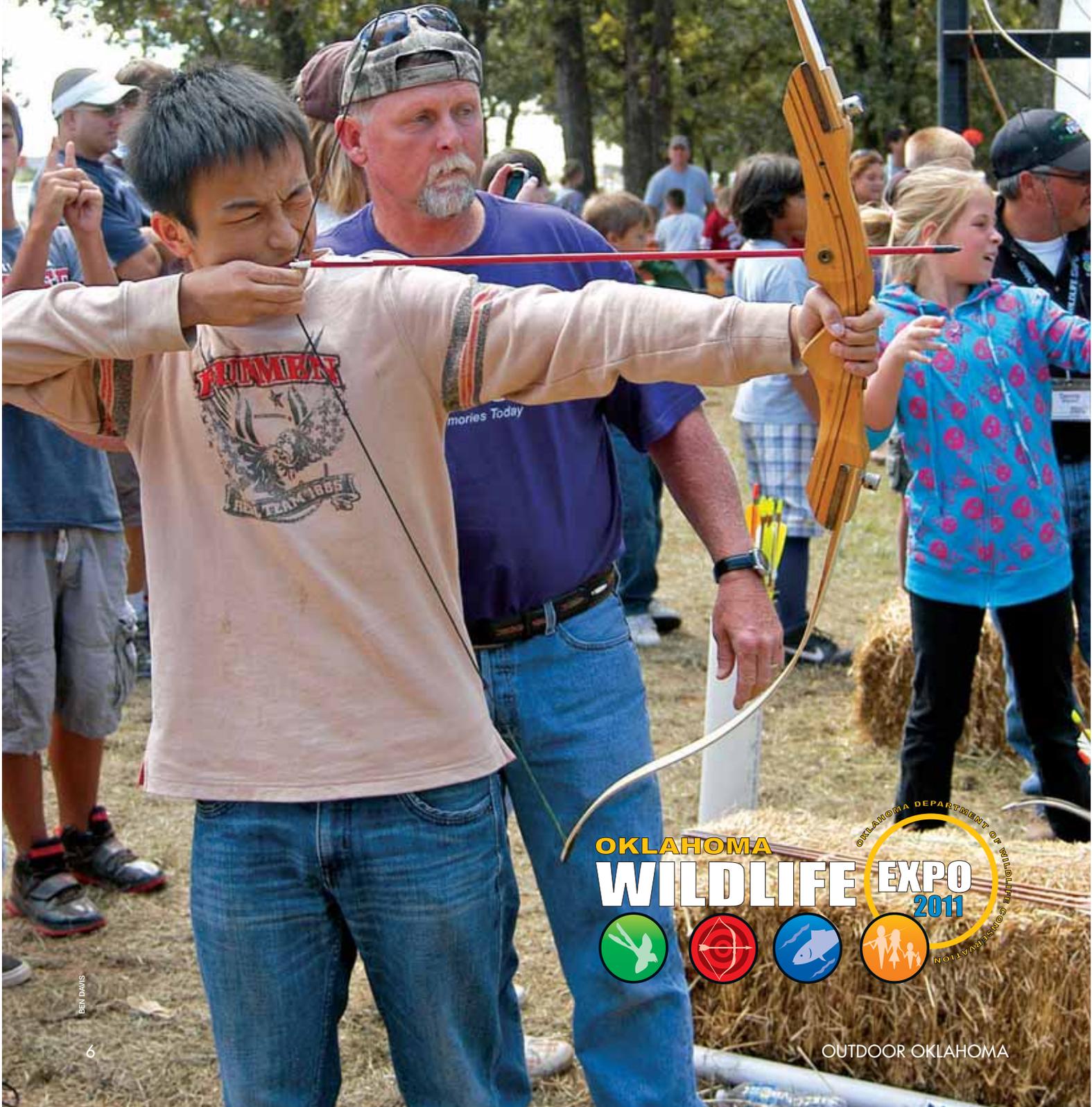


## The Expo: A Big Production with Big Results

The Oklahoma Department of Wildlife Conservation partners every year with a number of other state agencies, private individuals and outdoor-related companies to host the Expo. It takes months of preparation and planning to make the weekend something the public has come to enjoy so much over the last seven years.

Hundreds of volunteers come together to make the Expo happen, but thousands of people walk away with a better understanding and appreciation for wildlife and Oklahoma's outdoors. It's one more way the Wildlife Department reminds the people of Oklahoma just how important our state's wildlife resources are, and just how much they should be treasured.

# A Taste of the Many Activities that you and your family can enjoy at the Seventh Annual Oklahoma Wildlife Expo:



OKLAHOMA  
**WILDLIFE** EXPO  
2011



BEN DAVIS

### Shoot a shotgun, rifle or bow

The Expo features shooting ranges where visitors can shoot shotguns, pellet rifles and archery equipment and learn firsthand how to be a marksman. Whether you're an avid shooter or someone who has never held a shotgun in your life, expert staff will be on hand to guide you through your shooting experience, walking away with renewed or newfound appreciation for the Oklahoma shooting sports tradition.

### Learn Castnetting

Fish and wildlife abound in Oklahoma's waters, and a net let's you get an up close look at what's out there. Learn about castnetting as a technique for catching bait, or as just a way to have fun.

### Throw an Ancient Spear

Primitive muzzleloaders and longbows are sometimes enjoyed by affinity groups who fancy alternative methods for getting the job done or who long for time now passed.

But there are others, hunters who came long before any of us, who had no choice but to use primitive tools for hunting. One such unusual tool called the atlatl was a spear-like stick that was thrust from a handheld launcher and sailed through the air — somewhat like an arrow — to hopefully hit its mark. Though tools and hunting methods have come a long way since then, Expo visitors can pay tribute to the ancient traditions that have formed our own by trying their own hand at the atlatl. See how ancient hunters got the job done, and you'll appreciate today's tools much more. Plus, you'll just have fun trying your hand at this ancient skill.

### Learn a New Skill

Whether you want to learn how to tie a fly for fishing or build a birdhouse, there are several new skills you can pick up at the Expo. Filleting fish, camp cooking, training a hunting dog—you can learn something about it all at the Expo.

### Catch a Fish

Youngsters and adults alike can enjoy this pastime together, catching catfish and sunfish along the banks of a stocked pond on the grounds of the Lazy E Arena. Volunteers will show you everything you need to know and provide you with all the equipment you will need to catch your own fish. If you're a seasoned angler, bring along a friend or family member and help them find the same passion for the outdoors that you have discovered.

### Learn about Your Favorite Wildlife

Hunters and wildlife watchers are happy in Oklahoma, and that is because it is rich with wildlife. Visitors can see a number of exhibits featuring live wildlife like birds, reptiles and amphibians. They can also visit booths and attend seminars that will help them in their





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quest to become better hunters and anglers or even simply wet their curiosity about the natural world.

Last but not least, visitors can enjoy a huge selection of taxidermy at booths all across the event.

### **Ride a Mountain Bike**

There are mountains in Oklahoma, but only in certain remote locations. No matter; the sport of mountain biking is still popular. Off-road riding opportunities can be found at mountain bike parks across the state, even right in the middle of Oklahoma City. That's why you'll want to get a taste of this thrilling sport for yourself at the Expo. You'll be outfitted with a bike and a helmet and sent for a lap or two around a special mountain bike course set up especially for the Expo.

### **Take an ATV for a Spin**

Some people come to the Expo and ride an ATV for the first time on an off-road course built right into the lawn of the Lazy E Arena grounds. Bumps, turns, and obstacles are all part of the experience, giving passengers a true glimpse of ATV riding and an idea of what it might be like to use one in their own outdoor pursuits. Others come to see the latest advances in ATVs. Oklahoma-based P&K Equipment has been an important Expo sponsor over the years and provides the course and ATVs for visitors to enjoy. Additionally, one lucky Expo visitor who remembers to register for prizes will win a John Deere Gator from P&K Equipment.

BEN DAVIS



### **Taste Wild Game Meat and Learn to Cook at Camp**

One of the biggest hits at the Expo each year is the Taste of the Wild booth inside the arena where Wildlife Department personnel and volunteers are serving up everything wild to visitors. Sample venison bacon, fried catfish and more for free, and you'll go home anxious to do a little wild game cooking yourself. Plus a Dutch oven cooking seminar area serves up snacks at camp cooking seminars throughout the day.

### **Learn to Make Fire Without Matches**

Remembering where we come from is an important part of the outdoor tradition, as are making and preserving memories for the future. At the Expo, you can get a glimpse of our outdoor past by learning how to make a fire without a match. And best of all, the crowd gets the opportunity to participate hands-on.

## Dates and Hours of Operation

September 24-25, 2011

8 a.m. to 6 p.m. both days

Friday, Sept. 23: School Day

## Where is Expo held?

Expo takes place on the grounds of the Lazy E Arena just north of OKC between Edmond and Guthrie.

## What does it cost?

Admission and all activities at Expo are free! Visitors can bring money to shop for outdoor merchandise and services at the Expo's Outdoor Marketplace.

## How long should I plan to stay at Expo?

There's much more to do at Expo than can be done in just a few hours! Many people come two days. Come early, stay late!

## Where can I park?

On-site parking and shuttle service will be available in the parking lot adjacent to the Expo grounds. Parking is free.

## What should I wear?

Expo is an indoor and outdoor event, so dress comfortably and wear walking shoes. Be sure to put on sun screen before you come.

## Can I bring my dog or pet?

For the safety of our visitors and wild animals on the grounds, do not bring your dog or other pets.

## Can I bring food and drink or can I purchase it at Expo?

You cannot bring food or drink to the Expo but there will be free water, plus drinks and food can be purchased through the concessions at the Lazy E. You can also sample wild game at "The Taste of the Wild" booth for free.

## What else should I bring?

All equipment required for activities at Expo are provided. Bring your camera!

## Can I bring my bicycle, scooter, etc.?

Because of the number of young children at Expo, as a safety precaution we do not allow wheeled vehicles to be ridden on site. Likewise, skateboards, roller blades and roller skates are not allowed on the grounds. Persons with disabilities requiring wheel chairs or motorized carts are the only exemption.

## Where can I go to find more information?

Log on to [wildlifedepartment.com](http://wildlifedepartment.com) for the latest Expo news and information or call (405) 522-6279.

## Getting There

The Lazy E Arena is located at 9600 Lazy E Drive off I-35. The arena is just north of OKC between Edmond and Guthrie. There are several options to get to Expo using the map. It is easy to get to the Lazy E, so mark your calendar now.

## From Tulsa:

Turner Turnpike: Take I-244 that becomes I-44 which

turns into the Turner Turnpike. Take ramp onto I-35 north. Take I-35 north to the Seward Rd. exit (exit number 151). Turn right onto Seward Road and follow the signs to the Lazy E.

## From Stillwater:

Hwy 51: Take Hwy 51 west to I-35. Take I-35 south to the Seward Rd. exit (exit number 151). Turn left onto Seward Road and follow the signs to the Lazy E.

## From the East:

Merge onto I-40 west. Take the I-35 N/US-62 E exit (exit number 153) towards Wichita. Merge onto I-35 N. Take I-35 north to the Seward Rd. exit (exit number 151). Turn right onto Seward Road and follow the signs to the Lazy E.

## From the West:

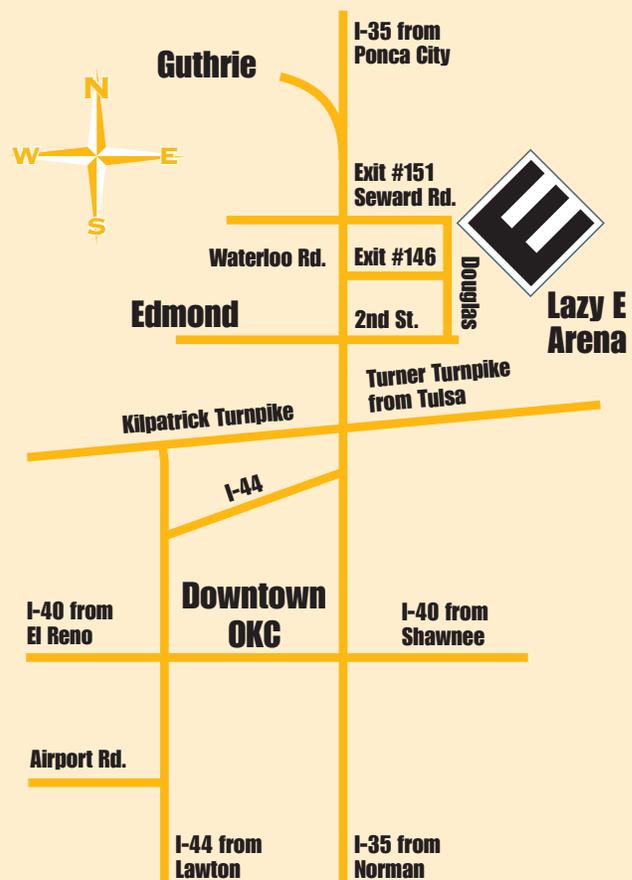
Take I-40 east. Take the I-44 E/OK-3 W exit (exit number 147B) on the left towards Tulsa/Wichita. Merge onto I-44 east. Take the I-44 east exit towards I-35/Tulsa/Wichita. Follow the signs to I-35 north to the Seward Rd. exit (exit number 151). Turn right onto Seward Road and follow the signs to the Lazy E.

## Where to Stay

Looking for a place to stay in Guthrie during Expo? Contact the Guthrie Chamber of Commerce at (800) 299-1889.

## Win Prizes at the Expo

In past year's, Expo visitors have won lifetime combination hunting and fishing licenses, ATVs and other great prizes at the Expo. Make sure you register at the event to win.





# 2010 BIG GAME REPORT

By: Jerry Shaw, Big Game Biologist and Gary Keller, Wildlife Research Technician

As a long, extremely hot summer lessens its grip on Oklahoma, giving way to the cooler temperatures of fall, it is time again to reflect back on the previous year's deer seasons. This year's Big Game Report (BGR) marks a turning point of sorts. As I prepared to summarize the 2010-11 deer seasons, I began looking back through the historical reports I have in my office. The first thing that I noticed was their brevity. For example, the 1955 Deer Season Report (as they were called at the time) contained only four pages of double spaced text and tables, and one of those pages was a listing of the season regulations! There were an additional three pages that consisted of a map showing the state with all the county boundaries marked. A mark was placed on the map showing the approximate location of each and every one of the deer taken that year. Talk about time consuming! But then again, the 1955 deer harvest tallied 1,344 deer. Imagine trying to complete that map with last year's harvest of 109,314 deer!

Looking at that map reminded me of the saying "The more things change, the more they stay the same." Just like the graphical representation of the deer harvest shown on that map from 1955, this year's Big Game Report presents data visually through charts and graphs to help you effectively use the

information. If you are a long-time follower of the annual Big Game Report, you will notice that there are several new charts, some of which provide new information never included in prior reports. Other sections of the report are improved as well. Just as my counterpart in the 1950s worked to find the best way to share information with his readers, it is my hope that you find this updated Big Game Report informative, engaging and user-friendly. And as always, best of luck this coming season!  
—Jerry Shaw, big game biologist

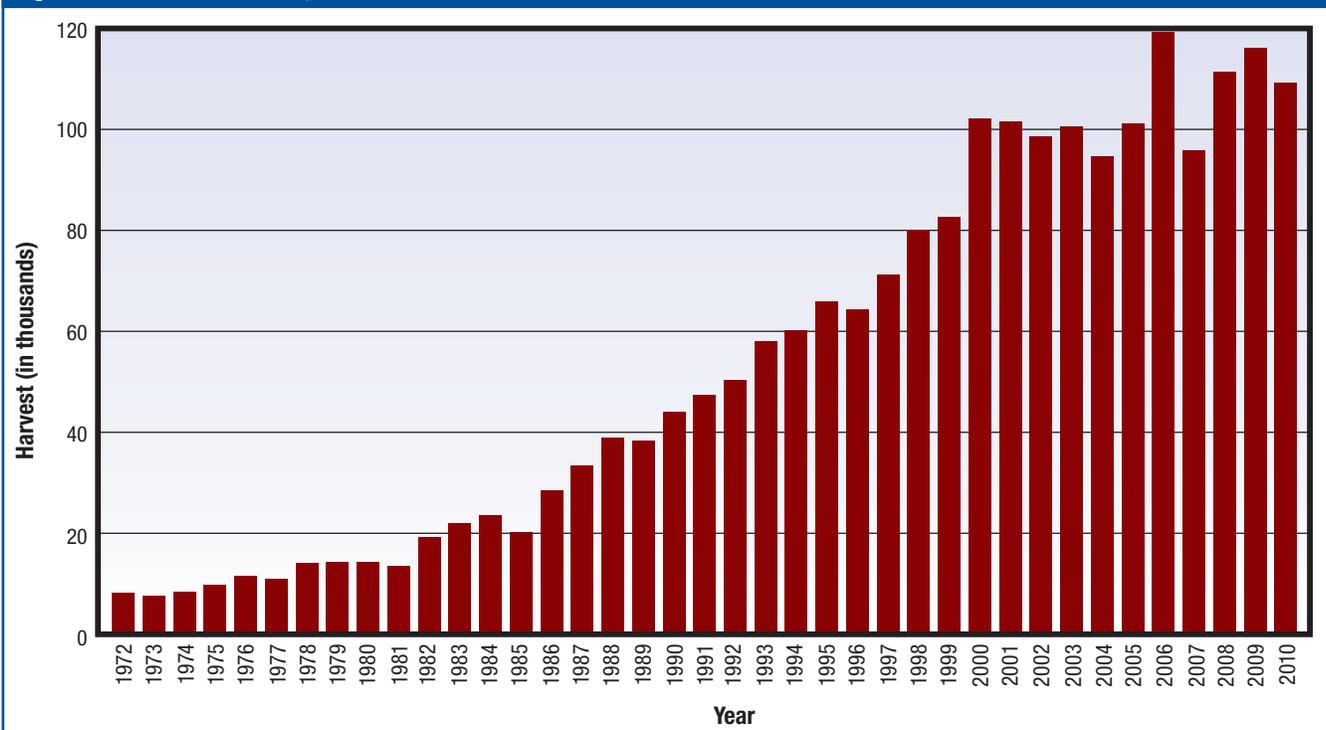
### 2010-2011 Deer Season

With the 2011-12 deer season just a few short weeks away, it is the perfect time to look back at the 2010-11 harvest. State hunters faced very hot and very dry conditions for most of last year's seasons. If the dry woods did not make hunting tough enough, gusty winds plagued most of the muzzleloader season, adding an extra degree of difficulty in filling a deer license. While early in the growing season it appeared that Oklahoma would see an excellent acorn crop, lack of rain hampered the acorns from maturing. Other forages also suffered from the dry conditions. With those challenges in mind, it is a testament to deer hunting in our state that we were able to tally the fourth highest deer harvest ever recorded for Oklahoma.

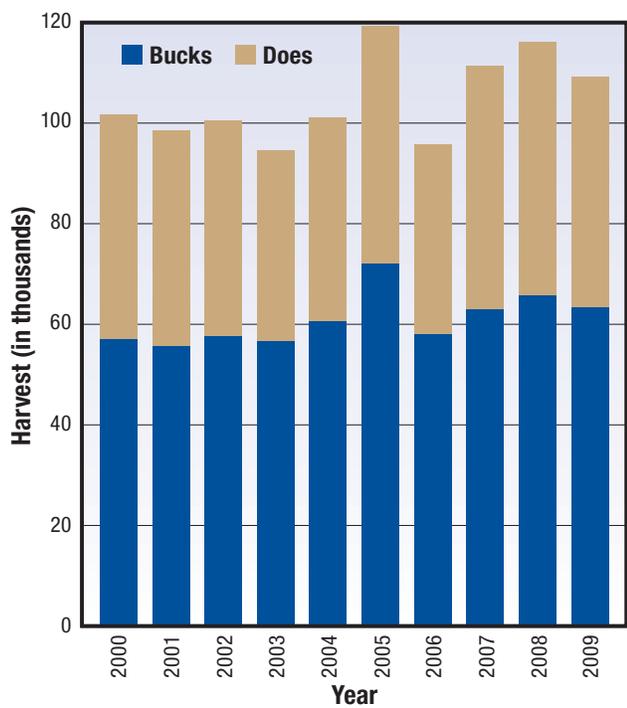
When all of the deer hunting was done, hunters brought home 109,314 deer. This number was 5.9 percent below last year's near record harvest of 116,175 and just over 10,000 fewer than the all-time harvest record set in 2006. Forty-two percent (46,000 deer) of the harvest was comprised of does with the remaining 63,314 being bucks. Table 1 details the harvest by county, season, and sex of the deer while Table 2 presents the same information for the Oklahoma Department of Wildlife Conservation's Wildlife Management Areas, or more simply WMA's. Figure 1 shows the total annual deer harvest dating back to 1972 with Figure 2 detailing buck and doe harvest over the past decade. The 2010-11 harvest fell well within the 104,877 deer average harvest calculated over the past 10 years.

