

Oklahoma Department of Wildlife Conservation
Hunter Education Manual
Set Your Sights on Safety



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Panoramas



Richard Hatcher

Director - Oklahoma Department of Wildlife Conservation

There has never been a better time to be a hunter in Oklahoma. Thanks to wildlife management efforts, deer and turkey numbers are at historically high numbers. Also, there are more opportunities than ever for sportsmen and women to get into the field. Additionally, hunters are safer and more ethical than ever thanks to hunter education.

The Oklahoma Department of Wildlife Conservation is a constitutional agency. It was created based on the user-pay/user-benefit principle where hunter and angler license fees fund the operation of the Department. The Department's mission is to manage Oklahoma's wildlife resources and habitat to provide scientific, educational, aesthetic, economic and recreational benefits for present and future generations of hunters, anglers and others who appreciate wildlife.

During the Oklahoma Department of Wildlife Conservation's first 70 years efforts were focused on bringing back native wildlife populations after decades of uncontrolled market hunting. Methods included setting bag limits, establishing season dates, reintroduction of native species and even introduction of a few game species. Those efforts have been incredibly successful.

In that time, new challenges and opportunities emerged. In order to improve the safety and ethics of hunters, the Department began offering hunter education courses in 1965. It became mandatory for new hunters in 1987. Since then, more than half a million Oklahoma hunters have graduated from a hunter education class.

Just like early wildlife managers, the ODWC still faces challenges and opportunities today. These range from maintaining hunting opportunities for antelope in the

Panhandle and creating new opportunities for hunting black bear in southeastern Oklahoma.

Other challenges stem from the habits of people and the trends of society. Families are met with more recreational choices than ever before whether or not they are outdoor related pursuits. The Department has risen to meet these challenges by improving the hunter education program. This includes offering home study hunter education classes that require less classroom time while maintaining a quality educational experience. The Department has also adjusted the class schedule to better fit new hunters' busy schedules. Another step introduced the apprentice-designated license that allows new hunters to learn in the field from a mentor on an actual hunting trip before attending a hunter education class.

And what better way for hunter education graduates to put their new skills to work than by going hunting? The Department manages more than 1.3 million acres of public land that is set aside for hunting and outdoor recreation. Combined, this land provides hunters with excellent opportunities for waterfowl, deer, turkey, quail, rabbit, squirrel and black bear.

What will the next 10, 20 or 100 years bring for hunters and the Wildlife Department? It will certainly bring more opportunities and changes in wildlife management techniques, as well as societal shifts that will affect both groups. One thing is certain, the Wildlife Department, with the help of hunters and other wildlife enthusiasts, will adapt when needed, meet all challenges head on and take advantage of every opportunity.



Robert Fleenor

Law Enforcement Chief

I have had the privilege of working with thousands of new hunters during my career with the Wildlife Department. Whether teaching them the skills they need to be a safe and ethical hunter in a hunter education course or meeting them in the field while they are hunting, they are almost always eager to learn more.

Our main goal at a hunter education class is to give students the knowledge they need to be safe and ethical hunters. Before you leave this class with your hunter education card, you will have to prove to us that you have mastered that knowledge. And even then, after you have proven to us that you know how to be a safe hunter, there is no way to test whether or not you will apply those skills when you are in the woods. Since we can't be with you while you're in the field, you will be the person who has to make sure you are being safe and ethical.

Every time you go hunting, there are many decisions to make, such as where to hunt, whether to bring an extra jacket, etc. Those are the easy decisions. The really important decisions are those that make you a safe and ethical hunter. Are your hunting companions safe and ethical? Are you going to cut corners on being safe? Are you going to unload your firearm before you cross a fence? Are you going to break a game law because you don't think it will matter this one time?

Staying safe, legal and ethical is up to you. It's your choice. Make the right one!



Alan Peoples

Wildlife Division Chief

Almost every family has a sacred memento that has been passed down through several generations. In some families it's a china set, in other families it's a gun. In my family, it's a love of hunting. My grandfather passed it to my dad, my dad passed it to me, and I've done my best to pass it on to my son and daughter. Hopefully, they'll pass it on to their sons and daughters.

Taking my daughter on hunting trips has not turned her into a hunter; she is just not wired that way, kind of like her mom. They do however, absolutely love and cherish marinated, bacon-wrapped, jalapeño-filled, deer back strap cooked on the grill or a tasty meal of fried quail with biscuits and gravy. With my son, however, it's a totally different story. Ever since he was a little bitty guy, he has lived and breathed hunting and I'm confident that he will pass the gift on to my grandchildren. Even though my daughter hasn't taken to hunting, I'm sure that she will raise her children in a way that hunting trips with grandpa are something that they look forward to.

I encourage you to pass the gift of hunting on to your children or grandchildren. If you don't have children, there are many young people out there who would love for you to take them hunting. Youth hunting opportunities are better in Oklahoma than they've ever been. License prices are low, there are special youth seasons for most game animals and wild game is plentiful, there has never been a better time to be a new hunter. Take someone hunting this year. You might find that the gift you give yourself is even better than the gift you give them.

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Welcome to Hunter Education

OBJECTIVE 1

Welcome to Oklahoma's Hunter Education program. This training program provides both beginning and veteran hunters an understanding of the responsibilities involved in the sport of hunting. It will help develop an understanding of sound safety practices, serve as a foundation for responsible and ethical decision making, and start hunters on the path to fully experience all aspects of the hunting tradition and pass this heritage to the next generation.

Hunter education is important because it improves hunter behavior and reduces hunting-related injuries. *Over the past 30 years, hunting related accidents and fatalities have declined by more than 70 percent in Oklahoma.* Mandatory hunter education courses have not only reduced accidents within Oklahoma, but also in every state and Canadian province with similar programs.

Hunter education is not just a firearms safety course. It provides sound guidelines for becoming responsible, ethical hunters and provides a comprehensive guide to Oklahoma wildlife. It also helps increase awareness of the importance of wildlife conservation and management efforts in Oklahoma. And finally, hunter education is a method of protecting the future of hunting in Oklahoma.

The history of wildlife conservation and management in Oklahoma is rich with commitment to the land and the wildlife that live on it. With management techniques that help conserve valuable wildlife and habitat, and with the help of both hunters and the non-hunting public, the future of Oklahoma hunting is bright. It is up to you to be a safe, legal

and responsible hunter and thereby help ensure Oklahoma's hunting heritage.

Hunter education covers a variety of topics including hunter responsibility, wildlife conservation and management, firearm safety, wildlife identification, archery, muzzleloading and turkey hunting.

Words to Know

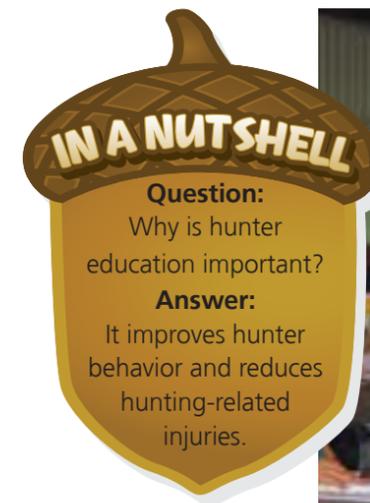
Responsible – Being fully accountable for your actions.

Ethical Behavior – Acting in a manner that is respectful of people, land and wildlife.

Rights – Benefits you legally have, or actions you can legally take.

Privileges – Benefits that can be taken away.

Trespassing – Hunting or otherwise intruding on private and some public property without permission.



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1 Introduction

Oklahoma Hunter Education

History of the Oklahoma Department of Wildlife Conservation

OBJECTIVE 2

Oklahoma's relationship with wildlife has gone through many changes throughout the years, from the early days of unregulated market hunting to the beginning of conservation and continuing with a string of conservation success stories.



- 1907 – Oklahoma statehood established.
- 1909 – Wildlife Department created. First game ranger appointed.
- 1933 – First deer season.
- 1945 – *Oklahoma Game and Fish News (Outdoor Oklahoma)* began publication.
- 1954 – First statewide deer gun season (5 days); 1,487 bucks harvested.
- 1955 – First gun safety program initiated in Oklahoma by National Rifle Association.
- 1956 – A vote of the people of Oklahoma makes the Wildlife Department constitutionally independent.
- 1962 – First elk hunt results in 42 harvested. First antlerless deer season.
- 1964 – First spring turkey season. Trout stocking program started.
- 1966 – First antelope season. Department moved into a new building.
- 1969 – First lifetime combination license sold for \$150.
- 1976 – *Outdoor Oklahoma* television show began.
- 1979 – Operation Game Thief established.
- 1990 – Statewide deer population estimated at 250,000, total harvest 44,070.
- 1996 – First watchable wildlife area established at Byron Hatchery.
- 1998 – Hunter education offered as home study.
- 2003 – Hunting and fishing licenses first offered online.
- 2004 – Archery in the Schools program started. Statewide deer population estimated at 475,000, total harvest 94,689.
- 2005 – First Wildlife Expo.
- 2008 – Wildlife Dept. adds 6,832 acres of public hunting land with the addition of Cimarron Bluff and Cimarron Hills wildlife management areas.
- 2009 – First bear season.
- 2010 – Wildlife Dept. adds 5,952 acres of public hunting land to Beaver River Wildlife Management Area.
- 2012 – Youth deer gun season expanded to allow hunters to harvest two antlerless deer or one antlered and one non-antlered. Unfilled youth deer gun licenses can be filled during the regular deer season.

2 Hunter Responsibility

Oklahoma Hunter Education

What is a responsible hunter?

OBJECTIVE 1

A responsible hunter is fully accountable for their actions.

Enjoying the Oklahoma outdoors is one of the great pleasures in life, but along with that comes the duty to protect and conserve our country's wild lands and the animals that inhabit them.

A responsible hunter:

- Always thinks of safety first.
- Follows laws and regulations and insists that his or her companions do as well.
- Values the land and treats it with respect.

- Ensures the safety of themselves and their companions by (1) wearing hunter orange when required; (2) adhering to hunting seasons and hours; and (3) clearly identifying the target before taking the shot.
- Develops a personal code of ethics and follows it unfailingly.
- Protects wildlife by supporting conservation efforts as well as following all regulations pertaining to limits and hunting practices.
- Respects others by displaying kind and courteous behavior to other hunters, landowners and the general public.
- Displays restraint and does not abuse privileges.
- Takes full responsibility for his or her actions, including mistakes, and does whatever necessary to correct those mistakes.

Be Safe, Be Legal and Be Responsible!

One of the main reasons some people oppose hunting is because of bad behavior of some hunters. Irresponsible hunters can quickly damage or erode public support. Harvesting an animal is a serious action, and how the public views that behavior can influence the future of hunting in Oklahoma.

IN A NUTSHELL

Question:

What is one of the main reasons some people oppose hunting?

Answer:

The bad behavior of some hunters.

Question:

What is a responsible hunter fully accountable for?

Answer:

His or her actions.

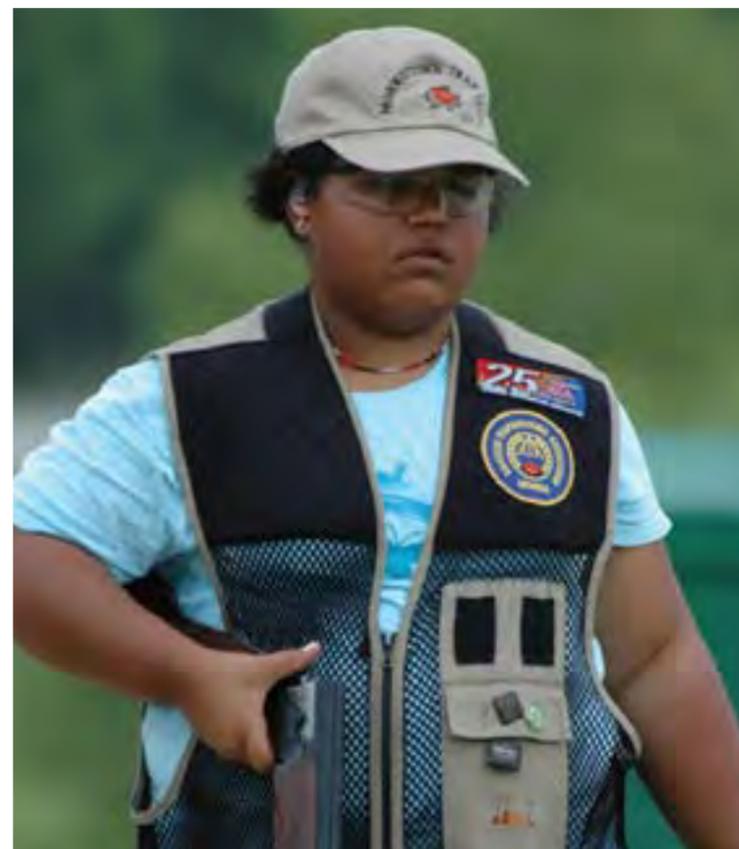


Photo courtesy of National Shooting Sports Foundation

2 Hunter Responsibility

Oklahoma Hunter Education

Do your part: Always be fair, ethical and responsible in all your actions!

In Oklahoma and the United States, most of the land where wildlife can be found is privately owned. Therefore, hunters should always act as guests on other people's property. There are certain "good neighbor" behaviors you should practice:

- **Always get permission** before going on private property. Trespassing is illegal and unethical.
- **Leave the land exactly the way you found it.** Careless hunters who leave trash around campsites, destroy vegetation when putting up deer stands, tear down fences, shoot signs, leave gates open and drive ATV's in fragile environments damage the reputation of all hunters.
- **Get to know the landowner.** Always thank the landowner for the use of his or her property for hunting. Offer some of the game meat when you hunt or offer to do some work for them.
- **Know the layout and boundaries of the area** in order to protect property and lives and avoid trespassing.
- **Do not poach.** Poaching is taking game illegally and is punishable by fines and the loss of your hunting license, vehicle and hunting gear.
- **Report poaching.** Call Operation Game Thief at 1-800-522-8039, or call your local game warden. Game warden phone numbers can be found in the hunting, fishing and waterfowl guides or online at wildlifedepartment.com.



Ben Davis



2 Hunter Responsibility

Oklahoma Hunter Education



Kelly Murrah

Responsible Hunters DO NOT

POACH – Taking game illegally and is punishable by fines and the loss of your hunting license, vehicle and hunting gear.

TRESPASS – It's illegal to go on private and some public property without permission.

BECOME GREEDY – Taking more game than the legal limit or pushing to achieve a full limit by using unsafe actions.

NEGLECT SAFETY – Safety is always the most important thing you should think about while hunting.

Hunter Pride

Hunters have many things on which to pride themselves. They have been instrumental in improving wildlife habitat, relocating species and even bringing species back from the edge of extinction. It is a long and rich heritage that brings rewards in a variety of forms – not the least of which is passing the sport on to the next generation.

Rights

Rights cannot be taken away from you except under extreme conditions. Examples of rights are the right to vote and the right to free speech.

Privileges

Privileges can be taken away if you fail to follow the conditions of a privilege. Examples of privileges include obtaining a driver's license, membership

2 Hunter Responsibility

Oklahoma Hunter Education

in a club, getting your hunting license and hunter education certificate. Hunting should always be treated as a privilege. It can be taken away from you if you abuse the privilege with poor behavior.

Developing a Personal Code of Hunting Ethics

OBJECTIVE 2

Responsible hunters develop a personal hunting code of ethics that governs the way they hunt. It is the way they act when the time comes to make a hunting decision. Responsible hunters follow their personal code of hunting ethics.

What is your personal code of hunting ethics?

INTERSTATE WILDLIFE VIOLATOR COMPACT



Oklahoma is a member of the Interstate Wildlife Violator Compact.

Oklahoma is a member of the Interstate Wildlife Violator Compact. Oklahoma is one of 38 states in the Interstate Wildlife Violator Compact. Violations in any member state can result in the loss of hunting or fishing privileges in all the states. Read more at wildlifedepartment.com/laws_regs/violator_compact.htm



Ben Davis

Example: Personal Code of Hunting Ethics

I will respect all wildlife and the land where I hunt. When I hunt, I will do so responsibly.

I will consider myself an invited guest of the landowner, seeking their permission, and conducting myself so that I may be welcome in the future.

I will obey the rules of safe gun handling and will courteously but firmly insist that others who hunt with me do the same.

I will obey all game laws and regulations, and will insist that my companions do likewise.

I will do my best to acquire marksmanship and hunting skills.

I will support conservation efforts that can assure good hunting for future generations of Americans.

I will pass along to younger hunters the attitudes and skills essential to a true outdoor sportsman.

2 Hunter Responsibility

Oklahoma Hunter Education

The Progression of a Hunter

OBJECTIVE 3

As hunters age and gain experience they find satisfaction in different aspects of the hunt. For beginning hunters, it's often getting a lot of shooting in or reaching their bag limits.

As they continue hunting, they will likely become interested in special methods of taking game such as bowhunting or muzzleloading. They may even become trophy hunters, interested in taking the largest tom or buck possible while passing up smaller animals.

Most hunters reach the point where their main interest is passing on the hunting tradition and spending time in the field with friends and family.



Lance Meek

2 Hunter Responsibility

Oklahoma Hunter Education

Preparing for a Successful Hunt

OBJECTIVE 4

A successful hunt is not dependent upon achieving your limit or even bagging a trophy animal. A successful hunt is much more than that. It takes preparation; not just physically but mentally as well. Successful hunters prepare in advance. They:

- Plan the hunt in detail.
- Learn the area of the hunt by scouting in advance.
- Use wildlife identification guides to learn the habitat, food choices and behavior of the wildlife they are hunting.
- Maintain firearms and hunting equipment in good condition and use the appropriate ammunition or accessories for the game they are hunting.
- Practice shooting with their firearm or bow often; not just the day before the season opens.
- Get in shape physically before they go hunting.
- Become familiar with all of the laws that govern the area they will hunt.
- Acquire the required licenses.

Wise hunters improve public opinion of hunters and protect the future of hunting by being:

- Courteous
- Thoughtful
- Respectful
- Responsible



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Jerry Hand

3 Wildlife Conservation & Management

Managing Resources

OBJECTIVE 1

The resources Oklahoma wildlife depend upon are renewable. That means important and critical elements such as food, water and shelter are replenished naturally by the environment. These resources are not infinite. They will not support an unlimited number of animals, especially when man is competing for the same resources. This is why conservation and management are so important. They are necessary for the continued survival of wildlife. Good wildlife management benefits wildlife and the people of Oklahoma.

Wildlife belongs to the people of Oklahoma. Conservation requires wise use of wildlife resources.

Habitat

Most of the land in Oklahoma where wildlife can be found is privately owned. People value wildlife not only as part of their quality of life, but for the contribution it makes to Oklahoma tourism, recreation, hunting and fishing. In order for a species to thrive, it must have good habitat available. Habitat consists of food, water, cover, space and arrangement to support wildlife. If there is not enough food, water or cover in an environment for a species, or if the quality of the habitat is poor, then the numbers of that animal will decrease. The most important thing we can do to ensure that we have wildlife in the future is to increase and to manage wildlife habitat.



Question:

Who owns the wildlife in the state of Oklahoma?

Answer:

The people of Oklahoma.

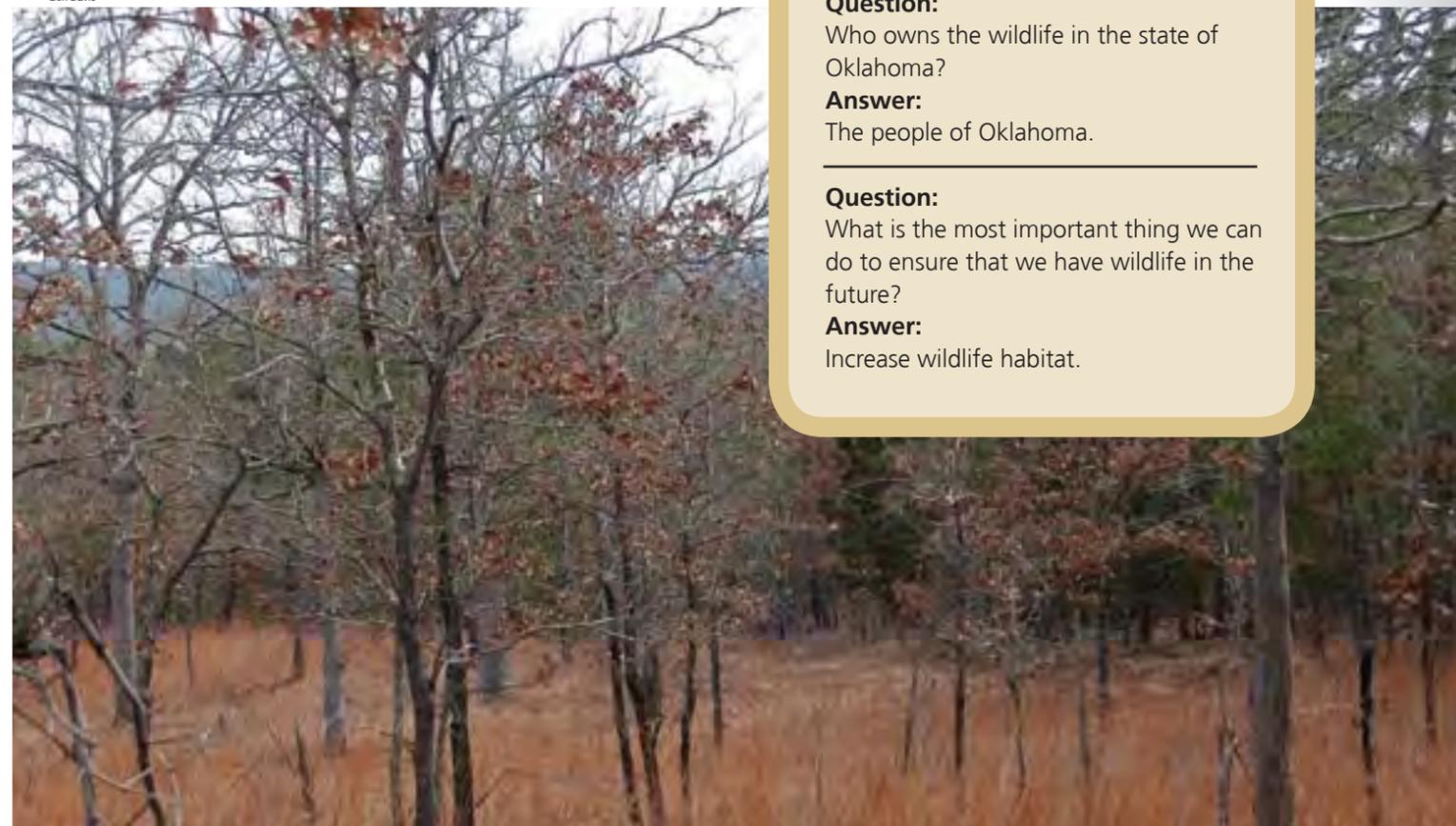
Question:

What is the most important thing we can do to ensure that we have wildlife in the future?