Looking at season categories, the combined rifle seasons (youth, holiday antlerless, and regular rifle) accounted for 63 percent of the deer taken in 2010 (displayed in Figure 3). As mentioned above, hunting was extremely difficult during muzzleloader season. Additionally, archers set a new harvest record taking 20,480 deer this past year. As a result, for probably the first time since before Oklahoma became a state, archers contributed a greater percentage of the total harvest than did muzzleloader hunters. Archers added

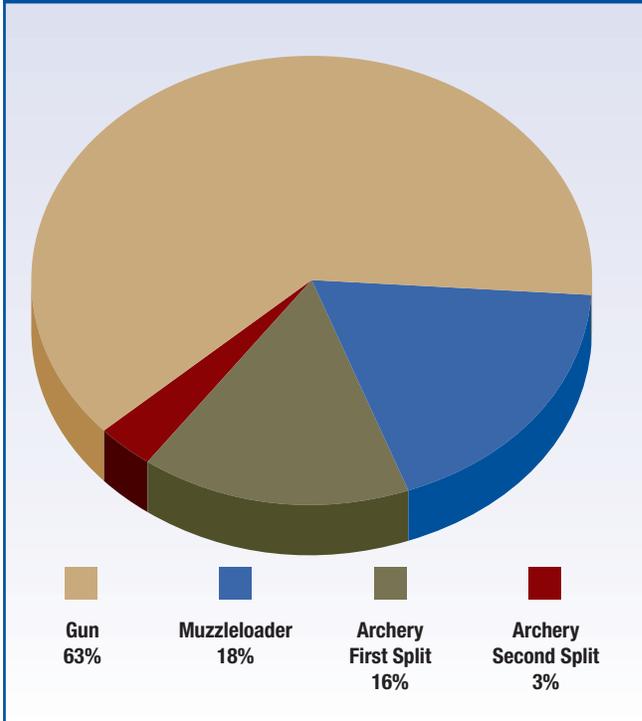
Figure 1: Total Deer Harvest, 1972-2010



**Figure 2: 10 Year Harvest Trend**



**Figure 3: 10 Year Harvest Trend**



18.74 percent of the total harvest compared to the 18.42 percent attributed to muzzleloaders.

Certain counties in Oklahoma have a distinct advantage when it comes to the number of deer killed within their borders. The size of the county, the amount of suitable deer habitat, the amount of that habitat that is open to hunter access, the number of hunters residing in that county, and a host of other factors all play a role in the number of deer that will be harvested from that county. These variables allow a small handful of counties to perennially be the top producing counties in terms of the amount of deer taken. The 2010 harvest followed that trend with nine of the top 10 counties from 2009 continuing their role as top 10 deer producers. As not all counties have WMA's within their borders, comparisons were made after WMA harvested deer were removed from the tallies. Table 1 lists the county harvest with WMA harvested deer removed and Table 2 lists the harvest for each area open to public hunting.

Looking at Table 1 shows that Osage County retained its title of top county with 4,205 deer taken. Just as has happened in the past three years, Cherokee and Pittsburg Counties have again alternated in the number two and three slots. This past year saw Pittsburg County pass Cherokee County with harvest

totals of 3,517 and 3,073 deer respectively. Rounding out the top 5 positions were Pushmataha County with 3,027 deer and LeFlore County with 2,890. In descending order, the remaining "Top Ten" are Atoka (2,751), McCurtain (2,520), Sequoyah (2,326), Craig (2,281) and representing Western Oklahoma, and the only non-repeat from 2009, Roger Mills with 2,094 deer checked.

Many people not familiar with our state and its incredible diversity are amazed to learn of the opportunity to hunt mule deer in Oklahoma. The extreme northwest corner of our state is home to a stable population of these deer. The wide open spaces and short-grass prairie habitat found there provide a unique opportunity to hunters. The 2010 season closed with a total harvest of 201 mule deer. Cimarron County always has the highest mule deer harvested and last year was no different. Hunters in this County, situated at the very western-most reach of the Panhandle, bagged 98 mule deer. Beaver County was a distant second place with 41 "mulies." Other counties recording mule deer harvest are Harmon (22), Texas (15), Woods (8), Harper (8), Beckham, Ellis, and Greer each with 2, and Major, Roger Mills, and Woodward Counties with one each.

Adequate antlerless harvest is vital to the proper management of a deer

resource. Oklahoma utilizes two main tools to help manipulate the doe harvest. The first tool is the number of days available to hunters to pursue antlerless deer and the second is the number of antlerless deer allowed in the bag limit.

During the 2010-11 seasons, all of Oklahoma was open for antlerless harvest for the entire length of archery season. Additionally, all of the state was open for antlerless harvest during the youth firearms season. With the exceptions of the far northwest panhandle and the southeast corner of the state, hunters afield during the muzzleloader and rifle season saw antlerless days stretch the entirety of those seasons. Antlerless opportunity was expanded in 2010 with the extension of the Holiday season. This season was open for most of the state with only the panhandle and southeast regions of the state being closed. For the first time this formerly two-weekend season ran for a full 10 days in December.

The deer bag limit was unchanged for 2010 with the combined total of no more than six deer per hunter. This limit included no more than two bucks. Hunters hunting in the high deer density management zones 2, 7, and 8 had the increased opportunity to take two antlerless deer during the muzzleloader and rifle seasons. A map showing the management zones and their associated

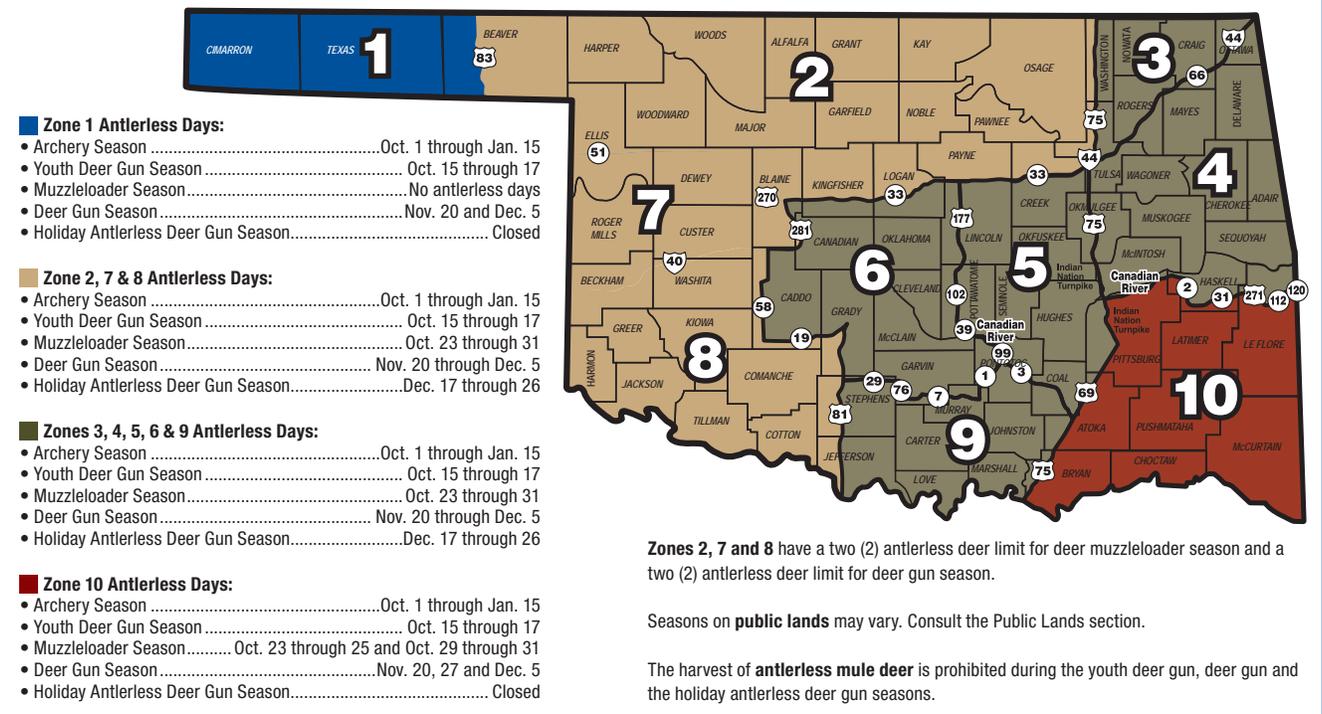
**Table 1: 2009 County Summary of Deer Harvest by Hunt Type**

County	Archery		Gun		Muzzleloader		Total Bucks	Total Does	Grand Total
	Bucks	Does	Bucks	Does	Bucks	Does			
Adair	150	95	425	383	298	114	873	592	1,465
Alfalfa	137	126	644	511	108	97	889	734	1,623
Atoka	274	318	870	633	442	214	1,586	1,165	2,751
Beaver	37	32	411	198	54	55	502	285	787
Beckham	81	65	606	380	92	60	779	505	1,284
Blaine	61	64	458	319	53	59	572	442	1,014
Bryan	125	183	363	321	110	61	598	565	1,163
Caddo	144	150	841	515	128	107	1,113	772	1,885
Canadian	88	59	334	217	50	44	472	320	792
Carter	107	99	430	304	104	53	641	456	1,097
Cherokee	314	354	820	811	514	260	1,648	1,425	3,073
Choctaw	144	165	544	296	224	132	912	593	1,505
Cimarron	10	5	149	8	11	0	170	13	183
Cleveland	121	147	266	240	124	81	511	468	979
Coal	104	140	500	390	212	106	816	636	1,452
Comanche	57	50	263	166	39	35	359	251	610
Cotton	28	34	167	156	26	21	221	211	432
Craig	193	169	870	679	222	148	1,285	996	2,281
Creek	197	172	703	557	216	160	1,116	889	2,005
Custer	52	52	394	254	48	46	494	352	846
Delaware	215	214	599	539	294	158	1,108	911	2,019
Dewey	56	59	596	342	77	81	729	482	1,211
Ellis	76	72	623	421	73	95	772	588	1,360
Garfield	77	52	438	301	60	52	575	405	980
Garvin	84	57	326	213	95	45	505	315	820
Grady	100	77	480	302	66	50	646	429	1,075
Grant	118	109	765	619	122	134	1,005	862	1,867
Greer	60	75	328	206	52	52	440	333	773
Harmon	56	68	336	231	54	66	446	365	811
Harper	52	42	433	243	57	38	542	323	865
Haskell	228	188	531	407	320	117	1,079	712	1,791
Hughes	125	134	541	373	207	98	873	605	1,478
Jackson	92	78	373	224	47	60	512	362	874
Jefferson	60	43	275	109	42	38	377	190	567
Johnston	105	127	434	335	125	66	664	528	1,192
Kay	96	112	583	547	94	113	773	772	1,545
Kingfisher	65	68	317	209	75	56	457	333	790
Kiowa	46	39	280	178	38	33	364	250	614
Latimer	206	162	654	307	347	131	1,207	600	1,807
LeFlore	309	252	921	530	611	267	1,841	1,049	2,890
Lincoln	144	146	691	453	156	133	991	732	1,723
Logan	167	151	547	426	116	104	830	681	1,511
Love	61	45	234	151	64	36	359	232	591
Major	135	125	794	540	128	98	1,057	763	1,820
Marshall	62	70	235	155	59	34	356	259	615
Mayes	203	178	453	378	244	147	900	703	1,603
McClain	54	53	174	111	33	30	261	194	455
McCurtain	255	259	836	438	489	243	1,580	940	2,520
McIntosh	119	75	281	200	145	64	545	339	884
Murray	59	73	234	148	58	38	351	259	610
Muskogee	205	160	481	334	197	125	883	619	1,502
Noble	75	96	494	334	72	54	641	484	1,125
Nowata	84	73	437	304	111	60	632	437	1,069
Okfuskee	92	78	377	190	118	68	587	336	923
Oklahoma	149	122	155	126	51	34	355	282	637
Okmulgee	86	113	350	198	127	65	563	376	939
Osage	296	324	1,729	1,254	321	281	2,346	1,859	4,205
Ottawa	124	122	444	338	143	66	711	526	1,237
Pawnee	71	79	415	325	78	76	564	480	1,044
Payne	92	95	462	376	91	71	645	542	1,187
Pittsburg	416	475	1,143	638	608	237	2,167	1,350	3,517
Pontotoc	174	149	453	287	136	75	763	511	1,274
Pottawatomie	124	107	520	332	136	82	780	521	1,301
Pushmataha	277	330	968	557	627	268	1,872	1,155	3,027
Roger Mills	100	110	958	700	110	116	1,168	926	2,094
Rogers	239	202	545	474	165	121	949	797	1,746
Seminole	73	102	350	278	122	73	545	453	998
Sequoyah	248	235	639	609	430	165	1,317	1,009	2,326
Stephens	137	115	401	249	85	47	623	411	1,034
Texas	16	15	164	44	30	0	210	59	269
Tillman	50	52	292	198	36	24	378	274	652
Tulsa	95	85	162	127	39	35	296	247	543
Wagoner	107	126	307	204	103	58	517	388	905
Washington	99	83	460	279	74	55	633	417	1,050
Washita	28	20	270	139	23	33	321	192	513
Woods	141	110	735	550	141	99	1,017	759	1,776
Woodward	115	130	825	547	130	111	1,070	788	1,858
<b>SUBTOTAL</b>	<b>9,622</b>	<b>9,390</b>	<b>38,906</b>	<b>26,965</b>	<b>11,727</b>	<b>7,029</b>	<b>60,255</b>	<b>43,384</b>	<b>103,639</b>

**Table 2. 2009 Management Area Summary of Deer Harvest by Hunt Type**

WMA	Archery		Gun		Muzzleloader		Total Bucks	Total Does	Grand Total
	Bucks	Does	Bucks	Does	Bucks	Does			
Altus-Lugert WMA	8	10	2	0	1	0	11	10	21
Atoka WMA	7	25	54	17	7	1	68	43	111
Beaver River WMA	1	1	40	4	11	10	52	15	67
Black Kettle WMA	20	27	206	159	46	84	272	270	542
Blue River WMA	2	6	4	0	0	0	6	6	12
Broken Bow WMA	0	1	3	3	1	1	4	5	9
Camp Gruber JMTC	0	0	0	0	2	0	2	0	2
Candy Creek WMA	0	1	0	0	2	10	2	11	13
Canton WMA	17	54	30	13	11	23	58	90	148
Cherokee GMA	3	9	26	15	14	12	43	36	79
Cherokee PHA	12	10	23	0	13	5	48	15	63
Chickasaw NRA	0	1	0	5	0	1	0	7	7
Chouteau WMA	0	1	1	0	0	1	1	2	3
Cimarron Bluff WMA	0	0	1	1	0	0	1	1	2
Cimarron Hills WMA	0	0	1	1	0	0	1	1	2
Cookson Hills WMA	2	2	17	11	5	8	24	21	45
Cooper WMA	0	0	41	5	6	4	47	9	56
Copan WMA	11	14	8	7	15	6	34	27	61
Deep Fork NWR	8	6	0	1	14	15	22	22	44
Deep Fork WMA	2	4	0	1	4	2	6	7	13
Drummond Flat WMA	2	0	0	0	0	0	2	0	2
Ellis County WMA	6	5	30	2	5	11	41	18	59
Eufaula WMA	3	7	3	4	6	4	12	15	27
Fobb Bottom WMA	2	3	5	2	0	0	7	5	12
Fort Cobb SP	0	0	0	14	0	7	0	21	21
Fort Cobb WMA	4	11	3	0	0	2	7	13	20
Fort Gibson WMA	43	39	42	14	28	15	113	68	181
Fort Gibson WR	2	1	0	0	9	25	11	26	37
Fort Sill MR	31	22	64	39	24	31	119	92	211
Fort Supply WMA	12	16	18	7	5	10	35	33	68
Gary Sherrer WMA	0	0	0	1	0	0	0	1	1
Gruber WMA	3	4	53	8	10	11	66	23	89
Heyburn WMA	3	1	5	0	1	2	9	3	12
Hickory Creek WMA	0	0	8	8	3	0	11	8	19
Honobia Creek WMA	25	10	66	41	55	29	146	80	226
Hugo WMA	8	16	38	42	23	10	69	68	137
Hulah WMA	3	6	40	3	9	10	52	19	71
James Collins WMA	57	51	28	2	1	1	86	54	140
Kaw WMA	25	34	65	52	19	26	109	112	221
Keystone WMA	18	24	16	14	12	4	46	42	88
Lexington WMA	3	3	74	33	2	0	79	36	115
Little River NWR	2	3	23	7	0	0	25	10	35
Little River SP	11	7	0	0	0	0	11	7	18
Love Valley WMA	7	3	12	8	2	2	21	13	34
McAlester AAP	109	128	4	21	0	0	113	149	262
McCurtain Co. WA	3	3	1	4	6	2	10	9	19
McGee Creek WMA	12	8	12	7	9	4	33	19	52
Mountain Park WMA	1	0	0	0	0	0	1	0	1
Okmulgee GMA	2	2	22	14	0	0	24	16	40
Okmulgee PHA	1	2	4	0	5	0	10	2	12
Oologah WMA	7	9	12	15	5	3	24	27	51
Optima NWR	0	0	1	0	0	0	1	0	1
Optima WMA	4	5	14	4	2	0	20	9	29
Osage Rock Creek WMA	3	1	14	1	9	5	26	7	33
Osage-W. Wall WMA	2	2	9	2	1	0	12	4	16
Ouachita WMA	13	11	41	14	18	6	72	31	103
Ouachita(McCurt. Unit)	1	3	9	9	13	6	23	18	41
Packsaddle WMA	5	5	64	3	11	14	80	22	102
Pine Creek WMA	3	5	7	5	6	4	16	14	30
Pushmataha WMA	11	18	34	22	22	14	67	54	121
Robbers Cave WMA	2	0	2	0	1	0	5	0	5
Robert S. Kerr WMA	1	1	7	3	0	0	8	4	12
Salt Plains NWR	0	3	75	104	7	17	82	124	206
Sandy Sanders WMA	6	5	5	7	7	1	18	13	31
Schultz WMA	0	0	2	0	0	0	2	0	2
Sequoyah NWR	2	0	2	2	20	111	24	113	137
Skiatook WMA	1	1	4	8	1	1	6	10	16
Spavinaw GMA	16	24	30	21	8	5	54	50	104
Spavinaw PHA	1	1	4	4	1	1	6	6	12
Stringtown WMA	1	3	0	0	2	0	3	3	6
Tenkiller WMA	0	0	3	4	1	1	4	5	9
Three Rivers WMA	77	65	236	231	124	103	437	399	836
Tishomingo NWR	0	0	2	27	2	8	4	35	39
Tishomingo WMA	1	3	2	0	4	3	7	6	13
Washita Arm WMA	3	2	4	10	1	0	8	12	20
Washita NWR	1	4	2	0	4	1	7	5	12
Waurika WMA	14	24	1	2	3	2	18	28	46
Webbers Falls WMA	2	1	0	1	0	0	2	2	4
Wichita Mts NWR	0	0	15	22	0	0	15	22	37
Wister WMA	12	10	11	9	12	11	35	30	65
Yourman WMA	0	1	2	2	1	0	3	3	6
<b>WMA SUBTOTAL</b>	<b>680</b>	<b>788</b>	<b>1,707</b>	<b>1,122</b>	<b>672</b>	<b>706</b>	<b>3,059</b>	<b>2,616</b>	<b>5,675</b>
<b>COUNTY SUBTOTAL</b>	<b>9,622</b>	<b>9,390</b>	<b>38,906</b>	<b>26,965</b>	<b>11,727</b>	<b>7,029</b>	<b>60,255</b>	<b>43,384</b>	<b>103,639</b>
<b>GRAND TOTAL</b>	<b>10,302</b>	<b>10,178</b>	<b>40,613</b>	<b>28,087</b>	<b>12,399</b>	<b>7,735</b>	<b>63,314</b>	<b>46,000</b>	<b>109,314</b>

**Figure 4: 2010 Antlerless Days and Bag Limits**



antlerless days and bag limits is shown in Figure 4. For areas open for the special holiday antlerless season, any antlerless deer taken during that time did not count against the hunters combined season bag limit. New to the Big Game Report this year are graphics depicting the average annual deer harvest per hunter. Figures 5-11 use data collected during the Department’s annual Game Harvest Survey to calculate how many deer the average deer hunter takes home each year. On average, each Oklahoma hunter harvests one deer per year.