Answer:

Increase wildlife habitat.

Ben Davis



Five Important Parts of a Sound Habitat

OBJECTIVE 2

Food

All wildlife rely on either plants or other animals for food. Without proper nutrition, animals will starve and die, get diseases, or fail to reproduce. The availability of food can vary depending on changes in the weather or seasons. It is also changed by man's actions including livestock stocking rates, planting crops, new housing developments or other activities.

Water

Water is necessary for everything to live. A species will quickly die without water. The amount of rainfall can affect the quality of the vegetation and therefore the population numbers of a species.

Cover

Shelter is important for protecting and providing refuge for animals to reproduce, sleep, eat and hide from predators. Depending on the animal, shelter can be in the form of trees, bushes, rocks, ground cover, burrows and other features of the environment.

Space

Without enough space, wildlife cannot find enough food and shelter causing them to fail to reproduce. The number of animals drops and even the animal's behavior can be changed. This results in less wildlife.

Words to Know

Habitat – Consists of cover, food, water, space and arrangement.

Conservation – Wise use and protection of natural resources.

Management Tool – Tools, such as prescribed fire or planting food plots, that Wildlife Department employees use to manage wildlife resources.

Species – Animals or plants that have the same common characteristics and can interbreed.

Carrying Capacity – The amount of wildlife each habitat can support throughout the year.

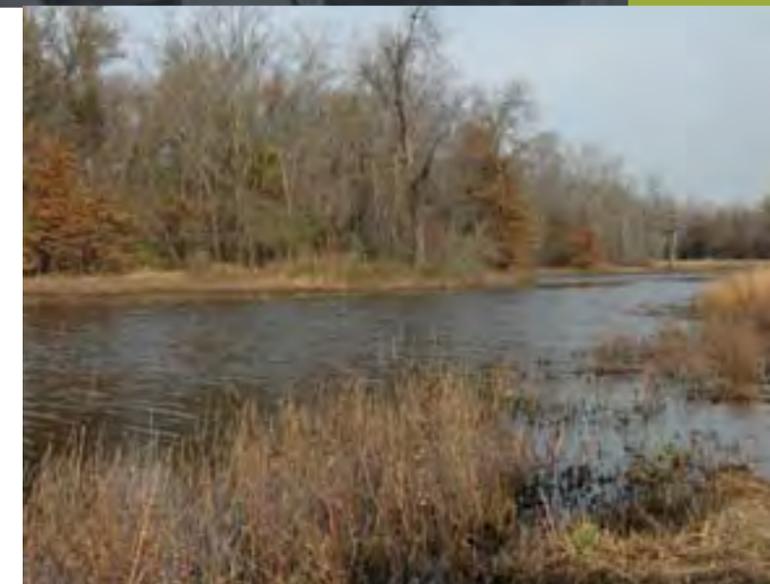
Pittman-Robertson Act – A federal tax on firearms and ammunition that helps fund conservation. This is administered through the Wildlife & Sport Fish Restoration Program.

Arrangement

The distance and obstacles between the four other parts of habitat is arrangement. Some animals may need to have all of these parts closer to each other than other animals. The white-footed mouse only travels half an acre to find all of these parts, while a white tail deer can travel a square mile or more to find these parts. An animal's home range needs to have several sources of each part of habitat. If one factor is too far away for an animal to safely travel, or if there is an obstacle, like a highway, the animal may abandon that habitat for a more suitable area.

Factors that limit the amount of wildlife:

Disease/parasites	Starvation
Predators	Pollution
Accidents	Water
Conservation	Food



Micah Holmes

Carrying Capacity

OBJECTIVE 3

Carrying capacity is the amount of wildlife a habitat can support throughout the year. If there is enough food, water, space and cover for all members of the population to survive, reproduce and do well then the number of animals is below or at the carrying capacity of the environment.

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However, if animals are starving, do not reproduce or are generally diseased, then the number is above the carrying capacity of the environment. It's all a matter of balance!

Species reproduce annually or more often, replenishing their numbers or population. If a species reproduces so much that the number of animals is greater than the ability of the land to supply water, food, space and cover, the result can be disease and death. When the number of wildlife is greater than the carrying capacity, then wildlife begin to compete for food, water, space and cover. This can damage the habitat and drops the carrying capacity even farther. This is where hunting and trapping can help maintain nature's balance.

The North American Model of Wildlife Conservation

OBJECTIVE 4

Oklahoma and all other 49 states manage wildlife based on The North American Model of Wildlife Conservation. There are two main principles, fish and wildlife belong to the people of North America and they should be managed in a way that their populations can be maintained forever. It is the world's most successful method, no other continent has as many of its native wildlife species still living. While other countries struggle to conserve the few species they have left, we enjoy great abundance and diversity of native wildlife. This is mainly because of the North American Model of Wildlife Conservation, which strives to sustain wildlife species and habitats through sound science and active management.

Hunting and angling make the North American Model of Wildlife Conservation work. These activities have generated more than \$10 billion toward wildlife

conservation since 1937. The conservation efforts that hunters and anglers fund also benefits non-hunted species. Protecting wetlands for ducks, forests for deer and grasslands for pronghorn have saved countless non-hunted species from peril. Even people who don't hunt or fish need to understand the conservation role sportsmen play.

Hunters and anglers actively support wildlife conservation by buying licenses and paying taxes on hunting and fishing equipment. Why are hunters and anglers so willing to support conservation through their pocketbooks? Because people value and are willing to pay for what they can use. In many states there aren't as many hunting and fishing licenses sold as there were 20 years ago. In Oklahoma and a few other states, the number of hunting and fishing licenses sold has remained stable. But given the rate of population growth, the percentage of people participating in hunting and fishing is actually decreasing. There is no alternative funding system in place to replace the potential lost funds for conservation. If hunting ends, funding for wildlife conservation is in peril.

Wildlife Management Tools

OBJECTIVE 5

The Oklahoma Department of Wildlife Conservation is the state agency responsible for managing wildlife in Oklahoma.

The first tool Oklahoma wildlife managers use to keep wildlife at the carrying capacity of the land or environment is a sound management plan. Without proper wildlife management plans, many species and/or populations of wildlife in Oklahoma would be in danger. These plans change when the environment changes.



Question:

What does good wildlife management benefit?

Answer:

Most of the plants and animals in a habitat – not just one species.



What Is Good Wildlife Management?

Good wildlife management:

- Is based on sound biological information.
- Includes the management of human activities that affect wildlife. Managing people is possibly one of the most important tools in a management plan.
- Has wildlife numbers that are just right – not too many and not too few. The number of animals are balanced with the resources of the habitat (food, water, shelter, space and arrangement).

Managing the way people interact with wildlife is one of the most important tools wildlife managers use. When wildlife populations are high, hunters often have increased opportunities to harvest game. When populations are low or the environment has been damaged, then hunters harvest less. Research and harvest surveys are also used as Wildlife Management tools. Managers keep data on numbers of species and the quality of the habitat each year in order to develop the best plans. Studying wildlife and researching such things as where wildlife live, what they eat, and how and where they reproduce are all things that wildlife biologists study in order to have a good understanding of wildlife species. Surveys are conducted every year to see:

- How many animals can be harvested from a population.
- The condition of the environment.
- Trends in population numbers and habitat conditions.
- Basic information on sex and age of animals harvested.
- Social impact of wildlife and of hunting.



In Oklahoma, the story of the whitetail deer is an excellent example of the positive results of wildlife management. In the early 1900s, there were only 500 whitetails in Oklahoma, primarily in the Kiamichi mountain range. By using protection, restocking, and other management tools, the whitetail population thrives today.

Wildlife Conservation & Management

Transplanting, protecting and conserving are management tools that have brought many species back from the edge of extinction. Without good management plans and the support of hunters and of the public, many species would no longer be found in Oklahoma.

Law enforcement is an essential part of Oklahoma wildlife management as it helps to ensure that everyone obeys game laws such as bag limits and season dates. One of the primary purposes of wildlife laws is to protect game animals from being over-harvested. Laws are enforced by full time and reserve game wardens. However, individual sportsmen are a crucial part of this effort. They should study and observe all game laws and report hunters who refuse to do so.



Prescribed burning is an important management tool. Ben Davis

Hunters Pay For Wildlife Management in Oklahoma

OBJECTIVE 6

The Oklahoma Department of Wildlife Conservation is the state agency responsible for managing fish and wildlife. Managing wildlife costs money. The Wildlife Department receives no general state tax appropriations.

Licensed hunters pay for wildlife conservation in Oklahoma. Money from the sale of hunting licenses goes toward the management of both game and nongame species.

Another source of funding is the Wildlife & Sport Fish Restoration Program, funded partially by the Pittman-Robertson Act passed by Congress in 1937. This act established a special tax the federal government collects on all gun, ammunition and archery purchases to help wildlife. Third, specific groups interested in wildlife raise money and work cooperatively with the Oklahoma Department of Wildlife Conservation to conserve and protect wildlife and habitat.

IN A NUTSHELL

Question:

What is one of the primary purposes of wildlife laws?

Answer:

To protect game animals from being over-harvested.

Question:

Who pays the most for wildlife conservation?

Answer:

Licensed hunters.

Oklahoma Wildlife Conservation Commission

- The Wildlife Conservation Commission is the eight-member governing board of the Oklahoma Department of Wildlife Conservation.
- Commissioners serve eight-year terms and are appointed by the Governor and confirmed by the Oklahoma Senate.

- The Oklahoma Department of Wildlife Conservation is a constitutionally mandated and independent state agency that regulates, manages and conserves the state's fish and wildlife resources.

Department Organization

The Department is organized into five major divisions: Administration, Fisheries, Information and Education, Law Enforcement and Wildlife.

Education

An important management tool of wildlife biologists is education. Education helps hunters be safe and helps them understand how taking care of wildlife affects their sport. The more the public understands wildlife management, the more likely they are to support management tools. Oklahoma education programs provide new, inexperienced and even experienced people with the information, knowledge and skills necessary for conserving wildlife.



National Wild Turkey Federation

Department Funding

The Wildlife Department remains a non-appropriated, user-pay/user-benefit agency that is funded either directly or indirectly by hunting and fishing license sales. In fiscal year 2011 the Department operated with an estimated \$50.8 million in revenue.

Impact of Hunters and Anglers on Oklahoma's Economy

Anglers, hunters and wildlife viewers spend dollars that, in turn, benefit many other industries throughout the state. The resulting economic benefits reach every corner of the state and its economy. Every resident and tourist of Oklahoma benefits from fish and wildlife recreation spending.

By the Numbers

Hunters	251,000
Total Expenditures	\$492 million
Total Jobs	9,800
Salaries and Wages	\$251 million
State Tax Revenue	\$49 million
Ripple Effect on the State Economy	\$840 million
Anglers	611,000
Total Expenditures	\$522 million
Total Jobs	10,300
Salaries and Wages	\$273 million
State Tax Revenue	\$57 million
Ripple Effect on the State Economy	\$906 million

- *The 2006 Economic Benefits of Hunting, Fishing and Wildlife Watching in Oklahoma* by Thomas Allen & Rob Southwick with Dr. Peggy McKee

Data derived from the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, conducted by the U.S. Fish and Wildlife Service and the U.S. Census

Wildlife Conservation & Management



Michael Holmes

more insight into the ecology and population dynamics of black bears. The Wildlife Department worked on a joint project with the Oklahoma Cooperative Fish and Wildlife Research Unit at Oklahoma State University to learn more about this unique and growing population of more than 450 bears. The project centered on the LeFlore County portions of the Ouachita National Forest and Honobia Creek Wildlife Management Area.

During the summers of 2000-2006, graduate students used radio telemetry and DNA samples to learn just how many bears were out there, how they used the landscape and how fast the population was growing. The research teams captured 80 black bears and collected data such as age, weight, and blood samples on each animal. Radio-telemetry collars were placed on 25 females, or “sows.” This allowed researchers to track the animals’ movements, feeding patterns, and habitat preferences. The collars also allowed researchers to track the female bears directly to their hibernation dens in the winter. By sedating the bears, researchers were able to learn about the reproductive success of the sows. During the study researchers were able to get data on 13 litters with a total of 29 cubs. The research showed that sows had an average of about two cubs every other year.

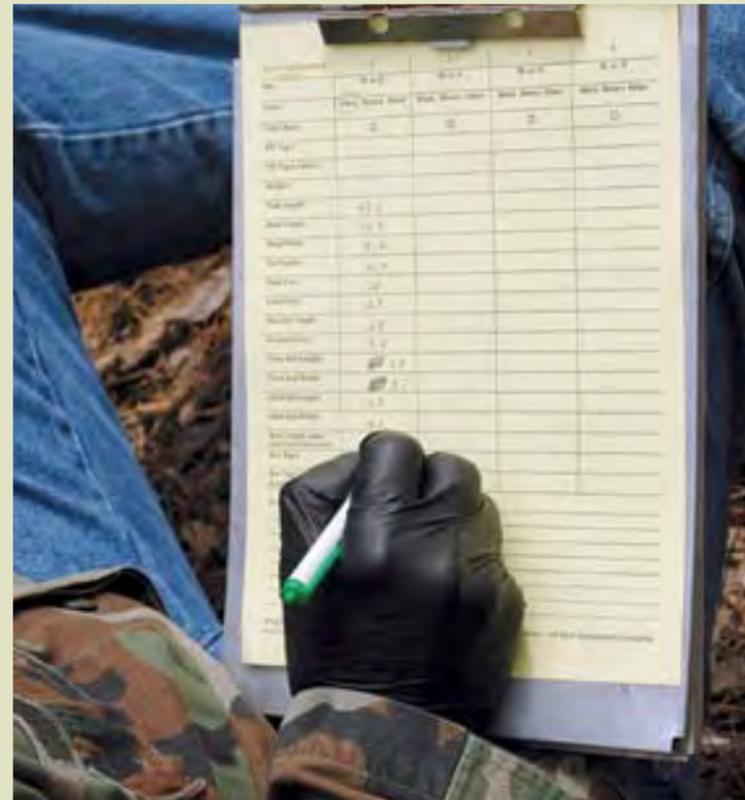


Michael Holmes

The sex ratio of Oklahoma’s bear population is split down the middle, about 50 percent males and 50 percent females. The average age of bears in Oklahoma is 3.7 years, a relatively young average age compared to other populations in other states. This means that the population is still growing. The oldest bear in the study was an 11-year-old female.

The Wildlife Department also tracks how many bears are killed by vehicles while crossing a road or highway.

Although seeing a bear along the road is rare, a total of seven bears have been killed by vehicles in the last four years. Officials with the Wildlife Department do not just research wildlife and fish populations, they also research people – or more specifically their attitudes and preferences toward hunting and fishing opportunities. Each winter the Wildlife Department conducts a survey of hunting license holders. Participants are asked about their hunting activities in the previous year and their opinions on issues facing the Wildlife Department. Sportsmen and women respond to a wide variety of questions each year ranging from how many squirrels they killed last year to how often they used wildlife management areas during the last year. These annual surveys also present an opportunity for the Wildlife Department to gauge the interest and opinions about potential regulations changes that may be on the horizon. In 2006, the Wildlife Department asked nearly 1,300 hunters their opinions about a limited bear hunting season in the state – an impressive 89 percent said they would support such a season.



Michael Holmes

In 2009 this research and planning resulted in the first Oklahoma bear season which was open to archery and muzzleloader hunters in Latimer, LeFlore, Pushmataha and McCurtain counties. A season limit of 20 bears was set,

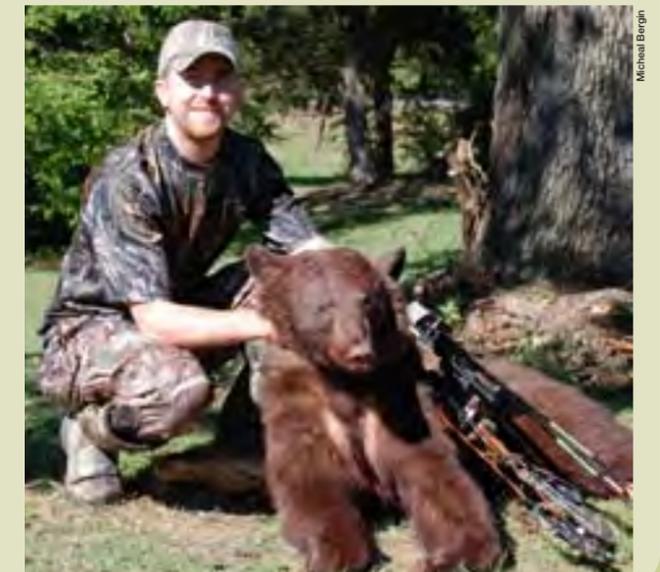
with hunters calling a bear hotline every evening to find out if the limit had been reached. Hunters harvested 19 bears over the course of 28 days. In 2010, hunters harvested 32 bears on opening day and in 2011 a total of 31 bears were harvested on opening day. According to Joe Hemphill, southeast region wildlife supervisor for the Oklahoma Department of Wildlife Conservation, the quota of 20 bears was very conservative.

“When we planned the regulations for the season, we took into account the possibility of exceeding the harvest quota,” Hemphill said.

In March of 2012 the Oklahoma Wildlife Commission voted to change the black bear archery season to Oct. 1 through the third Sunday in October with no quota. A bear muzzleloader season with a quota of 20 bears also was guaranteed, set to run concurrent with the deer muzzleloader season.

In 2011, the Department entered into a research project with the Oklahoma Cooperative Fish and Wildlife Research Unit and the Department of Natural Resource Ecology and Management at Oklahoma State University to study bears in northeast Oklahoma. The three-year research effort involves trapping bears for tagging and collection of biological data such as measurements, age estimates and DNA samples.

By studying range distributions, breeding success, body conditions, genetic diversity, feeding habits and other data collected during the project, biologists will learn important information about the health and stability of black bear populations in the northeast region.



Michael Begett



Ben Davis

The Future of Oklahoma Wildlife

Wildlife in Oklahoma belongs to the people of Oklahoma. The future of wildlife and hunting doesn't just depend on wildlife managers. It depends on hunters, trappers, wildlife enthusiasts and the public who:

- Support programs that improve the habitat on both public and private lands.
- Educate the public about the importance of hunting and trapping as a management tool.
- Use only the highest ethical behavior when hunting and trapping so as not to damage public support.
- Contribute time and money to help wildlife.
- Realize that hunting and trapping are important management tools that benefit wildlife populations and their habitat.
- Take someone hunting.

Review

- Food, water, space, cover and arrangement are the five components that animals must have in an environment in order to survive.
- Carrying capacity is the amount of wildlife a habitat can support each year. When the amount of wildlife is greater than the carrying capacity, then wildlife begins to compete for food, water, and cover. This can damage the habitat and drop the carrying capacity even lower.
- A sound management plan, research and harvest studies, transplanting, protecting and conserving and law enforcement are all management tools used by wildlife managers.
- The sale of hunting and trapping licenses, money from the Wildlife & Sport Fish Restoration Program and money from private sources are the three main funding sources of the Oklahoma Department of Wildlife Conservation.
- The Wildlife & Sport Fish Restoration Program provides a tax on firearms and ammunition in order to help fund state wildlife agencies.



IN A NUTSHELL

Question:

In Oklahoma, what state agency is responsible for managing wildlife?

Answer:

The Oklahoma Department of Wildlife Conservation

Did you know?

- The Oklahoma Department of Wildlife Conservation is the state agency responsible for managing wildlife.
- One of every three Oklahoma residents hunt or fish.
- The 28,142 jobs supported by hunting, fishing and wildlife-viewing in Oklahoma are greater than the state's third largest employer, Tinker Air Force Base, with 23,000 employees.
- The number of people who hunt in Oklahoma could fill the Oklahoma State University football stadium AND the University of Oklahoma football stadium almost two times, while the number of people who fish in Oklahoma could fill the stadiums four and a half times.