Hunters utilized the excellent antlerless hunting opportunities Oklahoma affords by taking a total of 46,000 does in 2010. This number was 8.8 percent less than the record setting doe harvest in 2009 but still accounted for 42 percent of the total deer kill last year. This is one percentage point below the 2009 harvest. An additional 2,717 button-bucks brings the entire antlerless harvest to 48,717. Button-bucks are part of the antlerless bag limit as they do not possess the three-inch or longer antlers required to meet the definition of an “antlered deer.” While under ideal conditions the harvest of button bucks would be curtailed, this level of harvest is acceptable and somewhat expected, especially during the later portions of the gun season and then again during the special holiday

season. Hunters often encounter these young bucks late in the year when their body size is approaching that of a young doe. Their size and precocious habit of being the first to step out onto a field or clearing often leads a hunter to think that they are an adult doe.

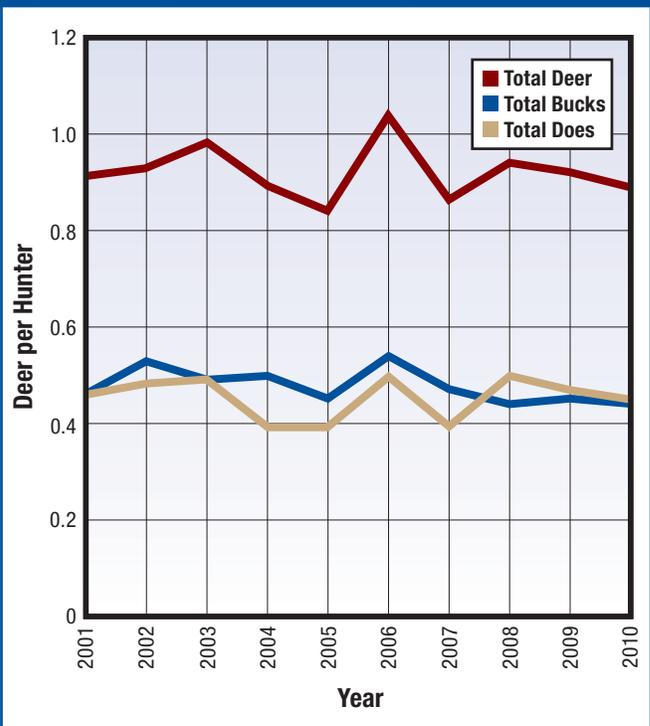
**Archery Season**

A major change in archery season saw its inaugural year in 2010. Last year marked the first time that crossbows were permitted as a legal means of take for any archery hunter. Prior to 2010, the use of these bows was restricted to persons certified by a physician as unable to draw and fire a conventional bow. This change was met with both skepticism and excitement. While some hunters were glad to have the opportunity to utilize these tools, other hunters

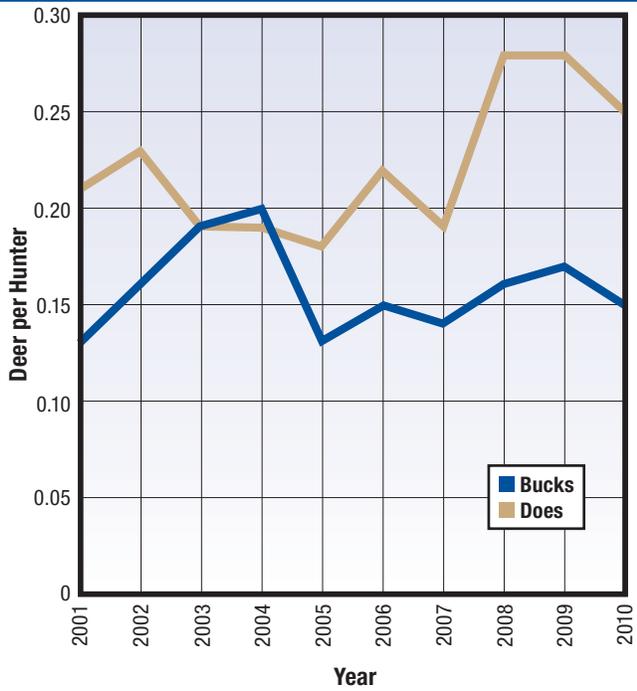
feared that the woods would become full with new bow hunters.

While it is true that the number of archery hunters (as calculated using data collected through the Game Harvest Survey) showed an increase to the highest number of archery hunters ever recorded in Oklahoma, the amount of increase was only

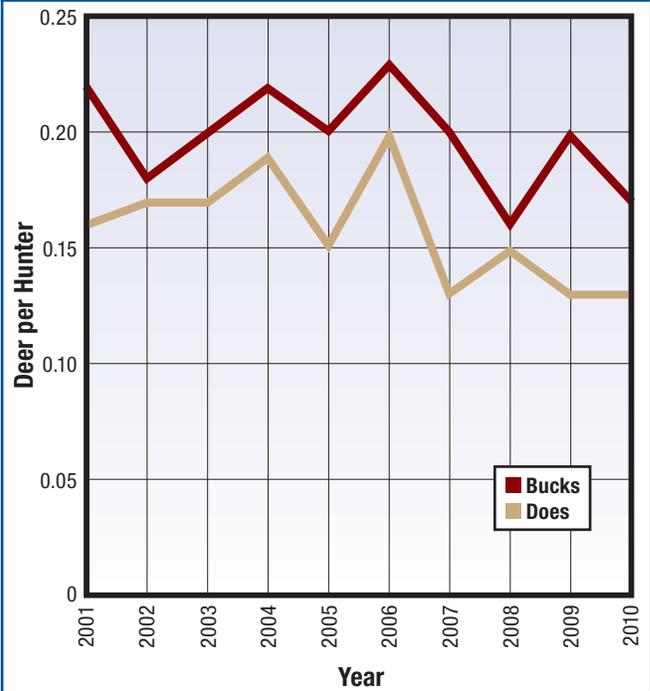
**Figure 5: Average Annual Deer Harvest per Hunter, 2001-2010**



**Figure 6: Average Annual Harvest per Hunter, Archery Season 2001-2010**



**Figure 7: Average Annual Deer Harvest per Hunter, Muzzleloader Season 2001-2010**



4.9 percent. The number of archers grew by a greater margin from 2008 to 2009 (5.7 percent). Oklahoma did set a new record for participation in archery season the year crossbows were legalized for all hunters,

but we also set new records in three of the five years prior to this rule change (2005, 2008, and 2009). In fact, the growth in the number of archery hunters in 2010 is only 4.6 percent higher than was recorded in 2002. It would appear that the addition of this method of take did not bring the mas-

sive increase in archery hunters that many crossbow objectors feared.

Concern and opposition to crossbows also focused on the fear that archery harvest would increase substantially. Again, as with the level of archer participation, we also saw a record archery harvest in 2010. Bow hunters checked in 20,480 deer last year, a three percent increase over 2009. Just as with bow hunter numbers, the setting of new harvest records was very prevalent prior to crossbows becoming a legal means of take. In the past decade a new archery record has been set 6 different times. And many of those records were much more substantial than the three percent post-crossbow increase. The 2009 record was 12 percent higher than the 2008 record. The record set in 2006 was 20 percent higher than the record harvest set two years prior. Figure 11 is new to this year's Big Game Report and shows archery hunter numbers and archery harvest over the past 10 years. Figure 12 depicts the buck and doe harvest broken down by the week of the season. Another new chart in this year's report can be seen as Figure 13, which illustrates the percent success by season type. As shown in this chart, hunters in 2010 had a success rate slightly below that shown from 2009. Figure 6 also depicts the average annual harvest by bow hunters.

*(Continues on page 34)*

### Honobia Creek and Three Rivers WMAs: A Place for Deer Hunters

Believe it or not, the deer archery season is only about two months away and now is the perfect time to do a little preseason scouting. For hunters looking for a great place to go this fall, look no further than the Honobia Creek and Three Rivers Wildlife Management Areas (WMA's) in southeast Oklahoma. Together the WMAs offer more than 280,000 acres of publicly accessible land and that's not all. During last year's hunter survey, 99 out of 117 hunter camps rated the quality of bucks on the WMAs as good to excellent. And just how many deer are present on the WMAs? Well, back when the WMAs were first established in the late 1990's, deer surveys produced an average of 3.4 deer observed per night. During the 2010 surveys the average number of deer observed per night was 35.0. Great numbers and great quality, a perfect combination for hunters who trophy hunt and hunters who just like to see deer.

For more great information about deer hunting opportunities on the Honobia Creek and Three Rivers Wildlife Management Areas, be sure to visit [www.wildlifedepartment.com](http://www.wildlifedepartment.com). By visiting the Honobia Creek and Three Rivers area descriptions on the Department's website, hunters may read articles about the great hunting opportunities available on the WMAs as well as see up-to-date game camera photos of deer from the WMAs.

Accessing the Honobia Creek and Three Rivers WMAs requires the purchase of a Land Access Fee permit, which is \$40 per calendar year for Oklahoma residents between the ages of 18 and 64 and \$85 for non-residents. The revenue from each permit sold is used to help keep the WMAs open to the public for hunting and fishing recreation and to manage the WMAs for the benefit of hunters and anglers. For maps of the WMAs, contact the area biologist at 918-527-5308. Recent trail camera pictures from the area can be viewed online at [wildlifedepartment.com](http://wildlifedepartment.com)

# UPLAND URGENCY:



*The Fight Against Bobwhite Quail Decline*



*The seemingly lonely lands of rural Oklahoma are actually rich with wildlife, such as the bobwhite quail. Unfortunately, this treasured bird has experienced downward population trends for the last 50 years.*

**T**o an Oklahoma quail hunter, every moment spent in the field with family, friends and dogs is a moment well spent.

Memories of dogs on point, coffee from a thermos, snowy winter days, big open country, coveralls, over-and-unders, game vests, hearty lunches, Grandpa, Dad and Mom are conjured up in the minds of hunters when they look back upon years of great quail hunting. And while all of these things are central to the making of a great memory in the field, none of them are as symbolic of the great sport of quail hunting as the iconic bobwhite quail itself.

Oklahoma has long been home to some of the best quail hunting and quail habitat in the nation. But the species is currently in a state of long-term decline across its range. While Oklahoma remains one of the strongest holdouts of bobwhite quail populations and habitat, wildlife professionals are proactively launching an extensive effort to understand and address what could be a number of contributors to the downward trend in quail populations.

“Quail are dependent on weather and habitat, but there are other issues out there,” said Alan Peoples, chief of wildlife for the Oklahoma Department of Wildlife Conservation.

The downward trend in bobwhite quail populations range-wide has been long-term since the 1960s and more recently in western

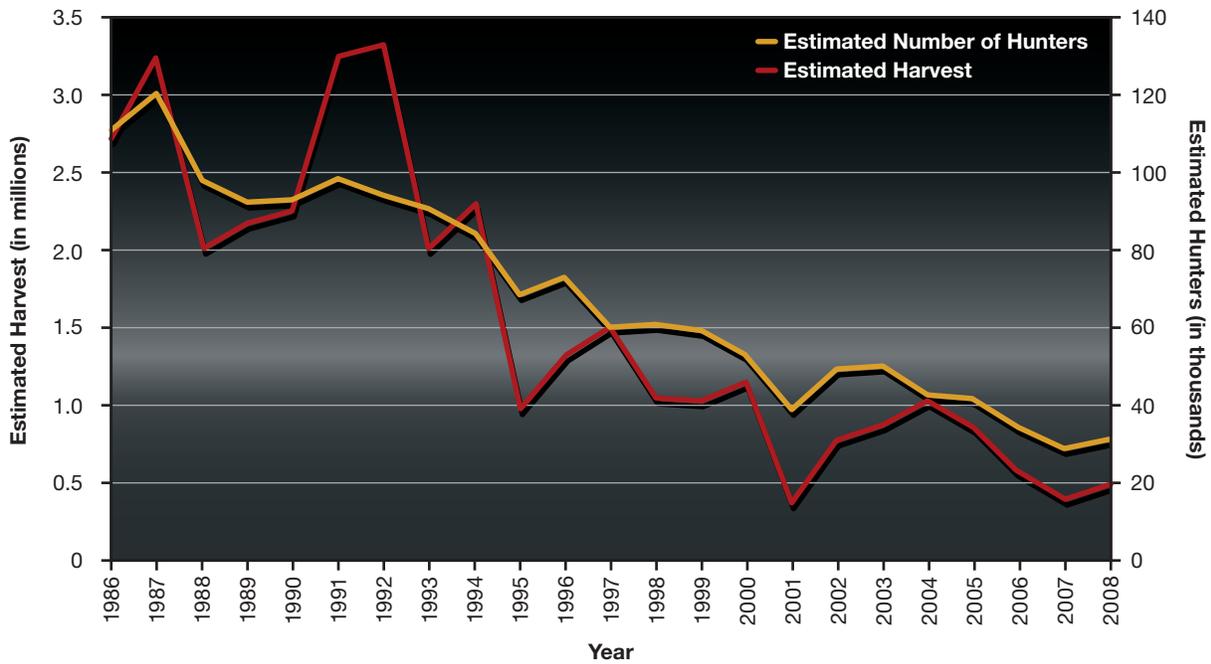
Oklahoma. The number of quail hunters has declined as well — from 111,000 in 1986 down to an estimated 30,000 hunters last year.

Quail decline has been attributed to a number of causes, and there is no shortage of theories blaming everything from diseases and food contamination to habitat loss, fragmentation and predation. But Wildlife Department officials say the issues need to be studied from all angles.

This fall, the Wildlife Department is embarking on an intensive, long-term research project on two northwest Oklahoma wildlife management areas to study quail reproductive success and mortality. The Department is also teaming up with a group of partners to conduct an extensive research project that covers the western portion of the bobwhite quail’s North American range. Additionally, the Department will continue ongoing quail conservation efforts across the state through a number of initiatives on both public and private lands.

Through these measures, the Department aims to learn as much as possible about the current downward trends in quail populations as well as how to most effectively approach quail conservation in the years to come. By joining with research partners as well as with landowners and sportsmen, the Wildlife Department looks forward to making headway in restoring and enhancing habitat for quail and other wildlife.

### Hunter and Harvest Trend



*This hunter survey data shows that the number of quail hunters has been going down since 1986 and the number of quail harvested has also been going down, from 111,000 hunters harvesting 2.7 million birds to 31,000 hunters harvesting 476,000 birds last year.*



*The Wildlife Department has begun an intensive joint research effort to better understand and address bobwhite quail decline.*

# An Overview of Key Concerns and Theories Affecting Quail Populations

## Which ones are most likely behind the decline and why biologists see them as priorities

**I**t has been established that quail populations are currently in decline, but what exactly are some of the factors that could be negatively impacting the numbers? And just how much of a threat does each of them pose to the state of the bobwhite quail? A better question still: What is the “number 1” cause of quail decline? According to wildlife biologists, there is likely no single answer, but rather a combination of factors occurring at the same time across the quail’s range that together present concerns. Quail may face challenges related to land uses in western Oklahoma that aren’t

as concerning in eastern portions of the state, but the quail in eastern Oklahoma still face their own slate of threats, such as the maturation of forests into habitats unsuitable to the needs of quail. As a whole, a number of different issues facing quail across its range can have significant impacts.

Take a look through the following section to get a feel for which environmental factors are proving to be the most daunting, as well some issues that are of less immediate concern but still important to biologists hoping to understand and reverse downward quail trends.

### Fire Exclusion



One hundred years ago, a wildfire could consume thousands of acres of land at a time without interruption. With nobody to control what, where or when it burned, the detriment could be significant...for a time. But just like the sun comes up every morning, charred earth recovers — and it actually recovers in a manner that beneficially restores the landscape with new growth, forage, food and habitat for wildlife. Fire maintains grassland ecosystems and suppresses woody growth. Wildlife managers have known for years that prescribed fire is a useful tool for improving habitat, but with development and expansion comes the need to suppress fires to protect property, homes, communities, livestock and people.

### What You Can Do

Prescribed fire is a tool that can be used by landowners. It can help control invasive trees and clear undergrowth. Small areas can be burned while other portions remain habitable until the burned portion is restored with new growth. For more information about prescribed burning, log on to [wildlifedepartment.com](http://wildlifedepartment.com) to view past issues of the Department’s landowner newsletter *Your Side of the Fence*, or contact Jena Donnell, quail habitat restoration biologist for the Wildlife Department, at (405) 684-1929. Opportunities



BEN DAVIS



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may also exist to join local burn co-ops. Additionally, see page 15 of this booklet to learn about a new group dedicated to helping landowners with prescribed burning efforts.

## Large Scale Habitat Fragmentation/Degradation



While there is indeed a vast amount of undeveloped land in Oklahoma, large tracts of it are increasingly becoming fragmented. Even communities in rural and semi-rural areas that once were havens for wildlife continue to sprawl

with housing additions, businesses and roadway expansions that pressure wildlife to look elsewhere for suitable habitat. Additionally, other tracts are becoming degraded by land use changes that affect the quality of available habitat. Because movement of quail across the landscape is interrupted in fragmented habitats, the birds have a difficult time recolonizing or increasing their numbers following weather catastrophes. Also, the localized populations within these small patches of habitat are more vulnerable to direct losses from predation, hunting, disease, etc.

### What You Can Do

When you purchase a hunting license, the money is used in research, management, habitat improvement and development and land acquisition that ultimately benefits wildlife in the state, so go hunting. Additionally, habitat management assistance is available for landowners from a number of sources, ranging from the Oklahoma Department of Wildlife Conservation to other state and federal agencies and programs. If you own property, start by doing a habitat assessment. For more information, contact Doug Schoeling, upland game bird biologist for the Wildlife Department, at (405) 301-9945.



RUSSELL GRAVES

## Cattle Grazing



Cattle grazing can be good or bad for quail habitat. Overstocking, leads to overgrazing. If quail are unable to find suitable cover and food due to overgrazing, an imbalance results that impacts quail populations. On a positive note, if an area is

too overgrown, cattle grazing can contribute to ideal quail habitat conditions.

### What You Can Do

Biologists with the Wildlife Department believe cattle ranching and quail management can go hand in hand. For more information about developing a grazing plan to fit your property, contact your local Natural Resource Conservation Service office.

## A Year in the Life of a Bobwhite Quail



*This figure shows the annual cycle of social and reproductive behavior of the bobwhite quail.*

**B**obwhite quail are found in groups called coveys. A covey remains together during most of its daily and nightly activities. The birds scatter when flushed but soon reunite through calling. The size of a covey is generally 12 to 15 birds but can be as many as 30 or 40 birds; the composition in the early fall usually includes one to three adult pairs, their surviving young, and one to several cocks or pairs that failed to produce broods. Bobwhites lost from one covey may join another so that birds of several different ages may be found together.

The covey roosts in a tight circle with tails toward the center and heads oriented outward, primarily for the detection of predators. Roosting sites typically contain vegetation no taller than six inches, allowing rapid escape from predators.

Adult body coloration is typically reddish brown and gray above, whitish below. Breast feathers have narrow, V-shaped barring. Tail feathers are slate-gray. Males have a white forehead, chin and throat, and a wide white line continuing back from the beak, just above and behind the eye; in the females these areas are a buff color. Abnormal body colorations have been reported in the bobwhite as in other wildlife species. The most striking of these are white phase and red phase birds.

The adult bobwhite is approximately eight inches long and usually weighs six to seven ounces. Occasionally a bird will weigh up to nine ounces. Quail follow an annual cycle illustrated by the figure shown above.

*(Continues on page 7)*

## Low Fur Market



Though predator calling and hunting may have enjoyed a resurgence of popularity in recent years, the fur market isn't booming like it once was. During the historical booms of the fur trade, trappers may have put significantly greater pressure on all furbearing species, including those that are known to prey on nests of ground nesting birds.

As a result, predator species like bobcats may still be highly sought after by hunters, but others such as raccoons, skunks and possums that are likely to prey on quail nests are receiving less pressure from hunting and trapping in recent years. Quail, especially in fragmented habitats, may be more vulnerable to predation now than during years when the fur market offered higher prices.

### What You Can Do

A skilled, responsible trapper or predator hunter is an asset to the Oklahoma landowner. And likewise, a generous landowner is an asset to the sportsman who enjoys trapping and hunting predators. The Oklahoma Predator Hunters Association and the Oklahoma Furbearer Alliance are two Oklahoma-based organizations that could provide invaluable resources for learning to trap and call furbearing predators, or for locating trappers in your area of the state. Both organizations maintain booth exhibits at the Oklahoma Wildlife Expo, held the last weekend in September at the Lazy E Arena, just north of Oklahoma City.