Lifetime License Trust Account

- When a lifetime license is sold, the money goes in the lifetime license trust fund. The principal cannot be spent but the interest investment income can be used for operations.
- First lifetime combination license was sold in 1969 for \$150.
- Since 1969, 200,484 lifetime licenses have been sold.



Darrin Hill

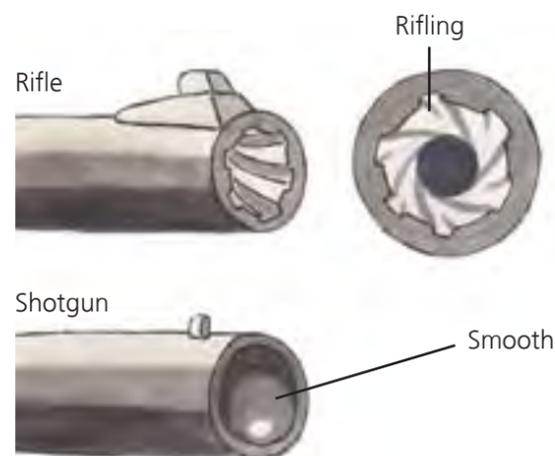
Firearms: Rifles and Shotguns

OBJECTIVE 1

While rifles and shotguns may have similarities and often look alike, the difference is the purpose and the barrel. Rifles are primarily designed to shoot single bullets which strike a single, usually stationary target, while shotguns are designed to fire a spread of shot or pellets in order to hit a moving target.

All rifles and shotguns have three main parts; the stock, action and barrel. The action is the part that loads, fires, and ejects a shell. The barrel is the tube the bullet or pellets pass through. The stock is the wood, metal or plastic frame that holds the barrel and action.

The main difference between rifles and shotguns is the inside of the barrel. Rifles are grooved in a spiral pattern while the inside of most shotgun barrels are smooth.



Kelley Farrar

Words to Know

Rifle – A firearm whose barrel has small spiraling grooves causing the bullet to spin and fly straighter.

Shotgun – A firearm that fires multiple pellets.

Action – The part of a firearm that loads, fires, and ejects the cartridge or shell.

Barrel – The part of the firearm through which the bullet or pellets travel when fired.

Stock – The wood, metal or plastic frame that holds the action and barrel

Rifling – Grooves inside a rifle barrel that cause the bullet to spin.

Choke – The narrowing at the end of a shotgun barrel that determines the pattern of the pellets as they leave the gun.

Non-Toxic Shot – Any shot approved by the U.S. Fish and Wildlife service for hunting waterfowl or in designated waterfowl areas.

Range – How far shot or bullets travel after exiting the barrel of the firearm.

Muzzle – The end of the barrel where the bullet comes out.

What is a Safety?

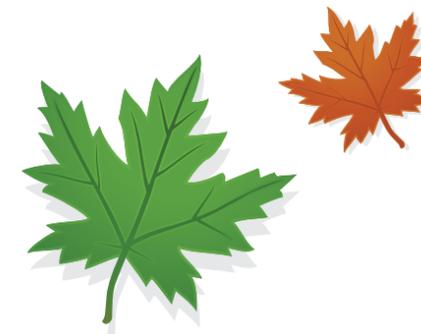
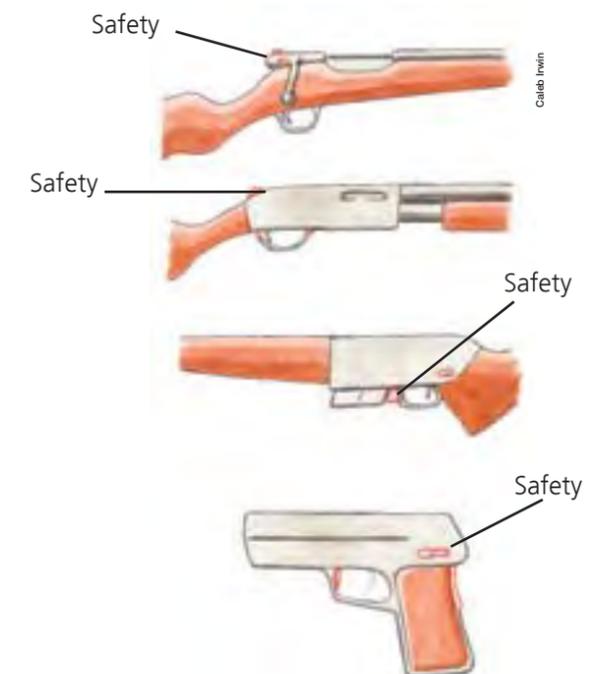
A safety is the most important part of the gun. Its purpose is to prevent the trigger, or the firing pin, from moving and thereby preventing the gun from firing. A careful hunter always knows where the safety is located on the gun before loading and firing.

However, a safety is a mechanical device. It can fail! Just because you have the safety on doesn't mean the gun won't fire. Safeties should never be used as a substitute for safe gun handling and the observance of all gun safety rules.

IN A NUTSHELL

Question:
What is the safety on a firearm?

Answer:
It is a mechanical device that can fail!



Firearms: Rifles and Shotguns

Oklahoma Hunter Education

Rifles

OBJECTIVE 2

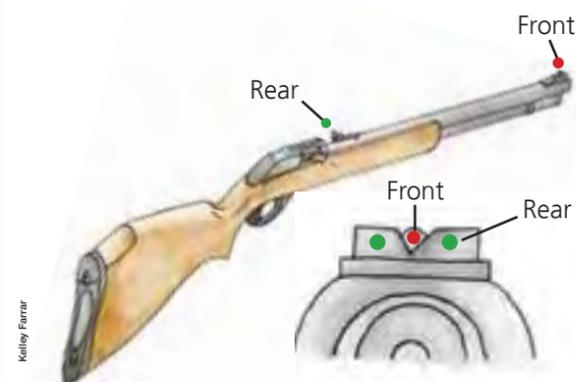


Rifles are designed to accurately hit a precise point. They are long-barreled firearms with grooves cut into the barrel of the rifle. These grooves are called rifling and give rifles their name. The rifling makes the bullet spin as it leaves the muzzle, making the projectile much more accurate and stable in flight. Make sure the ammunition you use matches the caliber that is stamped on the side of the barrel.

There are three main types of sights for rifles – open, aperture and telescopic.

Open sights

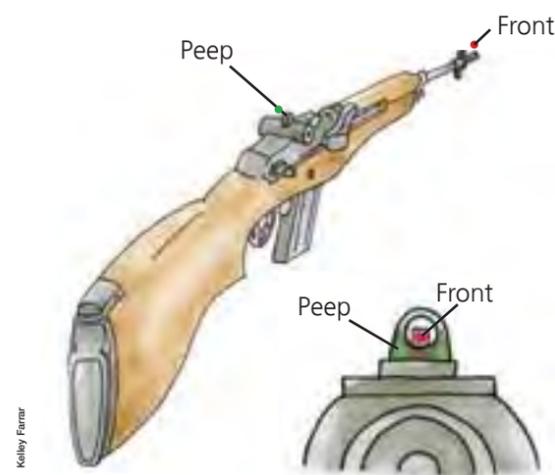
Open sights are composed of a post or bead at the muzzle end of the barrel and a blade with a V shape near the action.



The spot you want to hit on the target should be lined up so that it appears to sit on top of the post. The post should be lined up with the top of the V notch.

Aperture sights

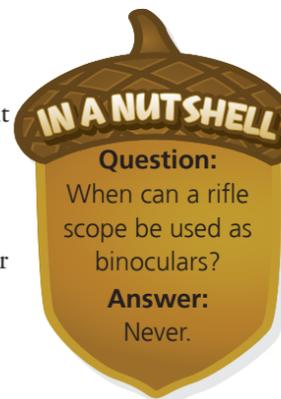
Aperture sights are also known as peep sights. Guns with aperture sights will have a post at the muzzle end of the barrel and an aperture or hole as the rear sight.



The spot you want to hit on the target should be lined up so that it appears to set on top of the post. The top of the post should appear to be in the middle of the hole.

Telescopic

Telescopic sights are also known as scopes. Scopes come in many styles, but the most common has crosshairs that are lined up with the target. The main advantage of telescopic sights is that they make your sights and target appear on the same level. This means that you can keep both the target and crosshairs in focus. Using scopes does not mean you do not need to spend time practicing with your firearm. Never use a rifle scope in place of binoculars. A rifle should only be aimed at the identified target that you plan to shoot.



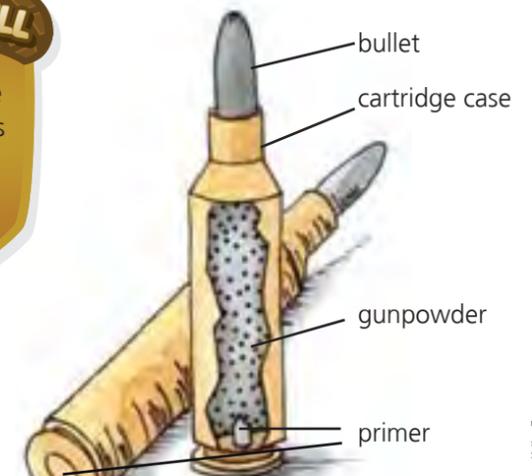
The Rifle Cartridge

OBJECTIVE 3

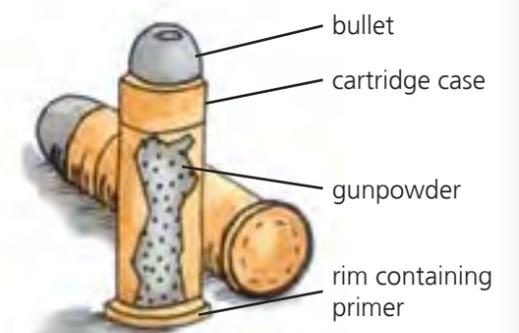
Cartridges are small explosive devices that have a primer at the bottom. When the primer is hit or compressed, it ignites a spark, which makes the gun powder rapidly ignite, causing the cartridge to fire. As the bullet travels down the barrel, the rifling makes the bullet spin.

For quick, clean shots, a bullet must penetrate sufficiently deep to reach vital organs. Cartridges are among the least expensive items for the hunt; get the best available for your quarry, and make every shot count. Always strive to cleanly harvest the animal with one shot.

Rifle Cartridges



Centerfire



Rimfire

Centerfire vs. Rimfire Cartridges

The difference between a rimfire and centerfire cartridge is the location of the primer. Centerfire cartridges have the primer in the center of the bottom of the cartridge. These cartridges are usually more powerful than rimfire cartridges and are used in larger caliber firearms. Rimfire cartridges have the primer material “spun” into the edges of the rim of the cartridge and are usually used in smaller caliber firearms.

Firearms: Rifles and Shotguns

Oklahoma Hunter Education

Trajectory

The trajectory of a bullet is the path the bullet takes from the muzzle of the gun to the target. It is not a straight line. The bullet begins to drop the second it emerges from the barrel because of the force of gravity and air resistance. Some bullets can travel a mile or more.