## No Till/Chemical-Fallow Farming



JOHN FORD



No-till farming can be productive for farmers, but farmers using this method have to use applications of herbicides that reduce annual production of forbs and seeds on which quail depend.

With a less diverse vegetative composition, insects may be less abundant — a problem because insects are a critical component of quail chicks' diet for the first several weeks of their life.



RUSSELL GRAYES

## Large Scale Clean Farming



Over the years, farming operations have not only become more efficient, but many have also focused on cleaner properties with well manicured fields that lay abruptly adjacent to edges created by timber or fence lines. Though this contributes to efficiency and looks good to many people, field edges and fence lines that were once left brushy and ideal for wildlife are fewer and farther between. Many of the family farms that brought richness to the history of Oklahoma also contributed to the richness of wildlife diversity in the state. Years ago, a drive across rural farmland may have revealed miles of brushy roadsides as well as feathered field edges and fence lines that gradually transitioned from timber or rugged prairie into crop production. Today, you may see a "cleaner" approach, but biologists say this is affecting downward quail populations trends.

### What You Can Do

Farmers and ranchers interested in benefiting wildlife should consider leaving some areas untilled, such as fencelines, field edges and other marginal portions not used for crop production. The resulting conditions lead to growth, brush and forage that may be used as habitat.

## Hunting Pressure



Some have suggested reducing the available days to hunt quail to three days weekly as in the past, but legal hunting is shown to have no negative impact on quail populations rangewide. However, localized hunting pressure may cause reduced numbers of quail, such as may be the case on some Oklahoma wildlife management areas. To help regulate quail harvests, some WMAs are open to quail hunting only during specific hours. For example, on the popular Beaver River WMA in northwest Oklahoma, shooting hours for quail hunting close at 4:30 p.m. and shooting hours for quail close at noon on Cimarron Bluff and Cimarron Hills WMAs (these WMAs and some others also are closed for part or all of the deer gun season). In short, biologists don't discourage the hunting of quail, and in fact remind sportsmen that hunters are key to the success of quail.

### What You Can Do

Go Hunting.

Oklahoma's hunting opportunities are numerous. From upland bird hunting for quail and turkeys to big game hunting for deer, antelope, elk and black bear, Oklahoma is one of the most diverse states for hunting. Hunters and anglers are the largest group of wildlife conservation supporters in Oklahoma, serving as the primary source of funding for wildlife conservation in the state through their purchase of hunting and fishing licenses. Additionally, manufacturers of certain sporting goods and boat motor fuels are charged federal excise taxes. Manufacturers pay these taxes to the federal government, and the U.S. Fish and Wildlife Service disburses these funds to state wildlife agencies like the Oklahoma Department of Wildlife Conservation. Wildlife agencies must use these funds for wildlife conservation. Therefore, participating in hunting and fishing is one of the best things anyone can do to support wildlife conservation in Oklahoma. License dollars are put right back into funding conservation, which includes everything from habitat improvement and management to land acquisition for public hunting and fishing opportunities.



WAYNE HUGHES

(Continued from page 5)

### Spring

During March and April, covey bonds weaken and the covey begins to dissolve. This is called *spring break-up*, a period during which mates are chosen and *pair-bonds* are formed in preparation for mating and nesting. These pair-bonds usually exist for one mating and brooding season. Both mated males and males that have not mated use the common two- or three-note whistle to attract a mate, establish a territory, or both. The nesting season, initiated by selection of a mate and territory, begins in late April and can last through summer. However, as birds nest later in the season, the average clutch size and percentage of eggs hatching tend to decrease, resulting in smaller broods. Nests are usually constructed on the ground in bowl-shaped depressions, in areas of light to moderately dense vegetation and ground litter.

Typically, nests are found in dried clumps of last year's growth of warm season grasses like little bluestem. They may be modest or intricate, with the latter occasionally topped by an arched or dome-shaped roof and access limited to a small side opening. Once the nest is completed to the hen's satisfaction, she may delay egg laying for several days. Then, visiting the nest one or more times each day, she will lay eggs until the clutch is complete. The average clutch size ranges from 12-15 eggs, although clutch sizes as low as six and as high as 28 have been reported. After egg laying is completed, there may be a delay before incubation begins. The incubation period is 23 days. From 45 to 55 days are usually required to complete the nesting and incubation process.

### Summer

The majority of the hatch is complete by mid-July. The cock may occasionally assist the hen in incubating the eggs and can continue hatching and brood rearing activities even in the absence of the hen.

Except for one or two short feeding periods per day, the setting bird stays on the nest. Insects are the preferred food of birds during the reproductive period.

Bobwhite chicks generally hatch within an hour or two of each other. Those hatching later are left behind. The newly hatched bobwhite chick weighs about a fourth of an ounce and is covered by buff-colored down.

Bobwhites can nest several times during a season in an attempt to raise a brood if early nests are destroyed by predators, farming operations, or other causes. Farmers harvesting warm-season grasses for hay before July 1 may cause nest destruction and abandonment.

Successful early nesting hens may occasionally produce

(Continues on page 9)

## Catastrophic Weather Events



Some researcher believe annual and short-term trends in quail populations may be due in large part to weather effects on production, and we all know the state's weather can be harsh. In the past year alone, weather events have been particularly detrimental.

July 2011 was the hottest July ever on record in Oklahoma with temperatures soaring above 100 degrees for extended periods, and extreme drought has affected over 85 percent of Oklahoma. Data has shown correlations between periods of drought and fall quail population levels, and field biologists have often noted nest abandonment, egg spoilage and suppressed courtship during extended periods of high heat combined with low moisture.

Winter was harsh as well, seeing snowfalls of up to 14 inches and temperatures well below zero. Tornadoes and hailstorms hammered the plains this spring. Nighttime cold and wet weather during certain times of brooding season can predispose chicks to hypothermia.

Likewise, the catastrophic weather can disrupt reproduction and survival of adult birds. For example, ice storms can pack a thick layer of ice on the surface of the ground, making it difficult to impossible for quail to access food underneath. Flooding can destroy nests and send birds looking for cover; and prolonged heat and drought can be detrimental to insect populations that quail rely on for food. Combine a few of these, such as a period of poor insect production followed by a flood season that takes a toll on quail nesting success, and you have a recipe for disaster.

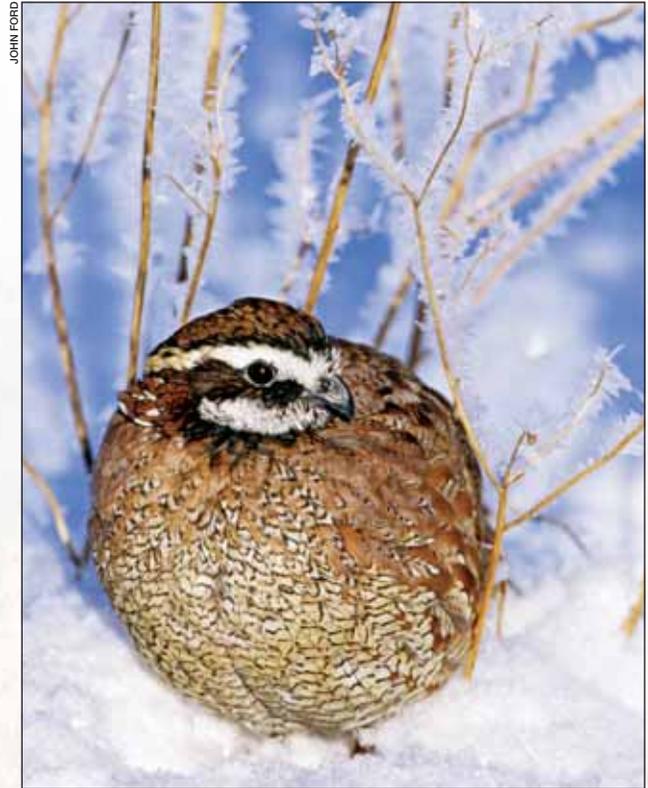
While weather extremes are nothing new and cannot be blamed entirely for rangewide quail declines, biologists agree that localized weather events as well as the timing of inclement weather with other factors can be problematic for wildlife.

### What You Can Do

Anyone who has lived in Oklahoma for any length of time knows that, unfortunately but obviously, there is no controlling our state's weather. That's why habitat work on private land and participation in hunting or conservation groups is critical.



RUSSELL GRAVES



JOHN FORD

## Global Climate Change



Whether or not the origin of the extreme weather Oklahoma has experienced in recent years is an effect of a long-term global climate change, biologists want to better understand weather effects on quail population dynamics in Oklahoma.

The Wildlife Department is working with Oklahoma State University on two northwest Oklahoma wildlife management areas, and biologists plan to use the knowledge gained from the study to move forward with conservation efforts that help minimize negative environmental effects on quail populations.

## Herbicides & Pesticides



Along with impacting food sources like insects and weed seeds, overuse of herbicides to control brushy cover in grassland does no favors for habitat. Quail require some brush like plum thickets and shinnery oak to provide escape and protective cover from raptors. Additionally, brush is very important for thermal cover during extreme weather conditions like heat, snow or ice storms.

“Basically, if you own or manage grassland and you overuse herbicides to eliminate brush on your property, it will have negative impacts on quail,” said Doug Schoeling, upland game bird biologist for the Wildlife Department. “Have a good percentage of brush scattered across the landscape.”



## Exotic Non-Native Grasses



Areas that once held large numbers of quail may hold fewer now as some farming operations have transitioned from production of row crops to pasture, hay fields and other crops that are “less friendly” to birds. Introduced, non-native grasses like Bermuda and tall fescue make for poor quail habitat because of their sod-forming qualities that make it difficult for quail to walk and search for food. Additionally, sod forming grasses contribute to loss of cover and good structure needed for nesting. Bare ground availability, such as that provided in habitat with native grasses that form bunches rather than sod, offer better foraging opportunities and easier traveling for quail. Non-native grass plantings also tend to be monocultures, with far less beneficial diversity than native grasses.

### What You Can Do

Landowners who want to see more quail on their property should look at the grasses produced on their property. Is bare ground available among bunches of native grass? Or do introduced sod-forming grasses eliminate any available bare ground for quail to move easily and with enough security to remain on the property? A number of state and federal programs are available for assisting landowners such as the Wildlife Department's Wildlife Habitat Improvement Program. For more information, contact Mike Sams, private lands senior biologist for the Wildlife Department, at (405) 590-2584.

*(Continued from page 7)*

second broods. Chicks observed late in the nesting season may even be the result of a third nesting attempt.

Bobwhite chicks are able to leave the nest and seek food with the adults as soon as their down dries. Early departure from the nest may serve to reduce the risk of predation from animals attracted by the scent of newly hatched chicks.

Young chicks forage for small, high-protein insects in brood rearing habitat, which consists of relatively open ground for freedom of movement, and lush green growth with overhead concealment. It is important that cover for refuge from predators is close by and that the area is free of tangled vegetation at ground level. This feeding area used by the brood may cover from two to 100 acres or more.

The most critical period for chicks is the first two weeks. Their initial covering of natal down provides little protection from wetting, but by about two weeks of age, down begins being replaced by juvenile plumage. However, only short flights are possible at this time.

Predation plus adverse weather during this period may account for a loss of 50 percent or more of the hatch.

Parents protect chicks during the night as well as a considerable portion of the day by covering them. Sometimes parents lure predators away from their young using a broken wing display. Six-week-old chicks primarily have juvenile plumage, are capable of extended flights and weigh about 2 1/2 ounces. At this age, the diet of the chick often includes berries and seeds in addition to insects. Adult size and appearance are reached by four months of age, but these sub adult birds can still be distinguished from adults by their growing primary wing feathers and buff-colored tips on their primary covert feathers.

## Fall

Much movement and mixing of bobwhite quail, called the fall shuffle, occurs in early fall when coveys are forming on their winter ranges. They select an area where food is abundant and suitable cover is near. The mixing of birds during the fall shuffle and spring break-up limits inbreeding. Movement of several miles to a winter range has been observed, but in quality habitat, movement of less than one-fourth mile is common. Bobwhite quail in northwestern Oklahoma use highlands in summer, but shift their ranges to brushy canyons in winter.

## Winter

Interchange between coveys continues to occur all winter. Coveys may lose or gain a new member every two or three days. 🌿

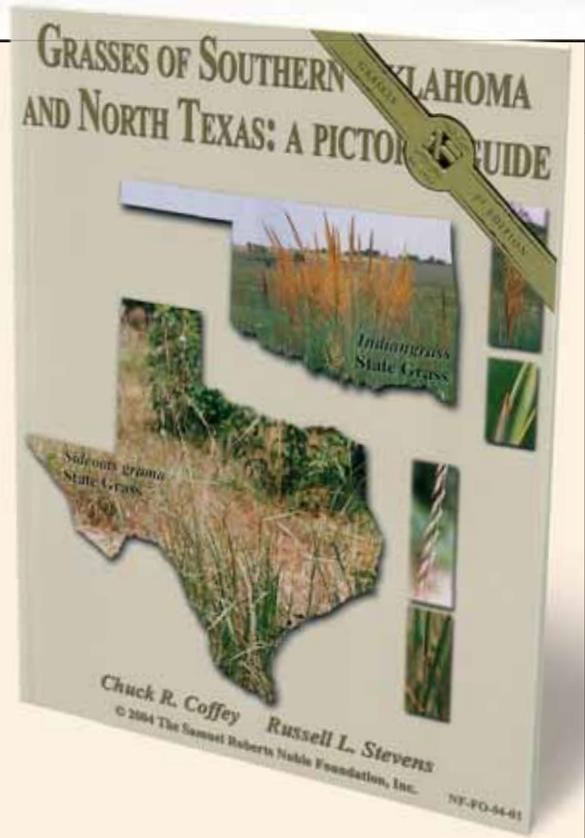
# A Few Good Weeds

**F**orbs — or as many call them, weeds — are an important part of the life of a quail. Not only do they provide cover, but they also produce seed for food and attract insects on which quail feed.

Just like the front lawn, drought and extremely hot temperatures take a toll on wild vegetation, and icy conditions in the winter can make foraging for seeds difficult. Additionally, land use changes can eliminate many of the weeds on lands that quail would otherwise inhabit. It takes a balance of nature and conscious land management efforts to build the kind of habitat that will attract and hold quail.

Oklahoma has around 70 public hunting areas that are managed specifically for wildlife such as quail, deer and turkeys. Production of native weeds and grasses are an important part of managing wildlife habitat to ensure species like quail can find the habitat they need. On these areas, hunters can rest assured knowing that creating and enhancing diverse habitat is a top priority.

Private landowners interested in learning more about native plant growth in Oklahoma should check out the Noble Foundation's *Grasses of Southern Oklahoma and North Texas: A Pictorial Guide*. A comprehensive reference book on grasses in the southern Oklahoma and North Texas region, this publication is ideal for wildlife enthu-



siasts as well as farmers, ranchers, and other landowners who are interested in identifying grasses. This 120-page, full-color book can be used to easily and accurately identify grasses in the area.

The book costs \$25 and can be purchased on the Noble Foundation's website at [noble.org](http://noble.org).

## Can you name these quail-friendly forbs?



A. Ragweed, B. Croton, C. Bundletflower

## Disease



RUSSELL GRAVES



West Nile Virus, Coccidiosis, Avian influenza, quail fever, pox, and bronchitis are diseases that quail can contract. Many questions remain to be answered regarding their direct and indirect population level impacts across the bobwhite's range.

Biologists would like to learn more about the incidence of disease among quail populations, be it through contact with domestic quail that have been released on hunting preserves, through blood-feeding insects like ticks and mosquitoes, or at wildlife feeders.

In order to better understand which diseases and parasites are having the greatest impacts on quail populations, the Wildlife Department is taking part in a research project with the Rolling Plains Quail Research Ranch, Texas A&M and Texas Tech University to study quail diseases and parasitism. Through the study called "Operation Idiopathic Decline," biologists are not only analyzing individual quail for diseases, but they are also studying certain quail parasites like mosquitoes and ticks for more insight on the spread of disease through parasitism.

A more in depth look at this research project is provided later in this issue.

## Feeders and Aflatoxin



Though often employed with good intentions, a wildlife feeder may be a two-edged sword. While they do provide some supplemental food and can increase the likelihood for hunters and wildlife watchers to see and harvest animals that

concentrate near them, they also draw natural predators that opportunistically prey on quail. They also can lead to the transfer of disease. Additionally, they have little positive impact on quail numbers when placed where quality quail habitat already exists. The result could mean fewer birds seen by hunters in those areas.

In addition to attracting predators to potentially "easy pickings," some seeds used in wildlife feeders, especially corn, may contain naturally occurring aflatoxins (a form of toxic mold). Quail can survive very high levels of aflatoxin, but it may have sublethal effects that could compromise a quail's fitness, including its reproductive success. The impact aflatoxin may be having on quail reproduction is still unknown.

Wildlife feeders are legal in most scenarios in Oklahoma, and they are not believed to be a threat to quail populations rangewide. Rather, they may simply impact very localized coveys and hunters. But even so, landowners who focus on creating and enhancing as much habitat on their property as possible can have lasting effects. Making habitat a priority and getting involved in conservation is as important now as it ever has been, and it starts with landowners and sportsmen getting involved. Additionally, if you are concerned that aflatoxins in corn may be affecting quail populations in your area, there are other feed options that may be more expensive but are known to have lesser amounts of aflatoxins, such as black-eyed peas and milo. You can also routinely clean your feeders.

## Late Stage Habitat Succession



With the exception of the Ozarks and Ouachitas, Oklahoma was historically a prairie state. Exclusion of fire along with other human activities has led to much of Oklahoma's prairie and Savannah habitats being invaded by timber growth, all at the expense of native prairie and therefore the bobwhite quail.

Many counties that were characterized by native grasses during the early 1900s (or even the late 1900s) are now marked by draws of oak timber with trees as wide as 10 inches in diameter. In short, habitat characteristics change over time, sometimes in ways that would be difficult to control or that might even go unnoticed, until it affects something so dear to the heart of Oklahoma as bobwhite quail.

## What You Can Do

If quail habitat is your top priority for your property, yet you cannot pinpoint just what has changed in your area that may be affecting quail populations, call Mike Sams, private lands senior biologist for the Wildlife Department, and seek input and further information on restoring and creating quail habitat on your property. For more information, log on to [wildlifedepartment.com](http://wildlifedepartment.com).



RUSSELL GRAVES



## Urbanization and Commercial Development

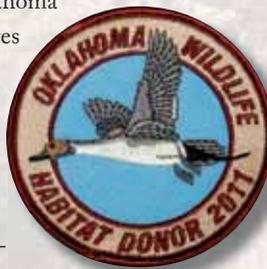


Pick any remaining patch of habitat on the outskirts of a community experiencing growth, and watch closely to see how long it takes for a large commercial development or housing addition to go up in its place. While economic growth and devel-

opment are good things, the fact that wildlife habitat may be impacted as a result is well known. If the habitat is gone, the wildlife will be gone as well. New roads, parking lots, parks, homes and businesses are signs of thriving, but the natural world that once called those places home are forever gone.

### What You Can Do

In addition to purchasing a hunting license and going hunting, wildlife enthusiasts can also purchase a habitat donor patch, which features a unique Oklahoma wildlife species. Doing so designates you as a contributor to the Wildlife Department's Land Acquisition Fund, which is used to purchase and secure land for conservation and hunting opportunities. The Wildlife Department has purchased several new properties across the state in recent years that are secure for conservation from now on. Patches are \$10 and are also available on top-quality, American-made caps for \$18. To purchase a patch or cap, log on to [wildlifedepartment.com](http://wildlifedepartment.com) or turn to the Wildlife Department's *Outdoor Oklahoma* magazine.



## Wild Wonders and Feral Foes

Competition is one of the greatest forces in the natural world, from the smallest of organisms that affect the natural food chain on up to Oklahoma's largest game animals such as deer and elk. When species compete — each one with the powerful natural will to survive — one will often take a greater hit than the other. Such may be case for quail. Though biologists believe it to be of little consequence to quail populations, it is possible for turkeys, deer, egrets, roadrunners and other wildlife to prey on quail chicks. Ticks can sometimes kill chicks as well.

A bigger threat still presents itself when non-native competition comes into play. In Oklahoma, feral hogs are widespread, and feral cats are found statewide as well. Non-native fire ants may at times kill quail chicks too. Each one can inflict harm on quail habitat and individual birds, and the worst part about them is they are not native wildlife. When a non-native species is the source of competition and predation on native wildlife, the significance of the problem is automatically increased, even in the case of feral hogs and cats that are not believed to be top-level threats to quail populations. Non-native and invasive species often have little competition and few predators, allowing for more detrimental impacts on native habitat and food sources otherwise available for native species.



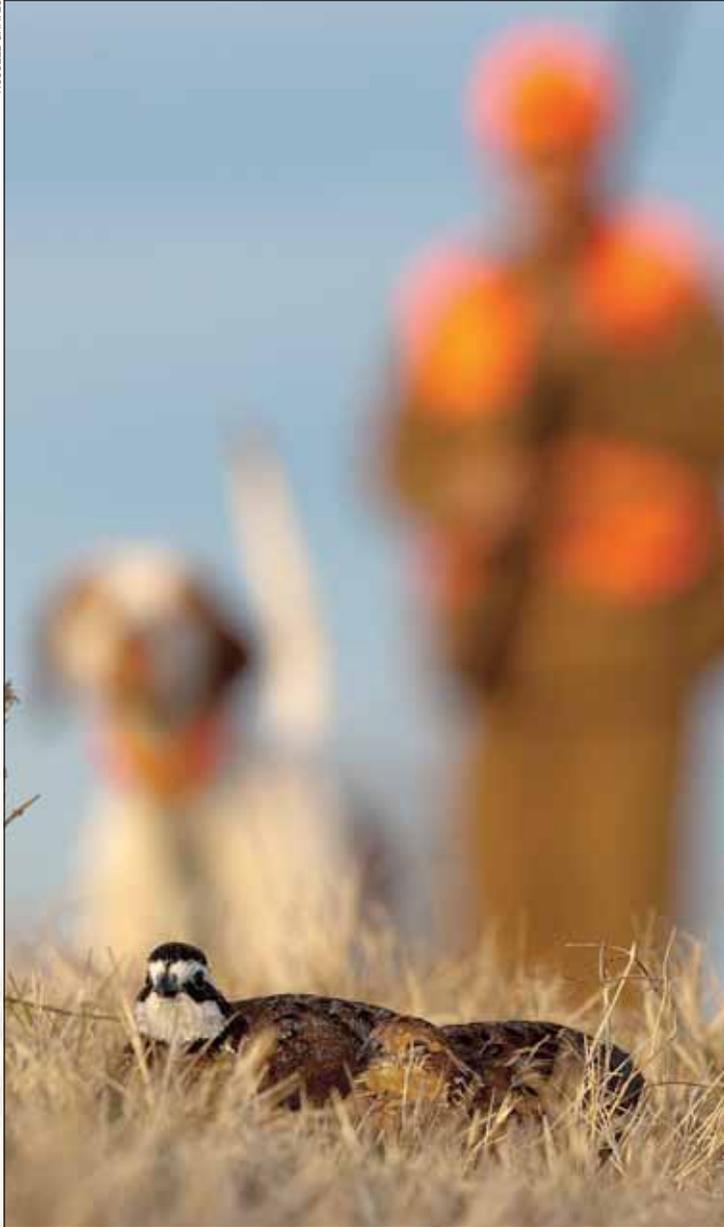
*Feral hogs and feral cats*



*Ticks and fire ants*



*Turkeys, deer, egrets, roadrunners*



## Two More Theories: Survival of the Fittest and Fewer Wild Birds for Training Bird Dogs

The “survival of the fittest” concept basically implies that individuals of a species who adapt most readily to their environment tend to have a better chance of survival and thus reproducing their genes. Biologists say it’s possible that today’s quail, though maybe fewer in number, are better at surviving. Could that mean they are more elusive as well? For example, quail that tend to run under pressure rather than flush may create greater distance between themselves and a bird dog that has pinpointed their location. The result in that case is that the birds may go unseen more often than flushing. If the tendency to run rather than flush results in higher survival, then the tendency to run could be passed on to offspring with increased frequency as each generation improves at surviving in their environment.

Additionally, with wild bird numbers down in recent years, the rate at which young hunting dogs can gain experience hunting wild quail may be slowed. It’s been suggested that this phenomenon may be causing a decrease in the number of coveys seen by hunters while also forcing them to rely more on domestic birds for training.



*Survival of the fittest*



*Fewer wild birds to provide experience for young hunting dogs*

## What Does it All Mean?

The quail is somewhat like any type of crop in that environmental conditions affect a given year’s production. When the condition of the habitat and available food interact favorably with the weather and other factors, the chance for a successful year of quail production is increased. But even then, the average lifespan of a wild quail is only seven months, and only about 20 percent survive from one October until the next. Their approach to species survival is to produce excessive numbers of offspring to compensate for the high number of losses caused by the environment. When a given year’s environmental conditions are particularly challenging, it shows in the quail population. It goes without saying that conditions that negatively affect the survival of the bobwhite quail in one year — be it weather or any of the threats that have been explored in this issue — can have far reaching affects on the next year, and likewise, a series of challenging years can lead to gradual declines like those seen across the western edge of the bobwhite’s range.

The challenge before Wildlife Department biologists as they begin their upcoming comprehensive research efforts with OSU and Operation Idiopathic Decline is to determine what unknown factors are playing a role in the downward population trend of quail, and just how much of a role they are playing. Only then can a sharper focus be placed on halting the unexplained decline. But we aren’t limited to waiting and doing nothing while biologists carry out their research, however. We all can be involved in bobwhite quail conservation now. 🌿

# We All Can Play a Role

WAYNE HUGHES



**W**ildlife Department officials are optimistic that we can make a difference for quail in Oklahoma. One thing that is sure is quail populations have a better chance of rebounding when private landowners, sportsmen and the Wildlife Department partner together for the benefit of wildlife.

## The Role of Private Landowners

In Oklahoma, the impact of what a landowner does for wildlife on his property spreads beyond his fence line. When an area provides a good arrangement and diversity of nutritious food, shelter and nesting cover, quail have a better chance of foraging and nesting successfully. And when more than one landowner in an area catch on and begin striving to provide better wildlife habitat, their success is multiplied.

While landowners cannot control the weather, they can make great strides in restoring and enhancing the wildlife habitat on their property, and in doing so put in place at least one of the puzzle pieces critical for quail to thrive.

Landowner efforts are far more than simply a beneficial supplement to quail and other wildlife; they are actually crucial for the success of wildlife in the state.

“Ninety-seven percent of Oklahoma is privately owned,” said Mike Sams, private lands senior wildlife biologist for the Wildlife Department. “Without private landowners, wildlife management is not going to happen.”

With so much land under private ownership, it’s up to landowners to partner with the Department and sportsmen to provide habitat for wildlife, and they do a good job of it. However, with land use changes taking place every day, small-tract landowners face challenges in the quest to provide habitat on a small scale that still makes a big impact. But there is a way.

## The Role of Sportsmen

Put simply, *hunting is conservation.*

The Oklahoma Department of Wildlife Conservation receives no general state tax appropriations and is supported primarily by sportsmen through their purchase of hunting and fishing licenses. Through their purchase of hunting licenses as well as the purchase of certain hunting equipment, funds have continued to flow into wildlife conservation in Oklahoma as part of the Wildlife Restoration Program. Hunting equipment carries a federal tax that is collected from the manufacturer, and the U.S. Fish and Wildlife Service then distributes such taxes to state wildlife agencies like the Oklahoma Department of Wildlife Conservation. The funds must be used by the states for wildlife conservation efforts. The program functions as a “user pay, user benefit” program in that the number of hunting licenses issued in Oklahoma annually helps determine the final amount of the program’s funding. Because of the Wildlife Restoration Program, Oklahoma’s funds today represent millions of additional conservation dollars invested in our state by licensed hunters.

Because of efforts to enhance and restore habitat, quail benefit, as do so many other species in Oklahoma ranging from big game like deer and antelope to turkeys, rabbits and others. Sportsmen’s dollars have gone a long way in making that happen through research projects, habitat restoration, law enforcement, education and long-term cooperative relationships between the Wildlife Department, landowners and sportsmen.

In short, one of the best ways to support wildlife conservation, and therefore quail conservation, is to purchase a hunting license and go hunting. Additionally, hunters can introduce others to the outdoors by taking them hunting. Becoming a volunteer instructor for the Wildlife Department’s hunter education program makes a big difference through educating the next generation of hunters in local communities. For more information, contact Lance Meek, hunter education coordinator for the Wildlife Department, at (405) 522-4572. Or get involved in local chapters of effective conservation groups such as Quail Forever and Quail Unlimited. Projects and fundraisers held by conservation organizations are effective ways to raise money for conservation projects.

## The Role of the Wildlife Department

—By Jena Donnell, Quail habitat restoration biologist

While quail are known for their “boom or bust” cycles, biologists have seen a consistent and concerning downward population trend. Unfortunately, this trend has been mirrored by the number of Oklahoma quail hunters — declining from 110,000 in 1980 to less than 30,000 hunters today.

While this issue has explored a number of threats that could be contributing in one way or another to declining quail populations, and while landowners and sportsmen have an important role to play in conserving quail, the question that begs an

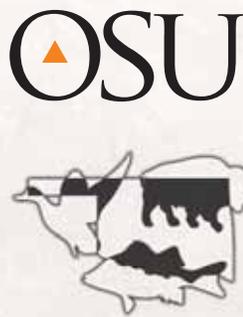
answer is what does the Wildlife Department plan to do to help conserve this upland treasure known as the bobwhite quail?

To many Wildlife Department biologists, the question is both scientific and deeply personal. Biologists with the Department are not only experts in the science of wildlife biology, but most are passionate hunters and wildlife enthusiasts who eagerly seek to benefit the bird that has given them so many cherished memories afield. And while it is true that quail numbers can fluctuate between “good years” and “bad years,” biologists are working now to ensure the bobwhite quail is a staple of the upland landscape forever.

Along with private lands programs and routine management efforts on public lands, the Wildlife Department is beginning a phase of extensive research involving two specific projects—one right here in Oklahoma and another through a joint effort between the Department and some of its national partners.

### Research Project #1

**A True Oklahoma Partnership to Benefit Quail:** The Wildlife Department has recently committed to a long-term bobwhite quail research project with Oklahoma State University’s Department of Natural Resource Ecology and Management and the Oklahoma Cooperative Fish and Wildlife Research Unit. This research is in response to the decline in both quail populations



and hunter numbers.

By conducting research on two of the best remaining public lands quail habitat areas in the nation — Packsaddle and Beaver River wildlife management areas in northwest Oklahoma — biologists hope to gain insights on various aspects of quail management, including the movement and distribution of birds during the late summer and early fall when coveys are known to shuffle and regroup into new coveys, how to effectively manage habitat to boost chick survival, and how the weather influences reproductive success and bobwhite survival in Oklahoma. To address these and other topics, studies will revolve around four primary approaches: habitat and population dynamics, insect and food availability, quail use of habitat by predators and aflatoxin.

**Habitat and Population Dynamics:** In this approach, researchers will fit both adult quail and chicks with transmitters to determine which factors affect habitat use, production and brood survival, and mortality of bobwhites throughout the year. In addition to telemetry work, habitat manipulations will be closely monitored for changes in vegetation, and biological information will be collected from hunter-harvested birds. From this information, biologists hope to create models that will help them predict the response of quail populations to drought and evaluate the role that temperature plays in nesting and survival.

**Arthropod (Insect) Availability and Preference:** Telemetry work from the above-mentioned studies will be used in conjunction with arthropod sampling to determine how nest location and chick survival are linked to arthropod abundance. Invertebrate samples

## New Association to Help Simplify Prescribed Burning for Landowners

A new association has been formed to provide landowners and state prescribed burn associations with an organization that can assist them with liability insurance, finding funding for equipment and training, and a voice for prescribed burning throughout the state.

The Oklahoma Prescribed Burn Association (OPBA) was formed through a three-year Conoco-Phillips challenge grant from the Playa Lakes Joint Venture through the High Plains Resource and Conservation District. Ron Voth is the executive director of this first of its kind organization to assist landowners with all aspects of prescribed burning.

Prescribed burning is a useful and important habitat management tool employed to remove accumulated litter, encourage new vegetative growth and to control excessive invasion of brush and woody cover. Native rangelands that are burned periodically have a wider diversity of plants that are beneficial to wildlife than unburned prairies. Wildlife such as quail benefit from burns because they increase mobility by removing ground level clutter, attract greater density and diversity of insects used by quail chicks as food and increase the ability of birds to feed on those insects.

The primary goal of the OPBA is to become the umbrella organization for landowners and local prescribed burn associations to receive reasonably priced liability insurance for conducting prescribed burns. Through the OPBA, the insurance will be available to burn association members at an affordable rate. The insurance covers escaped fires, suppression costs, injury to people assisting with the burn, and problems caused by smoke. A five-member board of directors has been formed to assist with the development of this organization. Members include Alva Gregory, Oklahoma Department of Wildlife Conservation; Darrel Dominick, Oklahoma Conservation Commission; Paul Clark, Natural Resource Conservation Service; Karsen Davis, Roger Mills Prescribed Burn Association; and John Weir, NREM, Oklahoma State University.

There will be a minimal annual fee, and a charge for each burn the landowner would like to have insured. There will be some requirements for each burn, which are currently being developed by the association and the insurance company.

The OPBA is currently conducting a survey of landowners throughout the state to get information on the number of landowners that would be interested in joining a prescribed burn association and if they are interested in the liability insurance. The survey can be found at the Oklahoma Prescribed Fire Council website at [www.oklahomaprescribedfirecouncil.okstate.edu](http://www.oklahomaprescribedfirecouncil.okstate.edu). Click on “Burn Associations” and send the completed survey to Ron Voth at the address listed. 🌿

### Packsaddle WMA

- Approx. 22,000 acres, and is located in Ellis County.
- Uplands sites are vegetated with mixed native grass species including big bluestem, indian grass, little bluestem, side-oats grama, and buffalo grass and brush species like shinnery oak, sagebrush, and sand plum.
- Bobwhite quail are usually present in good numbers, but are highly sought after.

### Beaver River WMA

- 17,700 acres of western Beaver County in the Oklahoma panhandle.
- Sagebrush and buffalo grass predominate on upland sites.
- Bobwhite quail are usually present in good numbers but are highly sought after. Very few blue quail present.

will be taken from preferred home ranges, known nesting sites, and areas where foraging is not occurring. Researchers will also attempt to identify how diets fluctuate as chicks develop. A model will be developed at the end of this approach to predict how nest selection and chick survival will be influenced by invertebrate abundance.

**Aerial/Terrestrial Predator Influence on Usable Space:** The potential impact of both avian and mammalian predators will be evaluated through raptor surveys, perching site assessments, and carnivore surveys. A GIS model will be developed using these surveys, predicting how potential raptor perch sites (including human structures) and areas frequented by mammals (waterways and streams, food plots, etc.) may facilitate predation of quail.

**Aflatoxicosis:** Though aflatoxin-related issues have long been a concern for waterfowl managers, the role of this fungus in quail populations has yet been determined. To better understand the potential effects on quail, several seed sources (including both native and commercially-obtained seed) will be evaluated for potentially toxic concentrations. Additionally, researchers hope to learn how feeders and supplemental feeding strategies influence quail and quail predation.

The six-year study is anticipated to begin in fall 2011 and will continue until summer 2017. Field stations will be built

on both study areas, providing research students with both a working lab and temporary housing.

### Research Project #2

**Operation Idiopathic Decline:** In addition to the cooperative research with OSU, the Wildlife Department will participate with the Rolling Plains Quail Research Ranch, Texas A&M, Texas A&M-Kingsville and Texas Tech University in a second study dubbed “Operation Idiopathic Decline.” The role of Wildlife Department biologists will include trapping quail in the fall and sending them to Texas Tech, where samples will be analyzed for contaminants and diseases like West Nile virus and avian influenza. Extensive research on the birds will also cover disease, parasitism, herbicides, insecticides and other issues. The Rolling Plains Quail Research Ranch is providing \$2 million of privately raised funds for this project.

“We are going to look at things like aflatoxins, Coccidiosis, West Nile virus, and all of the other ‘black box’ diseases,” said Doug Schoeling, upland game bird biologist for the Wildlife Department.

The primary goal of this project is to determine the role of infectious diseases on bobwhite quail. Disease research with respect to quail has been limited and little is known about the prevalence or importance of specific diseases on the population.

Ten Wildlife Management Areas (WMA’s) from across Oklahoma’s Rolling Plains region have been selected as sample sites for the operation: Beaver River, Black Kettle, Canton, Cimarron Hills and Bluff, Cooper, Ellis County, Hackberry Flat, Mountain Park, Packsaddle and Sandy Sanders. Biologists and technicians will trap quail twice at each location — once in August and again in October. Each sampled bird will be banded to ensure all future samples are unique. Researchers hope to collect approximately 300 samples during each trapping session.

ODWC staff will also collect insect samples from each site. Once the samples have been tested for a range of pathogens, researchers will compare the number of birds with diseases to the prevalence of that pathogen in quail parasites (ticks and mosquitoes).

By collecting biological samples from bobwhite quail, ODWC hopes to have a better understanding of which diseases are impacting our population. The three year study began August 15, 2011. 🌿

If you are a landowner who would like to speak with a Wildlife Department biologist about enhancing or creating quail habitat on your Oklahoma property, contact one of the following:

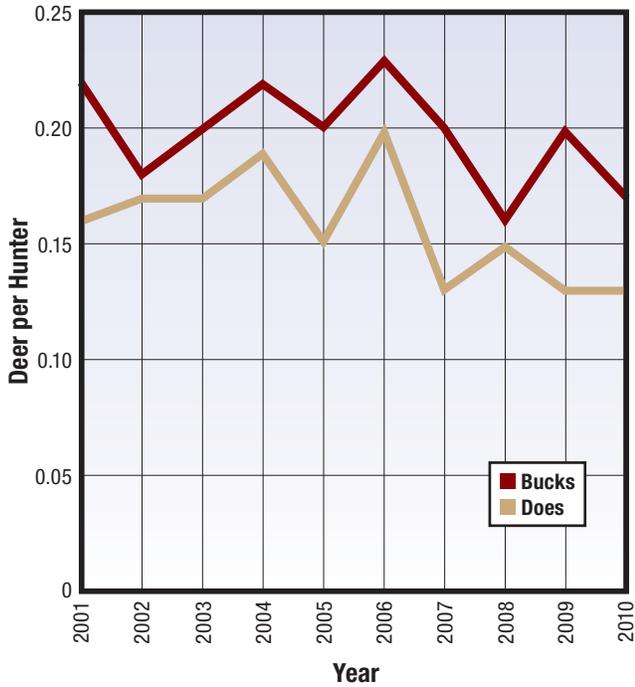
**Doug Schoeling**  
Upland game bird biologist  
(405) 301-9945

**Jena Donnell**  
Quail habitat restoration biologist  
(405) 684-1929

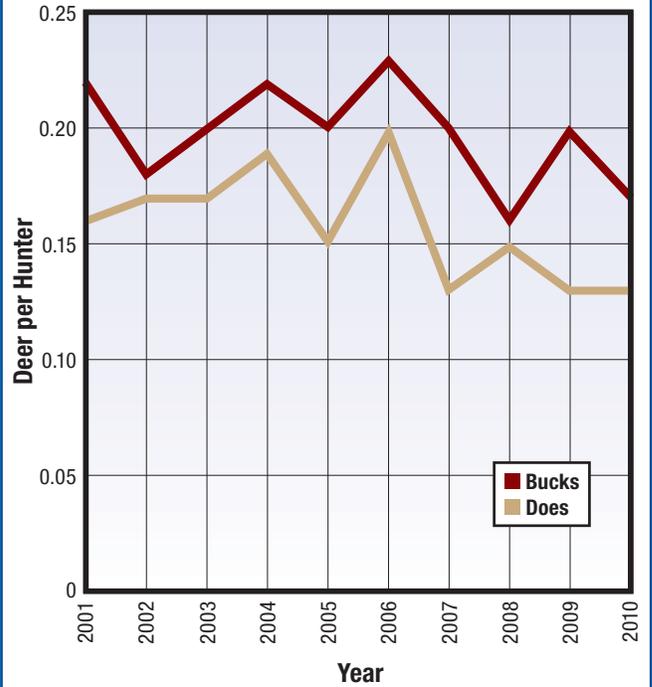
**Mike Sams**  
Private lands senior biologist  
(405) 590-2584

The Oklahoma Department of Wildlife Conservation is the state agency charged with conserving Oklahoma’s wildlife. The mission of the Wildlife Department is the management, protection, and enhancement of wildlife resources and habitat for the scientific, educational, recreational, aesthetic, and economic benefits to present and future generations of citizens and visitors to Oklahoma. The agency receives no general state tax appropriations and is supported by hunters, anglers, recreational shooters and boaters through hunting and fishing license fees and special taxes through the Wildlife & Sport Fish Restoration Program on sporting equipment and motorboat fuels. For more information about the Wildlife Department, its programs or about hunting or fishing in Oklahoma, log on to [wildlifedepartment.com](http://wildlifedepartment.com).