Shotguns

OBJECTIVE 4

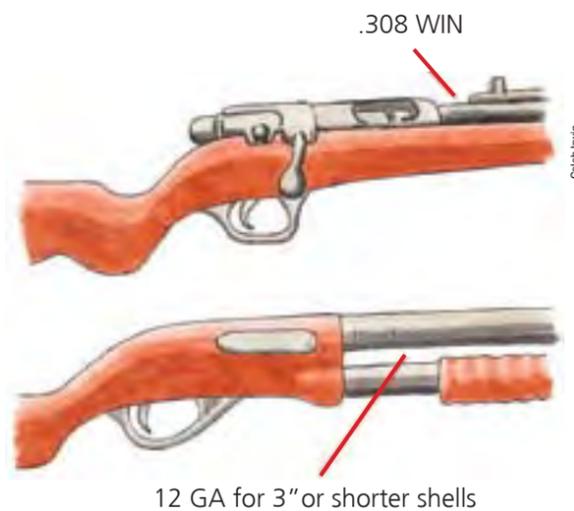
Shotguns typically shoot a spread of small projectiles instead of a rifle's single bullet. This increases the chances of hitting a moving target. They also have a smooth barrel inside. Shotgun styles allow a wide variety of choices including the gauge, the type of choke and the type of action. Shotguns can also fire a single projectile, called a slug, which is similar to a rifle bullet.

Gauge

Gauge is a measurement that has to do with the size of the barrel. Common shotguns are 10 gauge, 12 gauge, 16 gauge, 20 gauge and 28 gauge. The only shotgun that is not measured by gauge is the .410-caliber shotgun which means it has a .41 inch barrel diameter.

- Shotgun gauge size is marked on the barrel of the shotgun and on the box of ammunition. Make sure the ammunition matches what is stamped on the gun barrel.

Parts of a Shotgun



IN A NUTSHELL

Question:
How do you determine the correct size of ammunition for your firearm?

Answer:
Find the gauge or caliber stamped on the outside of the barrel.



Choke

The choke is a taper in the barrel that determines the pattern of the shot. As pellets leave the barrel they spread or disperse. A tight choke keeps pellets together as they leave the barrel so they travel farther before dispersing. An open choke allows the pellets to start dispersing as soon as they leave the barrel.

The effective range of a shot shell and choke combination will vary. As a rule of thumb, the improved cylinder choke is effective 20-30 yards, the modified choke 30-40 yards and the full choke 40-50 yards.

To find out the best shot shell and choke combination to use at different distances it's necessary to pattern your shotgun. It isn't a complicated process, but it does take some time and effort. Patterning your shotgun will keep you from wounding or crippling game and will reduce the number of shots needed to harvest your game.

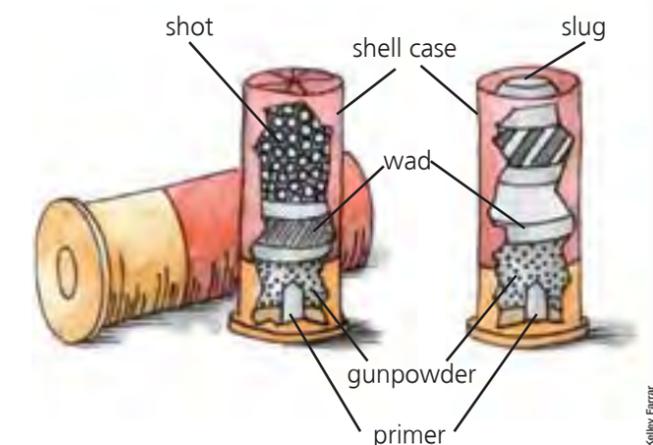
More information can be found at wildlifedepartment.com/shotgunning.

The Shotgun Shell

OBJECTIVE 5

There are five main parts of a shotgun shell: the case, primer, powder, wad and shot. The case is the outer part that holds everything together. The primer, found at the bottom of the shell, explodes when hit by the firing pin. This ignites the powder, which is just above the primer. The burning powder pushes the wad and shot out the barrel and towards the target. The wad holds the shot together until it leaves the barrel. The shot is many ball-shaped pieces of lead or lead substitute that spread out after they leave the barrel.

Shotgun Shell



Shotgun Shell Size

The shotgun shell size is given in inches and determined by the length of the empty case.

Shot Size

Shot comes in a variety of sizes from very small (size #12) to very large (size #000). Choose the shot size that fits the wildlife you are hunting.

Non-Toxic Shot

Historically, shot was made from lead pellets. However, because waterfowl eat lead shot and develop lead poisoning, the use of lead shot has been banned for all waterfowl and some upland game bird hunting.

Today's non-toxic shot is made from a variety of substances, the most popular and affordable of which is steel. Again, it is extremely important to pattern the ammo you plan to use.



Firearm Actions

OBJECTIVE 6



The firearm action loads, fires and ejects the cartridge or shell. The action can be:

- Bolt Action
- Break Action
- Pump Action
- Lever Action
- Semi-Auto Action

Bolt Action



Caleb Irwin

The bolt action is most often seen in rifles. Bolt action firearms are common and simple to use. Opening a bolt action firearm is as simple as pivoting the bolt upwards and pulling it backwards, using the handle on the bolt.

Bolt action rifles are known for their accuracy and reliability. Jamming is extremely rare in bolt-action firearms.

Break Action

Single-shot



Caleb Irwin

Double barrel side-by-side



Double barrel over-under



One of the simplest firearm actions is the break action.

The action release on a break action firearm is usually on the top of the firearm behind the chamber.

To load a break action firearm, simply open the action using the action release, insert the ammunition into the chamber, and close the action. After firing the firearm, open the action using the action release and remove the spent ammunition manually.

Pump Action



Caleb Irwin

The Pump Action is more commonly seen in shotguns than in any other type of firearm. It is a very reliable action, and an experienced shooter can go through the pumping actions very quickly, and instinctively. Sliding the front grip back and then forward ejects the spent shell, loads another shell and cocks the hammer.

Lever Action



Caleb Irwin

Lever-action uses a lever located around the trigger guard area, often including the trigger guard itself, to load, fire and eject cartridges. The lever action is most commonly seen in rifles. Lever actions firearms are known for their accuracy and reliability. They are popular for short- and medium-range hunting in heavily covered areas.

Semi-Automatic Action



Caleb Irwin

The semi-automatic action is very popular in both rifles and shotguns. A semi-automatic fires a bullet, ejects the spent cartridge and chambers a fresh cartridge each time the trigger is pulled.

Cleaning and Storing Your Firearm

OBJECTIVE 7

Dirt and debris can easily collect in any firearm. You should clean your firearm after every use in order to ensure safe and efficient functioning. Every hunter should own a fully stocked cleaning kit and use it regularly.

Components of a Cleaning Kit

Cleaning kits should include:

- Bristle brushes for each caliber and gauge firearm you own
- Cleaning rods of varying lengths for rifles, shotguns and handguns



- Cleaning patches sized to fit down the bore of each different firearm
- Patch holders that screw into the ends of the cleaning rods
- A stiff toothbrush
- Bore solvent
- Gun oil

The procedure for cleaning all firearms is essentially the same:

- Make sure the firearm is unloaded
- Check for obstructions in the barrel and malfunctions
- Run a patch or bristle brush soaked in bore solvent down the barrel
- Run dry follow-up patches to dry the barrel and check for traces of rust
- Once clean, run a patch with a light coat of gun oil down the barrel
- Clean all exposed parts of the action
- Clean and oil all exterior metal parts



Transporting Firearms

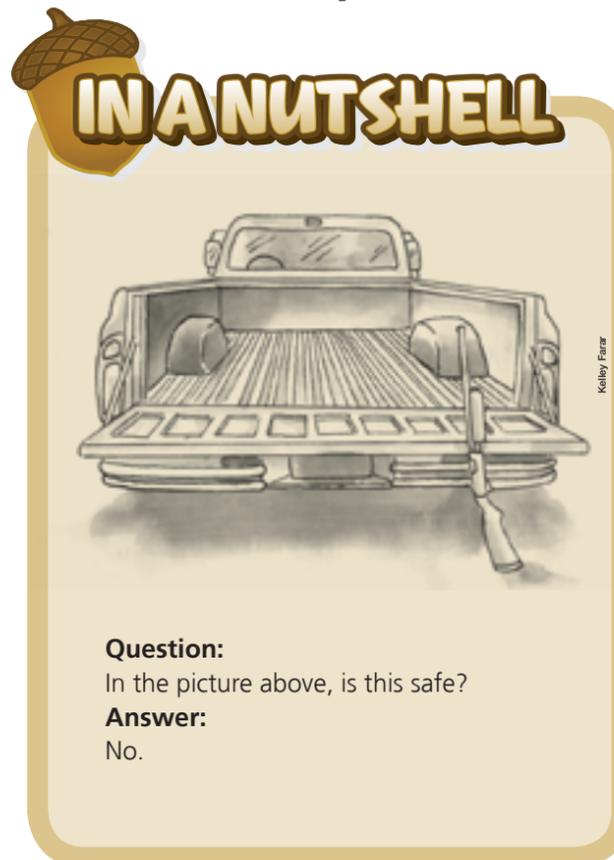
OBJECTIVE 8

There are certain safety rules and laws that govern transporting firearms in a motorized vehicle of any type. It is illegal and unsafe to transport a loaded firearm.

Guns should always be unloaded and cased before being placed in a vehicle.

A gun should never be leaned up against a tailgate, other part of a vehicle or any other object. The gun could easily slide and hit the ground, causing it to fire.

Marksmanship



OBJECTIVE 9

Shooting Positions:

The Prone Position



Lance Meek

The prone position is by far the most stable firing position and the most accurate firing position.

The Sitting Position



Lance Meek

A more stable firing position than the standing firing position is the sitting position. The sitting firing position generates much less sway in the muzzle than the standing position. Using a bipod will make this position even more stable.

Firearms: Rifles and Shotguns

Oklahoma Hunter Education



Lance Meek

The Kneeling Position

The kneeling firing position is more stable than the standing firing position. Using a bipod will make this position even more stable.



Lance Meek

The Standing Position

The standing position is easy to adopt quickly upon spotting game. However, the standing position is unstable, making it the least accurate shooting position.



Ben Davis

Shotgun Shooting Position

Because shooting a shotgun is very different from firing a rifle, the shotgun firing position is also different.

Review

- One of the main differences between a rifle and a shotgun is that rifles shoot a single bullet and shotguns shoot many pellets.
- Be able to locate and describe the parts of rifles and shotguns.
- Clean your firearm after every use in order to ensure safe and efficient functioning.
- The most common firing positions are sitting, standing, kneeling, prone and shotgun shooting positions.