**Figure 8: Average Annual Deer Harvest per Hunter, Gun Season 2001-2010**

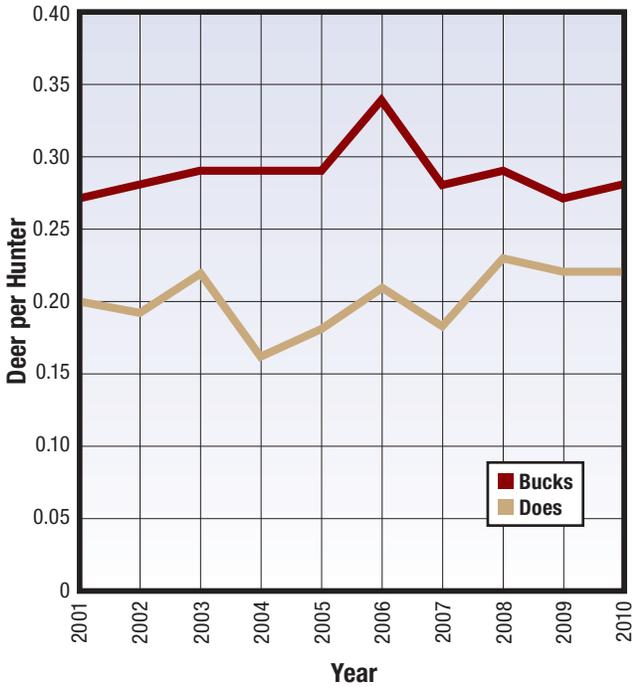


**Figure 9: Average Annual Deer Harvest per Hunter, Youth Season 2001-2010**

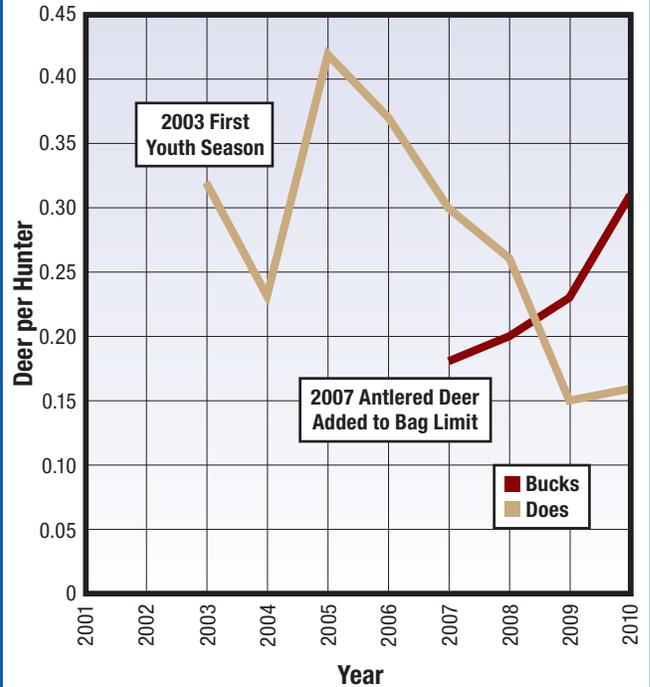


KIM HART

**Figure 8: Average Annual Deer Harvest per Hunter, Gun Season 2001-2010**



**Figure 9: Average Annual Deer Harvest per Hunter, Youth Season 2001-2010**



(Continued from page 16)

The archery season opened on Oct. 1 and continued uninterrupted until Jan. 15. The bag limit was 6 deer, which could include no more than two bucks. To keep with tradition, the archery season harvest is shown in two segments in Figure 3. The first “split” of the season ran from Oct. 1 through Nov. 20. The second session was from Nov. 21 to the end of the season on Jan. 15.

**Muzzleloader Season**

As was mentioned in the opening paragraphs, the 2010 muzzleloading season was difficult for most Oklahoma hunters. Most hunters taking advantage of the season that began on Oct. 23 and concluded on Oct. 31 found the weather unseasonably warm and the Oklahoma winds in full effect. Perhaps the weather was too much for many hunters as the 2010 hunter numbers showed the lowest participation level in over a decade (Figure 14). Survey data calculated that 94,905 hunters went afield during this season. Those that did brave the winds and heat faced a tough hunt as shown by low rate of success (Figure 14) taking home 20,134 deer for their efforts. In total, the muzzleloader harvest was down 18 percent from 2009 levels. While doe success remained unchanged from 2009 levels, the average annual harvest of bucks dropped (Figure 7).

The bag limit and antlerless opportunity remained unchanged from 2009. Hunters could kill one antlered and two antlerless deer, provided at least one of the antlerless deer were taken from Management Zones 2,7, or 8. Figure 15 charts the muzzleloader harvest by day and sex.

**Gun Season**

As muzzleloader season came to a close, stories of bucks chasing does began to circulate in locations where hunters tend to congregate and on online message boards. The disappointment many felt over the less than ideal muzzleloader season was replaced in large measure by optimism and excitement of hearing that deer were starting to move. Hunters who may have been reluctant to sit

in a treestand and put up with the heat and high winds, perhaps redoubled their efforts during rifle season. Whatever the cause, a record number of hunters hunted under deer gun license in 2010. With youth hunters, holiday season, and general gun season hunters

**Figure 10: Average Annual Deer Harvest per Hunter, Holiday Season 2001-2010**

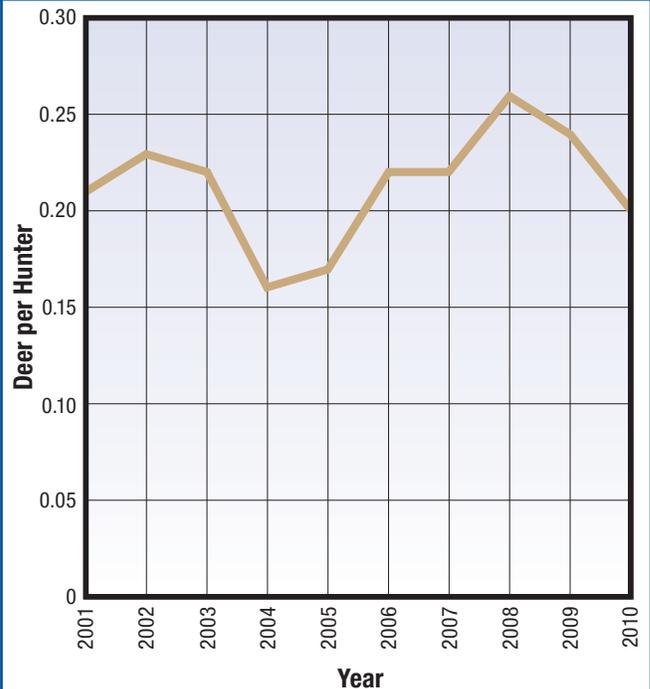
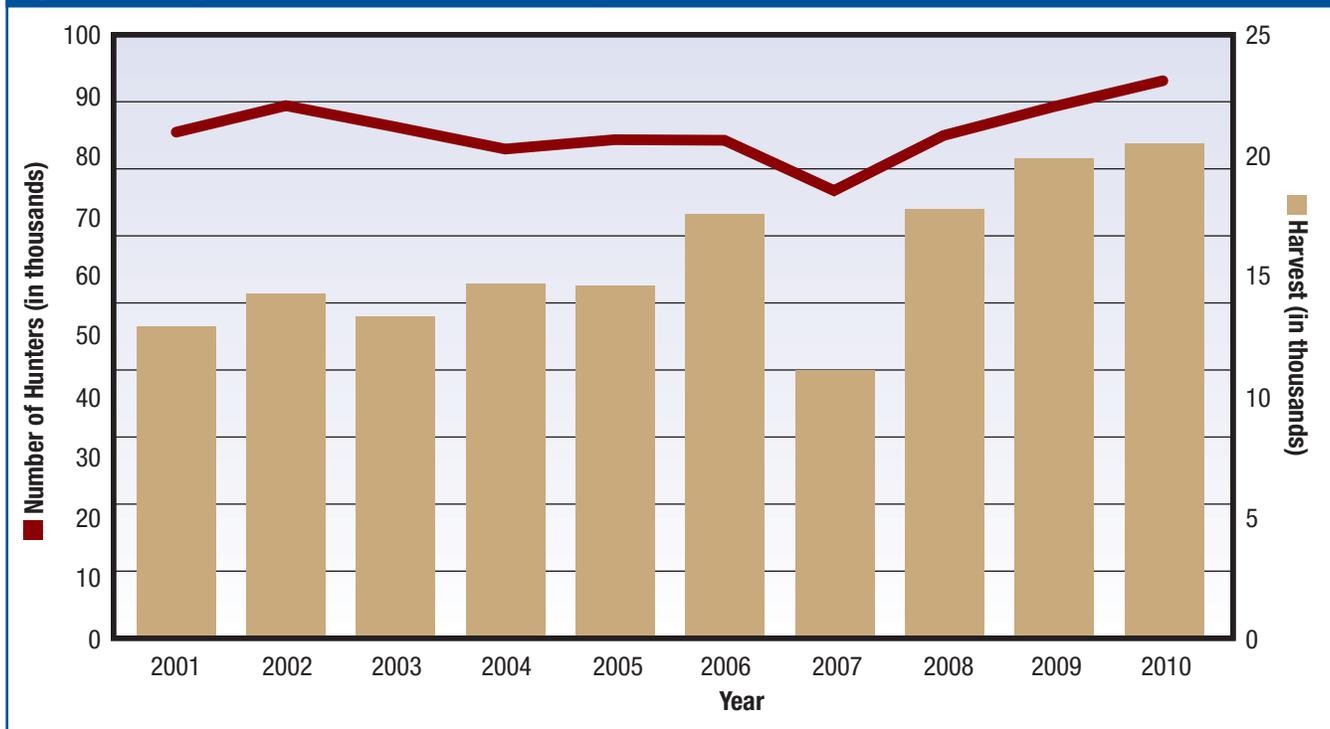


Figure 11: Archery Season Hunter Numbers and Harvest, 2001-2010



combined, a total of 203,915 hunters took to the deer woods last year (Figure 16). To a large degree their efforts were rewarded resulting in a total harvest of 68,700 deer, a four percent drop from 2009. Figure 13 shows the success rate of gun hunters at 34 percent, just slightly below the 10-year average.

The youth gun season continues to be popular with 8,130 participants in 2010. Hunters under the age of 18 were again the

first gun hunters in the woods when their season opened on Oct. 15. The three-day season, open statewide, had a bag limit of one antlered and one antlerless deer. Figure 9 represents the average annual harvest of these young hunters.

As is tradition in Oklahoma, the regular rifle season opened the Saturday before Thanksgiving and continued for 16 days (Nov. 20-Dec. 5). Survey data indicated that 156,180 hunters put on

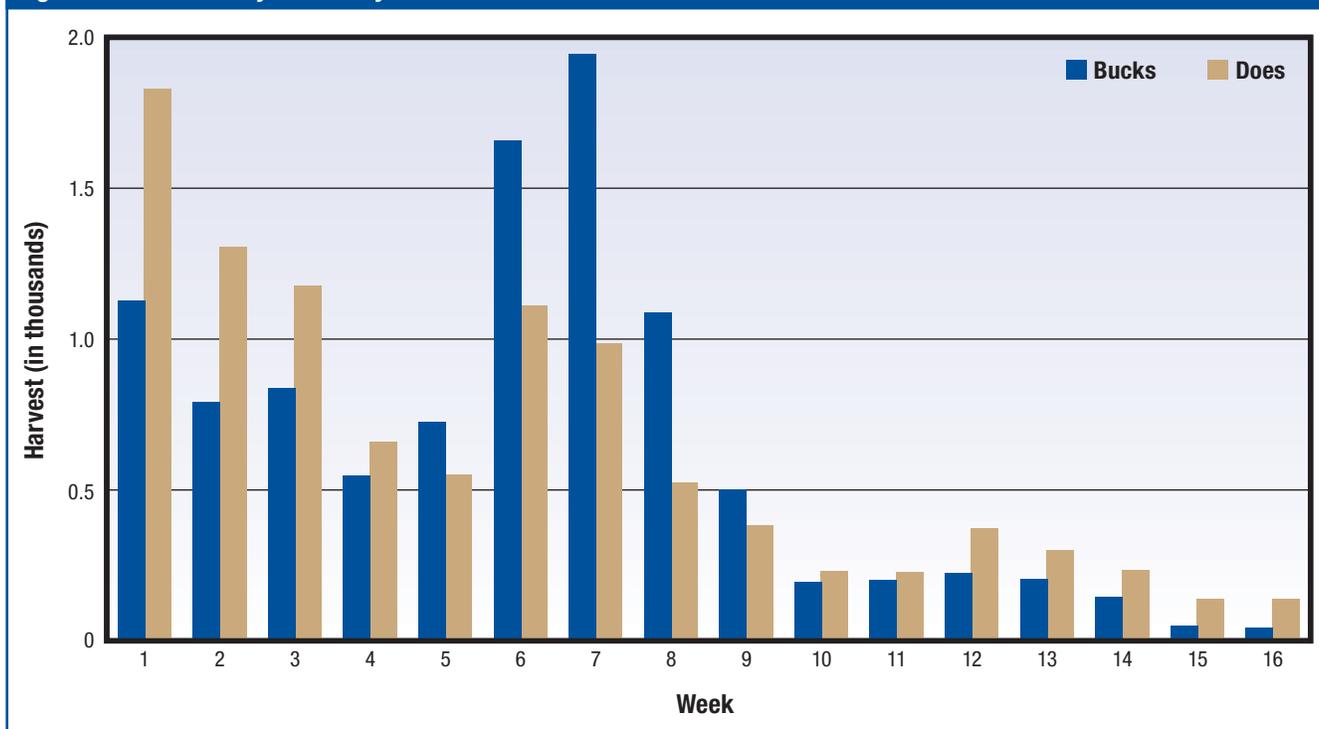
blaze orange and took to the woods and fields sometime during that window of opportunity. Figure 8 shows the average number of deer taken per hunter during the general gun season. When viewed by day of the season (Figure 17), the weekends continue to show the majority of the harvest, with opening day accounting for 23 percent of the total season harvest. Bag limits remained unchanged for 2010 with a possible three deer being taken, with no more than one antlered and two antlerless deer allowed per hunter. Those taking two antlerless must have taken at least one of them from management zones 2, 7, or 8.

The final opportunity for gun hunters took place in 8 of the state's 10 management zones during the end of December. The special holiday antlerless season opened Dec. 17 and ran for 10 days, closing on Dec. 26. This season saw 39,605 hunters take a break from the Christmas fanfare and take to the woods for one last chance to put some venison in the freezer. A good number of those hunters were successful with 4,377 deer being checked during that season. The bag limit remained at 1 antlerless deer. As an added incentive to participate in this season, this deer did not count against the hunters combined season bag limit of six deer. Figure 10 illustrates the average annual harvest for hunters participating in this popular season.





Figure 12: 2010 Archery Harvest by Week



**Elk**

Perhaps no other day sees more internet traffic coming into the Department’s web server than the day that the controlled hunt drawing results are posted. It is on that day that thousands of hopefuls log on with anticipation. For most, the day will be a disappointment. But for a very lucky few, it might be the beginning of a hunting story that they will tell for the rest of their life.

If you are a hunter in Oklahoma (and several other states for that matter) and you are participating in the controlled hunt process, odds are you apply for one of the coveted elk permits. The permits are so difficult to draw that it has been limited to a “once in a lifetime” opportunity. Once you are drawn, you can never be drawn again.

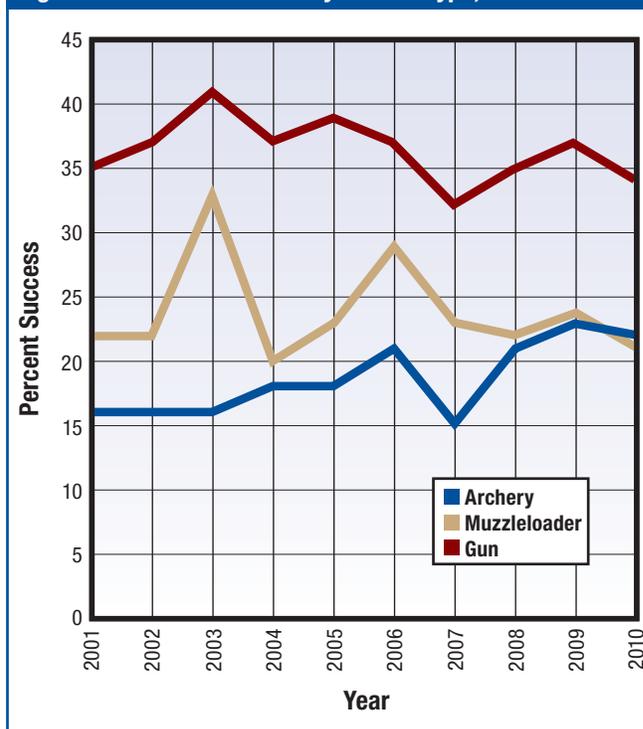
The overwhelming majority of the elk permits issued through the draw process are for access to the Wichita Mountains National Wildlife Refuge located in southwest Oklahoma. This past year 309 permits were issued, a decline from the 324 permits issued in 2009, the result of habitat damage caused by a history making ice storm. Sixty-six “either-sex” and 258 “cow-only” permits were drawn. There were nearly 33,000 applications for those permits. Of the lucky hunters

drawn, 60 of the either-sex permit holders and 212 of the cow-only permit holders attended the hunt. Of the 60 either-sex hunters 54 tagged a bull and with one hunter taking a cow. The cow-only hunters bagged an additional 125 animals for a total Wichita Mountains NWR elk harvest of 180 for 2010. Success rates for cow and either sex hunters was 59 percent and 92 percent respectively.

Two Department Wildlife Management Areas also provided limited elk hunting opportunities. One either sex permit was offered at the Pushmataha WMA and one was drawn for the Cookson WMA. Both permits were filled with hunters taking fine bull elk.

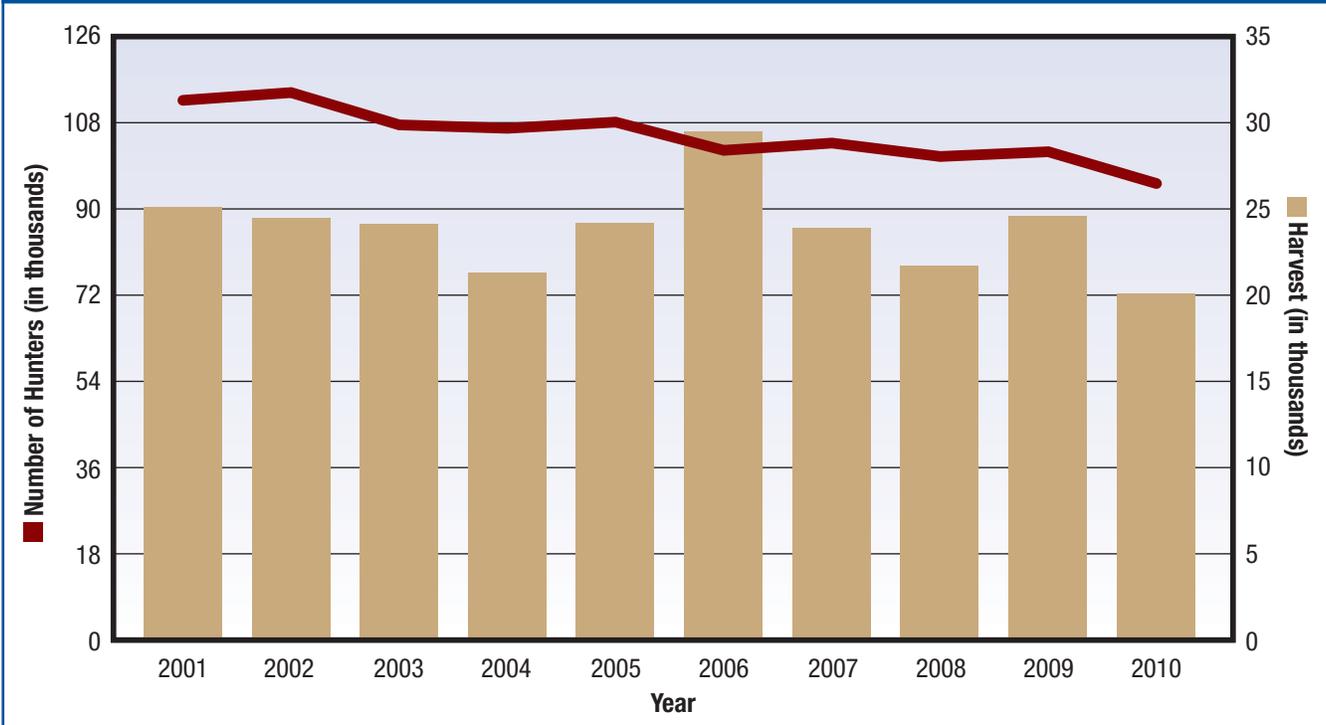
Oklahoma again offered elk hunting

Figure 13: Percent Success by Season Type, 2001-2010



opportunity on private lands in both the southwest and northeast corners of the state. In the southwest, elk hunting was available to persons obtaining written landowner permission in Caddo, Comanche, and Kiowa counties. To better manage these elk, they were divided

**Figure 14: Muzzleloader Season Hunter Numbers and Harvest, 2001-2010**



into two zones with different seasons dates and bag limit restrictions. The Granite Hills/West zone was located west of State Highway 115. The bag limit for this zone was established at 1 elk of either sex. On the opposite side of the highway, hunters were allowed two elk (one of which must have been antlerless) in the Slick Hills/East zone. Including elk taken of the Fort Sill military installation, nine males and five females were taken by archers with an additional 47 males and 49 females being killed by gun hunters. This brought the southwest region total, including the Wichita Mountains Wildlife Refuge harvest, to 290 total elk in 2010.

Northeast Oklahoma also allowed elk hunting opportunities in Adair, Cherokee, Delaware, Mayes, Muskogee, and Sequoyah Counties. The seasons ran concurrent with the established deer seasons and had a one elk bag limit. Archers in this zone tagged one cow elk and gun hunters tagged two bulls.

The combined season elk limit was set at two elk for all elk zones combined. In total 295 elk were taken during the 2010 seasons.

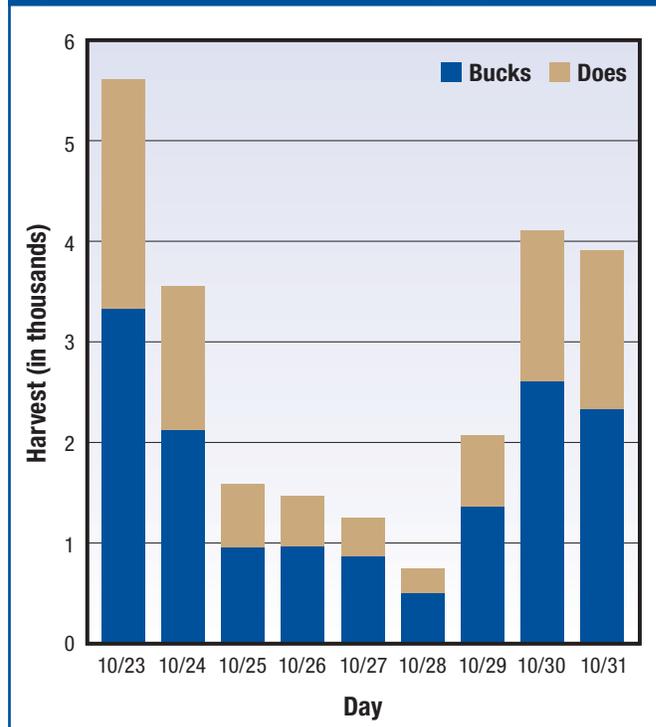
### Pronghorn Antelope

For only the second year, over-the-counter archery only pronghorn permits were available for Cimarron County and that part of Texas County west of Hwy 136. Archers took advantage of this unique hunting opportunity

and managed to increase their harvest over 2009 levels. In total, 49 bucks and 12 does were taken by bow hunters.

While the archery permits were available over-the-counter, gun hunting permits were issued through the Depart-

**Figure 15: 2010 Muzzleloader Harvest by Day\***

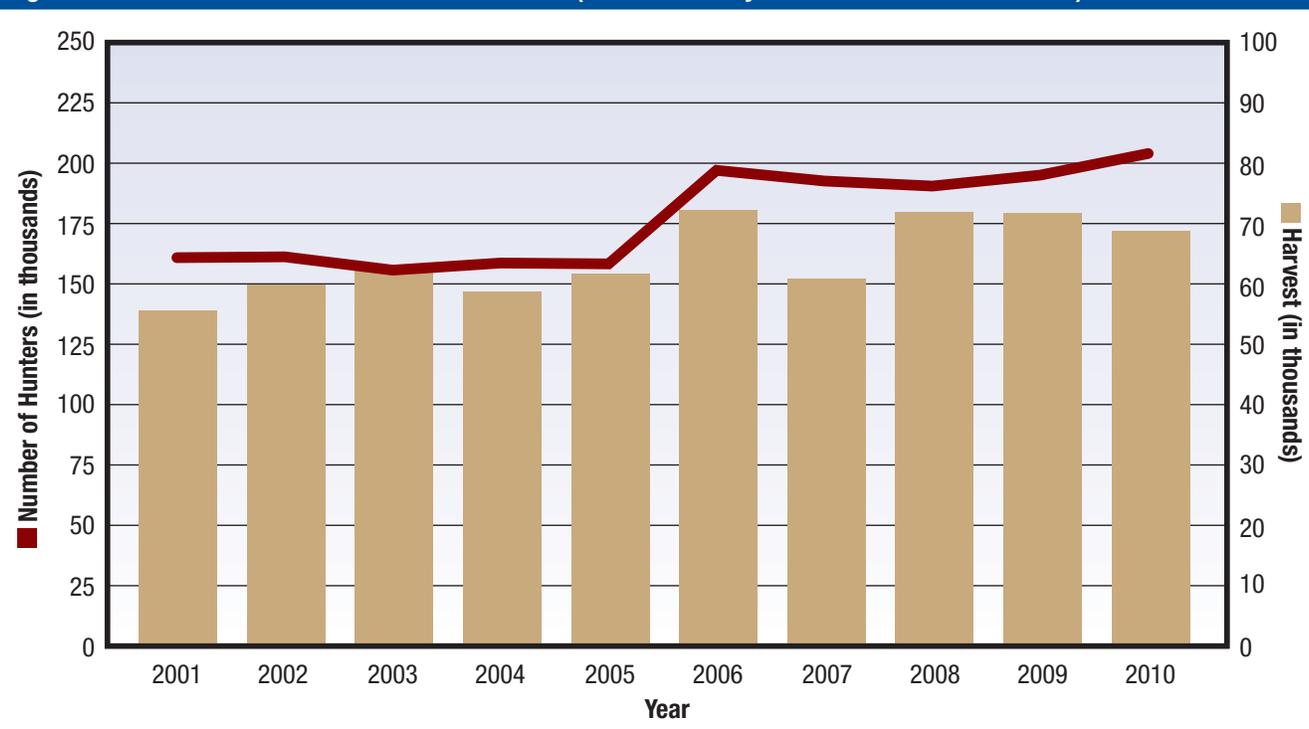


\*Graph depicts deer taken during the 9-day season. Additional deer were taken with ML equipment but are not included in this graph.



BILL NEWMAN

**Figure 16: Gun Season Hunter and Harvest 2001-2010 (Includes Holiday Antlerless and Youth Seasons)**



ment’s controlled hunts process. A total of 8,874 people applied for the 65 either-sex and 200 doe only permits. Of those hunters drawn, 55 collected bucks and 62 took home a doe. An additional number of permits were made available to landowners in the area. In total, 253 pronghorn were checked in Oklahoma in 2010.

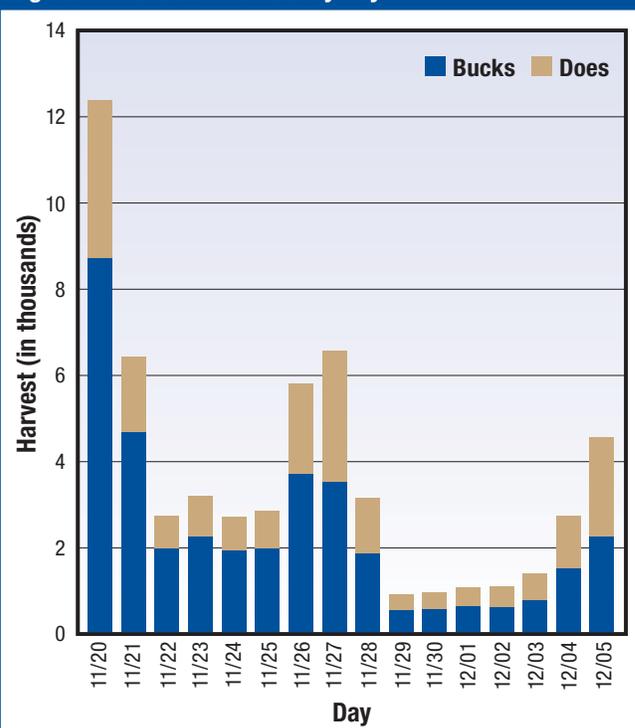
**Data Collection and Analysis**

Each year for the past few decades, natural resources students are hired from selected state universities to collect deer jaws at different check stations across the state. Together with data collected from cooperators enrolled in the Department’s Deer Management Assistance Program (DMAP), and deer harvested on Wildlife Management Areas (WMAs), the student-pulled jaws provide the herd age structure data that is needed for informed management decisions. During the 2010 season, 4,374 individual jaws were removed and analyzed using the tooth wear and eruption method to determine the age of the deer at the time it was harvested. This sample size is over four percent of the total number of deer harvested in 2010 and is 679 (18 percent) more jaws than were aged in 2009. This valuable data, collected at check stations across the state, is summarized in Figures 19 and 20. The ages given in these figures are divided into half-year increments. While this

might seem odd, if you remember that fawns are born in the spring, when hunting season arrives, that deer is six months old.

Yearling bucks (those that are 1.5 years old) are especially good barometers of a herd’s physical condition. Their high vulnerability to harvest usually insures a large sample size, and, more importantly, these young bucks have the burden of growing their first set of antlers when body growth is not complete. This makes them especially sensitive to prevailing range conditions. When yearlings have well-developed antlers with many points and large beam diameters, the herd can be considered healthy. Of the 298 yearling bucks examined in 2010, 54.1 percent had four or more points (Figure 18).

**Figure 17: 2010 Gun Harvest by Day\***



\*Graph depicts only deer taken during the 16-day regular rifle season. Additional deer were taken with firearms but not included in this graphic.

As shown in Figure 19, Oklahoma’s buck age structure continues to improve. The percentage of yearling bucks in this year’s sample was 23 percent. In 2009, that number was 30 (Continues on page 42)

# 2010 Black Bear Season Starts and Ends in One Day

By: Michael Bergin

In an unprecedented and unexpected turn of events, Oklahoma's second black bear archery season opened and closed in one day when hunters reached the quota of 20 bears Oct. 1 in southeast Oklahoma.

A total of 32 black bears were harvested Oct. 1, which is 13 more than were harvested in about a month's time last year. Considering that the inaugural season's quota of 20 bears was never quite met (19 harvested over the course of archery and muzzleloader season), 2010 was no doubt a very successful year for Oklahoma bear hunters.

"The weather was perfect for hunting and sportsmen worked hard leading up to the season, and it culminated in an outstanding day of bear hunting in Oklahoma," said Joe Hemphill, southeast region wildlife supervisor for the Okla-

homa Department of Wildlife Conservation.

"We had a very conservative bear quota, and when we planned the regulations for the season, we took into account the possibility of exceeding the harvest quota slightly," Hemphill said. "The harvest of 32 bears is a great sign that we are doing things right in Oklahoma, since the presence of bears in an environment is considered an indicator of good habitat."

According to Hemphill, biologists have seen two extremes in the two years since bear season was inaugurated in Oklahoma, with only 19 bears harvested in 28 days in 2009 and 32 harvested in just one day in 2010. Weather and environmental conditions also were starkly different during each of the two seasons. The 2009 season opened with thunder and lightning and a plentiful acorn crop, whereas the 2010 opener was marked with mild weather and few acorns to be found. As with hunting seasons on all species, Department personnel review all available data following the season and work to provide optimum hunting opportunities.

Though black bear archery season draws fewer hunters than other species (177 resident bear licenses purchased for the 2010 season), the season includes both hard work and excitement for those who participate. Many hunters spend weeks leading up to the bear season scouting, maintaining bait stations on private lands, and practicing archery. Counties open to black bear hunting during the archery season are Latimer, LeFlore, Pushmataha and McCurtain counties — all in the mountainous region of southeast Oklahoma.

Black bears once ranged across North America, including the entire area of what is now Oklahoma, but by the early 1900s, sightings had become rare. Factors like land use changes, unregulated hunting and habitat fragmentation caused black bear numbers to eventually decline drastically.

In the late 1900s, however, black bears began making a comeback in Oklahoma after the successful reintroduction of black bears in the Ouachita and Ozark Mountains of Arkansas. That initial relocation of about 250 bears from northern Minnesota and Manitoba, Canada, turned into thousands of bears in the mountains of Arkansas, which then expanded into southwest Missouri and eastern Oklahoma.

This successful reestablishment of black bears led to a renewed black bear hunting season in Arkansas in 1980 and Oklahoma in 2009.

Today bears have a growing population in southeast Oklahoma and are an important part of the state's wildlife diversity. Biologists with the Wildlife Department have now collected biological data from bear surveys and research projects as well as 51 bears harvested over the course of two hunting seasons. 🐾



Outdoor Oklahoma editor Nels Rodefeld, Maud, harvested this 300-lb. female black bear last season — the 20th bear checked on opening day of 2010. Cementum indicators from the bear's teeth suggested to biologists that she was 10 years old at the time of harvest and had raised cubs at ages three, five, seven and nine years old.

When biologists remove a tooth from a bear when it is checked in by a hunter, it is sent to a laboratory where scientists can use microscopes to study the cementum layers on the tooth and gain insight into the life of the bear.

According to Dr. David "Chip" Leslie with the Oklahoma Cooperative Fish and Wildlife Unit at Oklahoma State University's Department of Natural Resource Ecology and Management, the teeth of harvested bears can tell the approximate age of the animal and, if female, its estimated reproductive success. Lines of cementum on the tooth are typically closer together during years when cubs are raised, as the female expends additional effort and energy raising cubs during those years.

According to Leslie, if Rodefeld's bear indeed reared cubs every other year as indicated by the tooth study, then it would be considered a very successful reproducer.

# So, Are you Game for a Bear Hunt this Year? By Ryan Carini

Resident bear licenses are sold over the counter for \$101 (\$506 for nonresidents), and anyone with a valid hunting license or exemption can obtain a bear license and go hunting. Only Latimer, LeFlore, Pushmataha and McCurtain counties are open to bear hunting. A full listing of bear hunting season details, including license purchasing deadlines, season quotas, dates and open areas, legal means of harvest, field tagging, checking and more are available on page 28 of the current Oklahoma Hunting Guide, available online at [wildlifedepartment.com](http://wildlifedepartment.com) or anywhere hunting licenses are sold.

## Bear Hunting Tips from Successful Hunters

With only two official black bear hunting seasons under the state's belt, many hunters interested in pursuing this mammal may not know where to start. With this in mind, we talked with two hunters who have filled their black bear tags and got their advice for new bear hunters. Travis Elliot of Poteau harvested

a cinnamon phase black bear on public land in LeFlore County last season, and Jerry Lovell harvested a 433-lb. black bear with his crossbow an hour before sunset on private land in Latimer County. Lovell also took a bear in the inaugural season.

## What to Look For

"I scoped the area out for scat, tracks and claw marks on trees they had been climbing," Elliot said. "I looked for a water source and food source. The area I was hunting was fairly thick, so I knew the cover was there."

Elliot was hunting in a saddle on a ridge. His stand was set up in a flat of white oaks, with a creek down in the valley.

Jerry Lovell had another approach.

"What I look for is an open patch of hardwood, especially white oaks." Berries also grow on his land during the summer, so the bears stay there all year long.

If the ground is wet or sandy, Lovell said, bear tracks can be easily seen and identified. "I've noticed a lot of times when a bear steps over a log or obstacle

he'll step in the same place every time," he said.

In general, black bears are scavengers, eating grasses, roots, berries, insects, fish and other mammals. Their favorite acorns are from white oaks, and they won't pass up an opportunity to eat corn or other food such as remnants left in a trash can. Hunters on private land can take advantage of this, which is what Lovell did.

## Bring the bears to you

"If you have private land, put a bait barrel out and keep plenty of fresh food in it," Lovell said. "Put some game cameras up and you'll see bears coming in."

When looking for a place to set up a bait barrel, Lovell looks for an area through which bears naturally feed, but he doesn't place the feeder right on a trail.

"They can smell a bait barrel from a long way," he said. Common baits include sweets, sardines, and other ingredients with strong scents.

Lovell starts putting food in his barrel at the beginning of August, around two months before the season opens. He refills it about every three days, and as long as the bait is kept fresh and natural foods are not overly plentiful, bears will be reluctant to leave the area. It's not unusual for several bears to share the same range. Last year, two bears came regularly to feed at Lovell's bait barrel.

## The finer details

Black bears can grow to five or six feet long and weigh anywhere from 200 to 600 lbs. They are excellent tree climbers, and will claw and rub up against trunks, sometimes leaving hairs in the bark. Black bear droppings, when firm, are tubular and about one-and-a-half-inch thick.

Between Elliot and Lovell, there are several additional tips for hunting black bear, including wearing cover scent, knowing the wind direction, regularly practicing with your archery equipment, and using game cameras to locate bears along travel routes, ridges, saddles and draws.

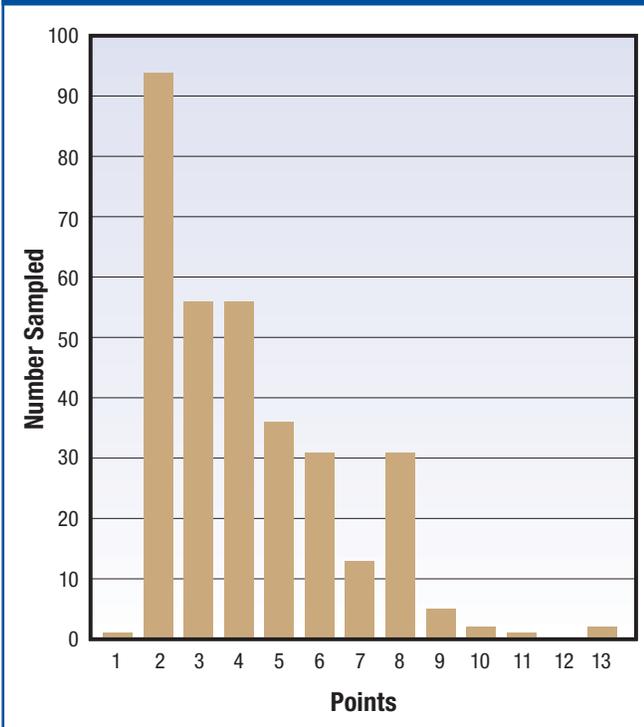
Finally, Lovell encourages hunters with this: "I've spent all my life in the mountains, and one thing people don't understand is that there are more bears out there than they think." 🐻

—Ryan Carini is a former Wildlife Department intern who resides in Catoosa.