Safety

Oklahoma Hunter Education

Firearm Safety

OBJECTIVE 1

The person holding the gun is responsible for the safe handling of the firearm. The International Hunter Education Association (IHEA) emphasizes four basic rules of firearm safety.

- A**ssume that every gun is loaded.
- C**ontrol the direction of the muzzle – point the gun in a safe direction.
- T**rigger Finger – keep your finger off the trigger until ready to fire.
- T**arget – be certain of your target and of what's behind it.


IN A NUTSHELL
Question:

What do you do when hunting with someone who refuses to follow the rules for proper firearm safety?

Answer:

Immediately tell them your concerns and refuse to hunt with them unless they follow the rules.

Question:

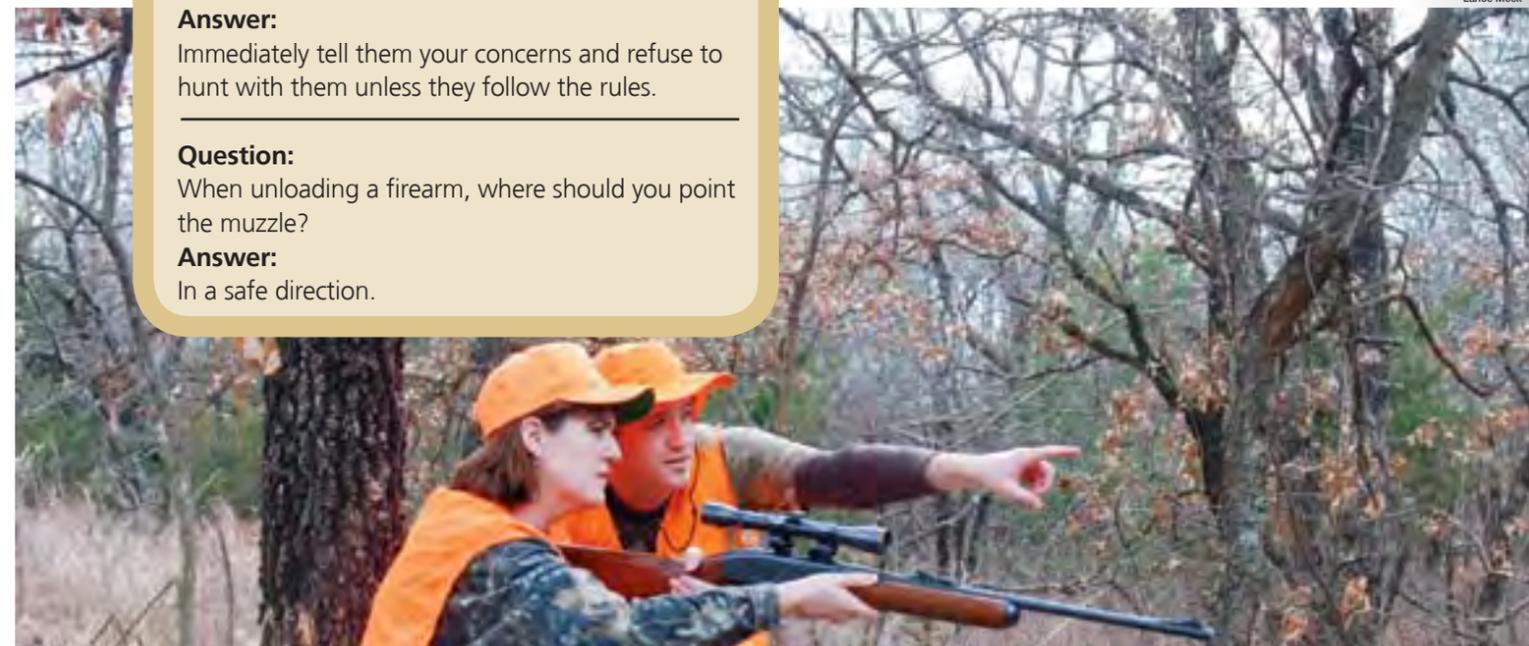
When unloading a firearm, where should you point the muzzle?

Answer:

In a safe direction.

Safety Tips

- Always determine if a firearm is unloaded before picking up or accepting it from another person.
- When carrying a gun, the most important thing to do is to keep the muzzle pointed in a safe direction. Never point a firearm at yourself or others.
- The natural instinct when picking up a firearm is to put your finger in the trigger guard. **DON'T!** This could cause an accidental discharge if the gun is loaded.
- Never take a shot unless you are aware of your target and what is behind it. Never point your firearm at something you do not intend to shoot.
- Do not use telescopic sights as a substitute for binoculars.
- If a friend refuses to follow safe gun handling rules while hunting with you, immediately tell them your concerns, and don't continue to hunt with them unless they follow the rules.
- Always unload your firearm and examine the barrel after a fall to be sure there is no snow, mud, or dirt in the barrel. If there is, clean it out before firing.



Lance Meek

- Never use drugs or alcohol before or during shooting.
- Make sure you have the correct ammunition for the firearm you are using.
- Don't shoot at water or hard objects such as rock or metal.

Loading and Unloading Firearms

OBJECTIVE 2

Firearms should be kept unloaded unless they are in use. Be sure you are familiar with the way your firearm is loaded and unloaded. When loading and unloading a firearm make sure the muzzle is pointed in a safe direction. Have someone who is familiar with the way your firearm works show you the proper methods of loading and unloading ammunition.

- Always check for yourself whether or not a gun is loaded. Don't rely on someone else's say-so.
- Practice using "dummy" ammunition until you can efficiently load and unload your firearm.
- Keep your finger out of the trigger guard when loading and unloading ammunition.
- Even if you just unloaded it, always treat a firearm as if it were loaded.

IN A NUTSHELL

Question:

What is the most important thing to do when carrying a gun?

Answer:

Keep the muzzle pointed in a safe direction at all times.

IN A NUTSHELL

Question:

The more you hunt, the more likely you are to have an accidental discharge. How do you make sure it doesn't kill or injure someone?

Answer:

Always point your firearm in a safe direction.

Question:

What should you assume about every gun?

Answer:

Assume that every gun is loaded.

Question:

When handling a firearm, you should always control what?

Answer:

The direction of the muzzle.

Question:

Who is responsible for safe handling of the firearm?

Answer:

The person holding the gun.

Question:

You should never take a shot until you are certain of what?

Answer:

Don't take a shot until you are certain of your target and what is behind it.

Question:

Is it OK to use drugs or alcohol before or during shooting?

Answer:

No. It is dangerous. Never do it.

Question:

What should you do after a fall?

Answer:

You should examine the barrel of your firearm to make sure there is no snow, dirt or mud in it.

Crossing Fences, Waterways and Other Obstacles

OBJECTIVE 3

A common cause of accidents is when hunters cross fences or other obstacles and forget basic rules of safety. It is easy to lose your footing or your balance and slip when climbing over a log, down into a ravine or wading through a stream. A loaded firearm in these situations can be extremely dangerous.

Always unload your firearm. When picking up, or accepting a firearm from another person, always make sure that it is unloaded.



Lance Meek

If hunting alone, point the muzzle of the gun away from you and place the gun on the ground on the other side of the barrier.

If two people are hunting together and come to an obstacle, they both unload their guns and one person holds both guns while the other person crosses. Then the guns are handed across, muzzle pointed up, over the obstacle to the second person and the first person crosses.



Lance Meek

IN A NUTSHELL

Question:

When do you know that a firearm is pointed in a safe direction?

Answer:

If it went off, no one would get injured.

Question:

When should you treat a firearm as if it were loaded?

Answer:

Always, even if you just unloaded it.

Question:

Before crossing a fence or other obstacle what should you do?

Answer:

Always unload your firearm.

Question:

What should you do when picking up or accepting a firearm from another person?

Answer:

You should always make sure that it is unloaded.

Safe Zones of Fire

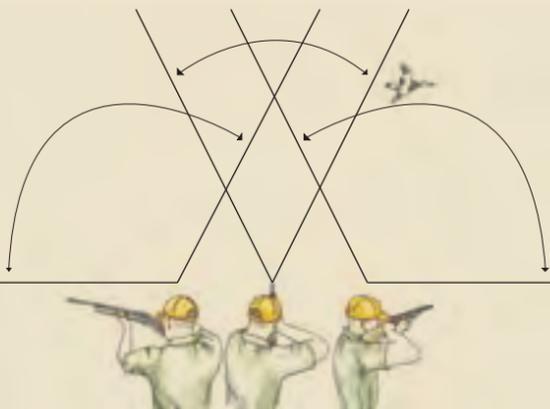
OBJECTIVE 4

The area into which a hunter may shoot safely is referred to as a “zone of fire.” When hunting alone, your safe zone of fire will be determined by your field of view, the presence of trees, rocks, water or other obstacles and the range of your firearm.

Upland gamebird and waterfowl hunters often use zones of fire that are triangle shaped. Hunters walk or sit in a straight line, in sight of each other when hunting. No one runs ahead or lags behind the line. The area behind the hunters is off limits—no one turns to shoot behind. The middle hunter or hunters have the narrowest zone of fire—about 45 degrees. Hunters to the left and right ends have a broader zone of fire since they can swing to the outside edges. No one shoots at game that is directly between each hunter.

IN A NUTSHELL

Safe Zones of Fire



Question: Who can safely shoot at this bird?
Answer: The hunter on the right.

Ammunition Safety

OBJECTIVE 5

It is extremely important to know the correct methods for handling ammunition. Following a few rules can keep you and your hunting partners safe.

- Carry only the correct size of ammunition for your firearm.
- If ammunition appears dented or in any way defective, don't use it!
- Store ammunition in its original box. Do not mix different types of ammunition in a generic container.
- Keep ammunition away from heat or from being hit.
- Keep your ammunition locked in a separate container from your firearms.

The 10 Commandments of Firearm Safety

1. Always keep the muzzle pointed in a safe direction.
2. Firearms should be unloaded when not actually in use.
3. Don't rely on your gun's "Safety."
4. Be sure of your target and what's beyond it.
5. Use correct ammunition.
6. If your gun fails to fire when the trigger is pulled, handle with care!
7. Always wear eye and ear protection when shooting.
8. Be sure the barrel is clear of obstructions before shooting.
9. Don't alter or modify your gun, and have guns serviced regularly.
10. Learn the mechanical and handling characteristics of the firearm you are using.

Hunter Orange

OBJECTIVE 6



In Oklahoma, individuals hunting deer, elk, bear or antelope with any type of firearm must conspicuously wear both a head covering and an outer garment above the waistline both consisting of hunter orange color totaling at least 400 square inches. The safest color to wear while hunting is solid hunter orange.

All other hunters, except those hunting waterfowl, crow or crane, or while hunting furbearing animals at night, must wear either a head covering or upper garment of hunter orange clothing while hunting during any antelope, bear, deer, or elk firearms (muzzleloader or gun) season.