2010 Black Bear Harvest Profiles				
	Harvest Location	Sex	Color Phase	Weight
Bear #1	East of Big Cedar (LeFlore Co.)	Male	Black	120 dressed
Bear #2	Honobia Mountain near Tourney Ranch (LeFlore Co.)	Male	Black	205 not dressed
Bear #3	East of Hwy 259 on Talimena Drive (LeFlore Co.)	Male	Black	340 not dressed
Bear #4	South Deadman Road (LeFlore Co.)	Female	Cinnamon	125 dressed
Bear #5	South of Muse (LeFlore Co.)	Male	Black	170 not dressed
Bear #6	LeFlore County	Female	Black	180 not dressed
Bear #7	West end of Horseshoe Mountain (McCurtain Co.)	Male	Black	150 not dressed
Bear #8	Poteau Mountain (Pushmataha Co.)	Female	Black	112 dressed
Bear #9	South of County Line Church (Pushmataha Co.)	Male	Black	160 not dressed
Bear #10	Daisy (Pushmataha Co.)	Male	Black	152 dressed
Bear #11	County Line Church (Pushmataha Co.)	Male	Black	330
Bear #12	East of Whitesboro (LeFlore Co.)	Male	Chocolate	360 not dressed
Bear #13	West end of Blue Mountain (LeFlore Co.)	Male	Black	102 not dressed
Bear #14	Southwest of County Line Church (Pushmataha Co.)	Female	Black	170 not dressed
Bear #15	Buffalo Mountain west of Talihina (Latimer Co.)	Male	Black	350 dressed
Bear #16	Spring Mountain (LeFlore Co.)	Female	Black	230 dressed
Bear #17	Latimer County	Male	Black	460 dressed
Bear #18	Flagpole Tower, Crum Creek (Pushmataha Co.)	Male	Black	296 dressed
Bear #19	South of Muse (LeFlore Co.)	Male	Black	245 not dressed
Bear #20	Honobia Mountain (LeFlore Co.)	Female	Black	300 dressed
Bear #21	Tombstone Mountain (Pushmataha Co.)	Male	Black	144 not dressed
Bear #22	North of Bethel (McCurtain Co.)	Male	Black	280 not dressed
Bear #23	He Mountain (McCurtain Co.)	Male	Black	300 not dressed
Bear #24	West side of turnpike, Daisy (Pushmataha Co.)	Male	Black	196 dressed
Bear #25	Junction Hwy 1 & 2 (Latimer Co.)	Male	Black	180 dressed
Bear #26	South of Blue Mountain (Latimer)	Male	Black	433 not dressed
Bear #27	Five miles west of Honobia (Pushmataha Co.)	Male	Black	222 dressed
Bear #28	Billy Creek (LeFlore Co.)	Male	Black	342 not dressed
Bear #29	Flagpole Tower, Crum Creek (Pushmataha Co.)	Male	Black	194 dressed
Bear #30	Tombstone Mountain (Pushmataha Co.)	Male	Black	370 not dressed
Bear #31	East of Three Sticks (LeFlore Co.)	Male	Black	125 dressed
Bear #32	East of K-Trail (Pushmataha Co.)	Male	Black	125 dressed

All bears harvested in 2010 were listed in good to excellent condition, with light to moderate tooth wear — two signs of good health and habitat.

**Figure 18: Yearling Buck Antler Point Distribution**



(Continued from page 39)

percent. It appears that the Department's past decisions to lower the buck bag limit from three to two, increase the length of the gun season, and liberalize antlerless hunting opportunities are combining with an increased awareness on the part of hunters about the need for balancing ages structures to show substantial dividends in terms of reducing the number of young bucks in the harvest. Hopefully the trend towards older aged bucks in the harvest will continue in future seasons.

Figure 20 demonstrates that Oklahoma is doing a fair job with doe harvest as a large percentage of the harvest is made up of younger does. What will bear watching is the number of does that are in the 6.5+ year category. A larger percentage of older does in the harvest is one of the symptoms of under-harvest of the doe segment of the population. In 2009, seven percent of the does sampled were six-and-a-half years old. In 2010, that segment had increased to nine percent. While one year's increase is not indicative of a looming problem, it will bear watching in future year's analyses.

### Wildlife Management Areas

Department managed lands might account for only three percent of the state's land mass but they were respon-

sible for producing 5.2 percent of the harvest. Amazingly, this figure is exactly the percentage that was recorded for WMA's in the 2009 harvest. A total of 5,675 deer came from WMA's with 46 percent being females. Table 2 presents a harvest summary for each area by season and sex.

### Awards Program Deer

The Oklahoma Department of Wildlife has its own deer recognition program designed to offer official recognition to hunters

fortunate enough to harvest a large-antlered deer from within our borders. The Cy Curtis Awards Program was established in 1975 in honor of the man most responsible for re-establishing white-tailed deer throughout the state. Many Oklahoma hunters are unaware of the dire state our deer herds were in the not so distant past. In the early 1900 the total statewide white-tailed deer population was estimated to be fewer than 500 animals. Cy Curtis was the spearhead for the "trap and transplant" effort that moved deer from well-populated areas to those with suitable habitat, but lacking in deer. His efforts formed the groundwork for the deer hunting that Oklahomans enjoy today.

To qualify for a Cy Curtis Award, the buck must be measured by an Oklahoma Department of Wildlife Conservation employee or an official measurer of the Boone and Crockett or Pope and Young programs. The Boone and Crockett system of measurement is used to judge the antlers. All deer legally harvested within Oklahoma from 1972 to the present are eligible. The minimum score for entry into the typical white-tailed deer category is 135 points and non-typical deer must score at least 150 points. Minimum entry score for a typical mule deer is 155. Non-typical mule deer must score at least 185 points.

At the end of the recording period in June, at total of 219 deer had been added to the Cy Curtis record book. Figure 21 shows the number of entries added to the book each year since the program began in 1972.

The top three new entries for the typical and non-typical white-tailed deer are shown in the tables below.

### Conclusions

In summary, Oklahoma's deer hunters had an excellent year in 2010. In spite of some tough hunting conditions and habitat that was less than optimal in many areas of the state, they were still able to take home the fourth highest deer harvest in state history. Along the way, the largest number of archery hunters ever in Oklahoma managed to bag the most deer ever for that season type. Muzzleloader season was down a significant amount, in large part to decreased hunter participation, but will bear watching in future years. The general rifle season was down slightly in terms of harvest, but showed a record number of participants. The youth and holiday antlerless season continue to be

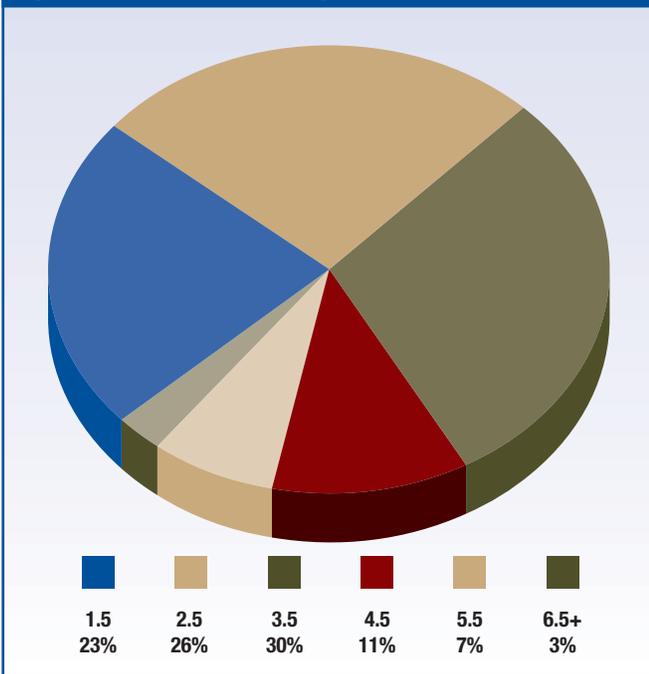
#### Typical Whitetail Deer

Hunter	Net Score	County of Kill	Season	Antler Points
Wade Ward	188 4/8	Rogers	Archery	7x7
Troy Thompson	183 4/8	Beaver	Archery	8x7
Theresa Hendrix	170 6/8	Osage	Gun	7x6

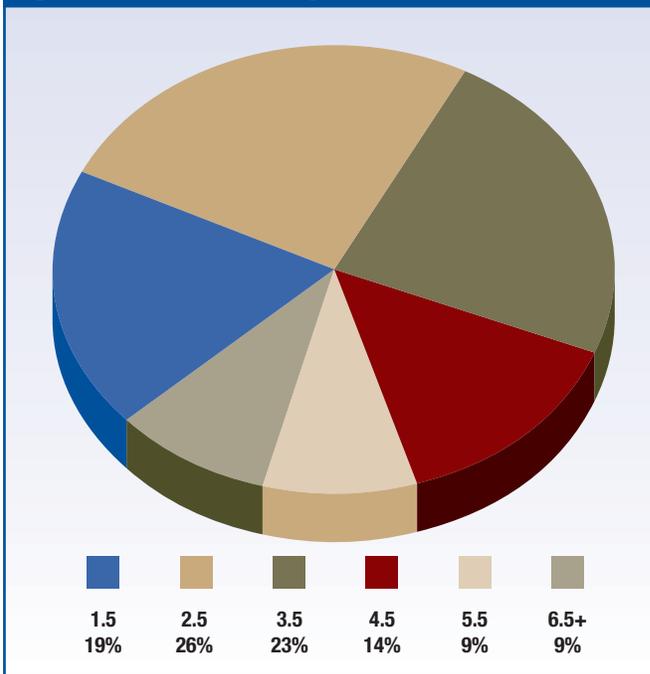
#### Non-typical Whitetail Deer

Hunter	Net Score	County of Kill	Season	Antler Points
Michael Cole	221 2/8	Lincoln	Gun	16x12
Jarrett Orrell	220 2/8	Caddo	Gun	13x13
Kelsey McKay	200 7/8	Coal	Gun	10x9

**Figure 19: 2010 Adult Buck Age Distribution**



**Figure 20: 2010 Adult Doe Age Distribution**



popular and productive for those hunters electing to participate.

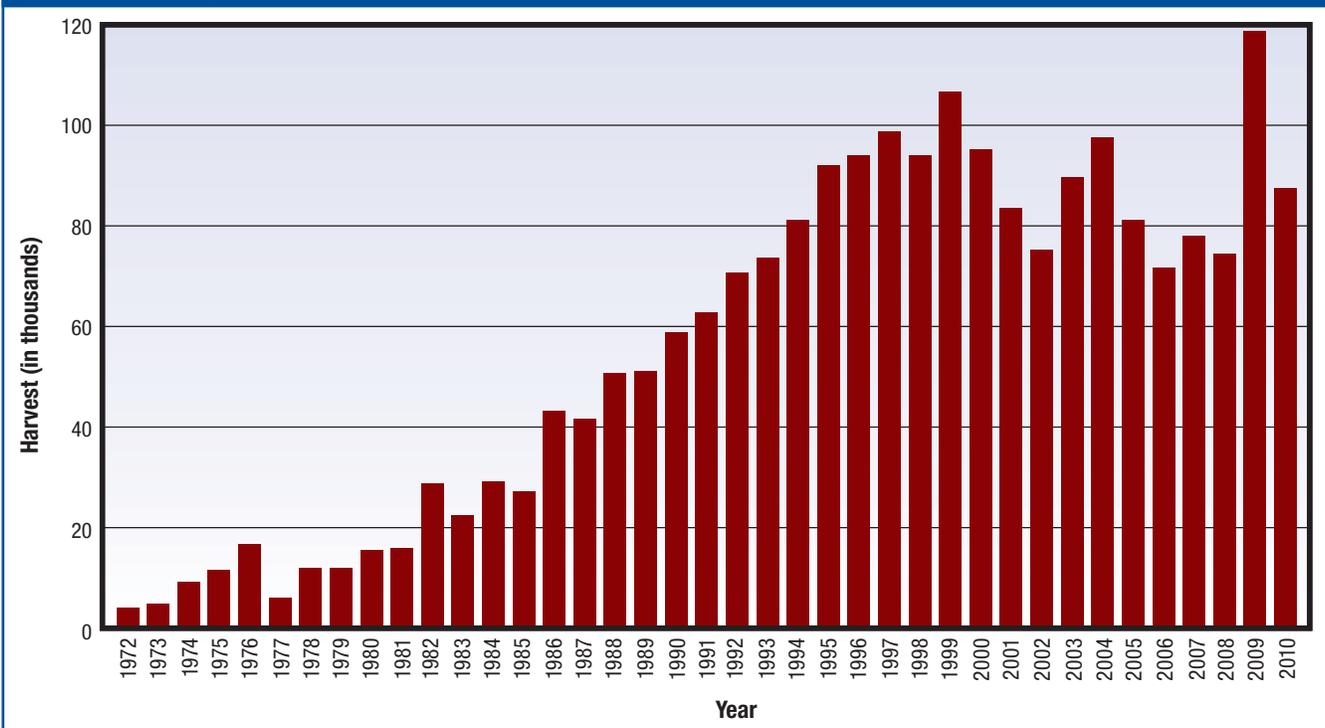
Buck age data shows continued improvements in the age structure of the harvested bucks. Doe harvest comprised 42 percent of the overall deer kill, a number that can be increased in many areas of the state, but nonetheless is acceptable. Significant numbers of deer qualified for the Department's

recognition program. All in all, deer hunting continues to be a safe and enjoyable pursuit for over 200,000 people within our state.

The future of Oklahoma deer hunting continues to look bright. The deer population is in good health. Habitat across much of the state is suffering under an extreme drought, but will recover quickly when the rain returns.

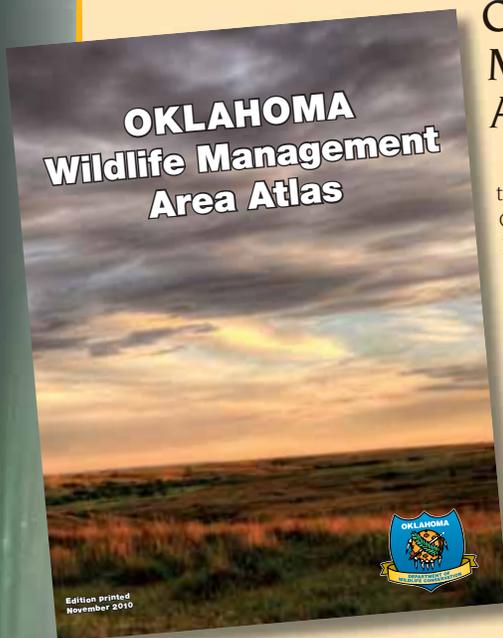
Regulations remain in place maximizing hunter opportunity. Bag limits are some of the most liberal in the region. Additional public hunting areas are being added in several locations. For these reasons and many more, Oklahoma hunters continue to have ample reasons to be proud of our state's progress and to celebrate the good things yet to come. 🦌

**Cy Curtis Entries by Year, 1972-2010**



# The Outdoor Store

## FEATURED PRODUCT



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When you purchase an atlas, you also receive a one-year subscription to *Outdoor Oklahoma* magazine. If you already receive the magazine, you can donate the subscription to a friend free of charge, or the Wildlife Department can donate it to a school or library. Item No. OS-13 — \$25



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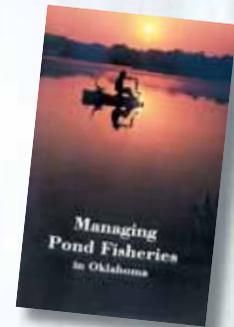


### Cy Curtis Awards Program Deer Record Book

Is your name in the record book? Want to find out where the big ones have been hiding? This up-to-date book contains the hall of fame of trophy deer harvested in Oklahoma since 1972. Item OS-12 — \$10

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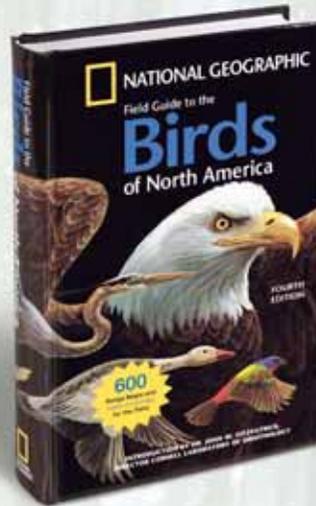
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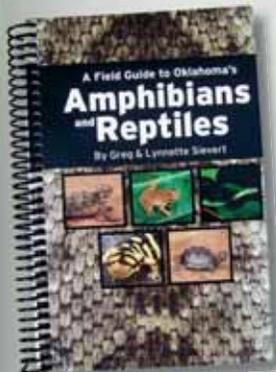
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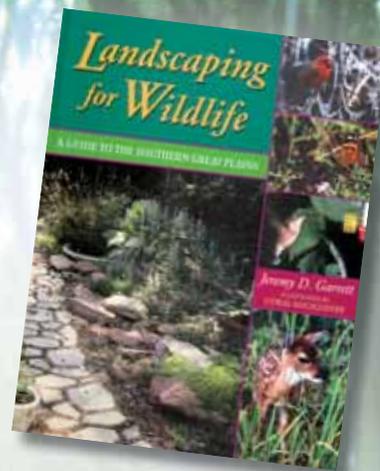


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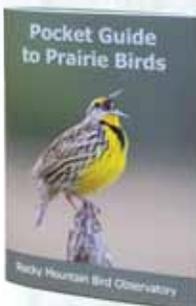
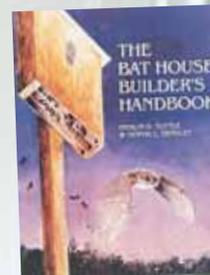
### Landscaping for Wildlife

Landscaping for Wildlife: A Guide to the Southern Great Plains brings your property to life. Find everything you need to know about attracting birds, butterflies, turtles and other wildlife in this full-color, 224-page landscaping guidebook. You'll find useful instructions for meeting water needs, feeding preferences and nesting requirements for wildlife found in the Southern Great Plains, with specific emphasis on Oklahoma species. Enjoy the detailed diagrams and plant listings that accompany book photographs and illustrations in addition to woodworking diagrams and lists of plant and seed companies. This book was compiled with the most up-to-date "wildscaping" information available. Your purchase of this book includes a one-year subscription to *Outdoor Oklahoma* magazine. Item WD-1 — \$25



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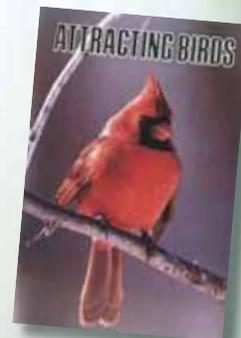


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# Watchable Wildlife

## THE BROWN RECLUSE

BY KELLY ADAMS

They are found throughout the south central and Midwestern United States, but more specifically, they can probably be found in your garage or even your living room in all but the most western reaches of the Panhandle. We've all seen them, and they often spook us. We're talking about none other than the brown recluse.

The brown recluse spider (*Loxosceles reclusa*) belongs to the Order Aranea (spiders) and the Family Sicarriidae (six eyed spiders), but you may know them as simply “fiddlebacks” because of their most distinctive feature — the dark violin-shaped mark located on its back, with the neck of the violin pointing toward the abdomen of the spider.

This characteristic is not a reliable diagnostic feature, however. This marking is consistently found in adult brown recluses, and is sometimes less apparent in younger spiders. When the legs are

*You may know them as simply “fiddlebacks” because of their most distinctive feature — the dark violin-shaped mark located on its back, with the neck of the violin pointing toward the abdomen of the spider.*

extended, adults are usually about the size of a quarter although size can be quite variable. Coloration ranges from tan to dark brown. They lack any stripes, bands or mottling and the legs are long and thin. A more definitive diagnostic feature is the eye pattern. Most spiders have eight eyes but the brown recluse spider has a semicircular arrangement of six eyes in three groups of two eyes called a dyad. This is characteristic of all species in the family Sicarriidae.

In nature, brown recluse spiders can be found under rocks, logs, woodpiles and debris. As mentioned, they are commonly found in houses and are considered synanthropic, meaning their populations benefit when living among humans. Artificial lights around houses attract their main dietary source — insects — which in turn attracts them.

Brown recluses are able to withstand extreme temperatures and have become well adapted to living indoors with humans. During the day, they prefer to be secluded in dark areas away from human activity. They often line their daytime retreats with irregular web-

bing, which is used to form their egg sacs. However, like most spiders, these insectivorous spiders do not form webs to capture their prey. Webs strung along walls, ceilings, outdoor vegetation, and in other exposed areas are nearly always associated with other types of spiders. Instead, these spiders are scavengers. At night they come out to search for food. Usually they eat dead insects but sometimes they will inject their hemolytic venom into live prey.

The brown recluse will typically only bite a human if it is threatened or touched. Their bite can be mild to serious in humans, and their hemolytic venom is toxic. The cells surrounding the puncture die as a result of the toxin, producing a black gangrenous spot. If untreated, the skin begins to rot and peel away from the area around the wound, exposing the underlying tissues.

Before brown recluses mate, there is usually a courtship ritual. Males use chemotactic senses to find a female. Males mostly rely on the fine sensory hairs that cover the body and appendages to locate a female. But along with the sense of touch, males also have the ability to distinguish various chemical substances. Through this combined chemotactic sense, males find their mate by a scent that she leaves on the threads of her web. Males must announce their presence as a potential mate or the female may mistake them as potential prey. Once the female submits to the male's advances, mating takes place. The female later lays hundreds of fertilized eggs in a silk cocoon that she attaches to a web or plant. She may even carry it with her. In two weeks, the eggs hatch and the young stay in the cocoon for a few weeks.

Arachnophobia is a fear of spiders and is one the most common phobias. Brown recluses have an undeserved reputation of being aggressive spiders. They are not always aggressive and their bite is not always deadly. Brown recluse spiders help control populations of destructive and invasive insects. So next time your tempted to wish the world was free of spiders, remember to look at this spider as an important part of the environment. 🕸

—Kelly Adams is an information technician for the Wildlife Department





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