While hunters hunting in other seasons are not required to, hunter orange is still the safest color to wear. Upland game bird hunters (quail, pheasant, etc.) should wear at least a hunter orange vest or head covering. Turkey hunters should wear at least a hunter orange vest or head covering while moving through their hunting areas.



Safely Carrying Your Firearm While Hunting

OBJECTIVE 7

There are several safe methods of carrying your rifle or shotgun when you are hunting. The method you choose will depend upon the type of animal you are hunting and the conditions of the environment. Always be conservative and choose the safest method possible.

All hunting situations are different and most of them could easily change at any given time. For example, the cradle carry with the muzzle of your firearm pointed to the left is a very safe carry if you are the furthest left person in a group of pheasant hunters. However, if another hunter joins your group to your left, you will need to adjust your carry. You must remember, when carrying a gun the most important thing is to keep the muzzle pointed in a safe direction at all times. If a firearm is pointed in a safe direction and it went off, no one would get injured.



Remember that other hunters cannot see your hunter orange when you are in your blind. Attach a piece of hunter orange material to the outside of the blind.



Michael Bergin

Two-handed Carry

Hold the grip in one hand and the gun's forearm in the other hand. This carry provides the best muzzle control.



Lance Meek

Cradle Carry

Cradle the gun's forearm in the bend of one arm. Hunting situations change often. You should always keep the muzzle pointed in a safe direction. This can change depending on the location of other members of your party.



Michael Bergin

Shoulder Carry

Rest the forearm on the top of your shoulder by holding the grip.



Lance Meek

Trail Carry

Hold the stock with one hand, and make sure the muzzle is pointed at the ground.



Lance Meek

Elbow Carry

Hold the grip of the gun over your elbow, let the stock rest against the back of your upper arm. The muzzle of the gun should be pointing down. Using this carry gives the handler the least control.

**Turkey Hunting Safety****OBJECTIVE 8**

Turkey behave differently from other game species, and hunters use different techniques to hunt them. Therefore you should observe some special safety rules while hunting them.

Never stalk a turkey. The chance of getting close enough for a shot is slim, and the chances of becoming mistaken for a turkey and involved in a hunting accident are increased.

Don't wear red, white or blue. Red is the color most hunters count on to differentiate a gobbler's head from the hen's blue-colored head. Never move, wave, or make turkey sounds to alert another hunter to your presence. A quick movement may draw fire. Yell in a loud voice and remain hidden. Be particularly careful when using a gobbler call. The sound and motion may attract other hunters. When selecting your calling position, don't try to hide so well that you cannot see what is happening around you.

The best calling position provides a background as wide as your shoulders, and will completely protect you from the top of your head down. Small trees will not hide slight movements of your hands or shoulders which might look like a turkey to another hunter who could be unwisely stalking your calls.



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Never shoot at a sound or movement. Be 100 percent certain of your target before you pull the trigger. Don't ever shoot at a "piece" of a turkey. You must see the whole bird to determine whether it is safe or legal to shoot. A good rule of thumb is to not shoot until you can clearly see the gobbler's eye. That way, the bird will be in range and you will be sure it is a turkey. When turkey hunting, assume that every sound you hear is made by another hunter.

Turkey Hunting Safety

- Never assume that you are alone in the woods - even if you are the only one on with permission to hunt.
- Never assume that other hunters are acting responsibly.
- Use a flashlight when walking in the dark.
- Make sure your head-net does not obscure your vision.
- Be aware of what is beyond your target before you shoot.
- Keep your gun unloaded until you are set up in the field. Keep your finger off the trigger until you are ready to shoot.
- Keep your decoy covered until ready to set it up. After harvesting a turkey, cover it until you are out of the woods.
- Wear orange when moving through the woods.



Question:
 What should you avoid wearing while turkey hunting?
Answer:
 Don't wear red, white or blue.

Firearm Safety in the Home

OBJECTIVE 9

Safe storage of your firearms is your responsibility.

Firearms should be loaded only when in the field or on the range. At all other times, during travel and especially in the home, they should be kept unloaded.

Never handle or show guns without first carefully checking to be sure they are unloaded. Open the action and keep it open until the gun is again ready for storage. Never assume that a firearm is unloaded, even if it was checked only a few minutes earlier. Don't trust the safety to compensate for unsafe gun handling. Like all mechanical devices, safeties can malfunction, and in any case, they are only intended to supplement human care and intelligence.



The best method for storing firearms and ammunition in the home is locked separately in a cabinet or safe. If it's not possible, seek the next best solution. That is locked together in a safe or cabinet.

Finally, if the proper storage facilities are not available, trigger locks should be purchased.

On the practical side, guns should be stored in a reasonably dry environment but away from exposure to heat. Dampness causes rust and heat can bake the wood of stocks and grips to the point of cracking or splitting.



Question:

What is the best method for storing firearms and ammunition in the home?

Answer:

Locked separately in a cabinet or safe.

When handling firearms, always keep the muzzle pointed in a safe direction. Avoid horseplay at all times -- guns are not toys and they must be handled with respect. Common sense must be used in choosing the safest direction to point the muzzle. "Down" is not always the safest direction and neither is "up."

Firearm Education

Safety in general is largely a matter of education, and home firearms safety is certainly no exception. All family members must learn safe gun handling. Without proper education, preventive measures are nearly useless.

Children are never too young to begin the lessons of safety. Teaching can begin long before children are old enough to understand detailed instruction. Start by setting a proper and consistent example. If parents treat guns with care and respect, children will likely follow their lead.

Children should learn that firearms are not toys. Having noticed adult interest in guns, children will naturally develop a healthy curiosity about their use and operation. In addition, children tend to have an entirely unrealistic idea of what guns are all about because of exposure to modern realistic toys and to the fantasies of television.

The quickest and surest way to show children the power of firearms is by demonstration. Take them to the local range, fire a few rounds of high velocity ammunition at closed gallon cans of water, and show them the results.

It is a serious mistake to assume that keeping children ignorant will prevent accidents. Nothing could be further from the truth. Where firearms are concerned, there is no such thing as blissful ignorance. Keeping children in the dark only ensures that they will not understand the potential danger and increases the likelihood that they will seek to satisfy their curiosity without proper supervision. Also, the hazards that the parent wishes to eliminate are greatly increased if the child does not know how firearms function.

A good rule for children is hands off until they are old enough to be taught safe gun handling, and then only in the presence of an adult – never while playing with other children. As they progress, they need to know that the more they hunt, the more likely they are to have an accidental discharge. The way to make sure it doesn't kill or injure someone is to always point the gun in a safe direction.



Set up your treestand at ground level the first time you use it so that you'll know how to install it before you climb a tree.



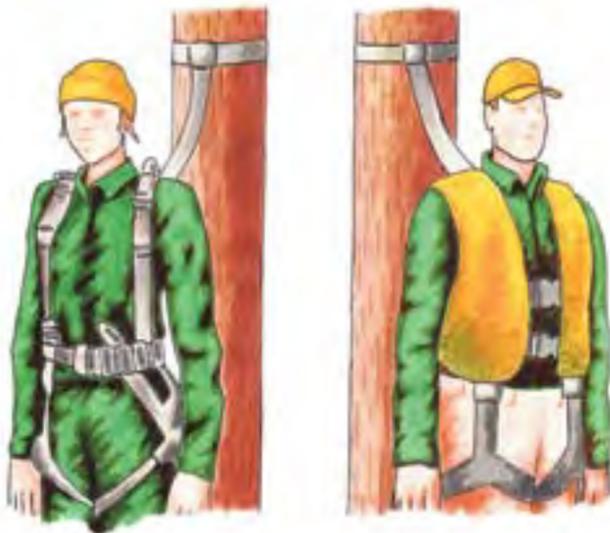
Treestand Safety

OBJECTIVE 10

What are treestands and how are they used for hunting?

A treestand is simply a perch in a tree that provides a place to sit or stand. It gives the hunter the advantage of height and silence; big advantages when hunting with bows. It keeps the hunter's scent from drifting as easily to wildlife. It does have some drawbacks. Once you are in a treestand you can't move around to get a better shot.

The biggest hazard of a treestand is an accidental fall. Hunters have to climb a tree to get into their stand. They also have to get their firearm or archery equipment up the tree. Once there, they have to perch on a narrow seat or ledge. These are all situations that can get hunters into trouble if they are not careful. Hunters have slipped and fallen, strangled on gun slings, landed on arrows or triggered a firearm unintentionally. Even a fall from a short distance can result in broken bones, paralysis or death.



Treestand Safety Rules

ALWAYS wear a full body harness meeting Treestand Manufacturers Association standards even during ascent and descent. Do not rely on belt or chest harnesses. Failure to use a full body harness could result in serious injury or death.

ALWAYS read and understand the manufacturer's warnings and instructions before using the treestand each season. Practice with the treestand at ground level prior to using at elevated positions.

Keep the manufacturer's warnings and instructions for later review as needed, for instructions on usage to anyone borrowing your stand, or to pass on when selling the treestand. Use all safety devices provided with your treestand.

NEVER exceed the weight limit specified by the manufacturer. If you have any questions after reviewing the warnings and instructions, please contact the manufacturer. Always wear a safety harness!

ALWAYS inspect the treestand for signs of wear or damage before each use. Contact the manufacturer for replacement parts. Destroy all products that cannot be repaired by the manufacturer and/or exceed the recommended expiration date, or if the manufacturer no longer exists. The full body harness should be discarded and replaced after a fall has occurred.

ALWAYS practice in your full body harness in the presence of a responsible adult, learning what it feels like to hang suspended in it at ground level.

ALWAYS attach your full body harness in the manner and method described by the manufacturer. There should be no slack in the tether when seated. Failure to do so may result in suspension without the ability to recover into your treestand. Be aware of the hazards (suspension trauma) associated with full body harnesses and the fact that prolonged suspension in a harness may be fatal. Have a plan in place for rescue, including the use of cell phones or signal devices that may be easily reached and used while suspended. If rescue personnel cannot be notified, you must have a plan for recovery or escape. If you have to hang suspended for a period of time before help arrives, exercise your legs by pushing against the tree or doing any other form of continuous motion. Failure to recover in a timely manner could result in serious injury or death. If you do not have the ability to recover/escape, hunt from the ground.

ALWAYS hunt with a plan and if possible a buddy. Before you leave home, let others know your exact hunting location, when you plan to return and who is with you.

ALWAYS carry emergency signal devices such as a cell phone, walkie-talkie, whistle, signal flare, personal locator device and flashlight on your person at all times and within reach even while you are suspended in your full body harness. Watch for changing weather conditions. In the event of an accident, remain calm and seek help immediately.

ALWAYS select the proper tree for use with your treestand. Select a live straight tree that fits within the size limits recommended in your treestand's instructions. Do not climb or place a treestand against a leaning tree.

NEVER leave a treestand installed for more than two weeks since it could be damaged from changing weather conditions and/or from other factors not obvious with a visual inspection.

ALWAYS use a haul line to pull up your gear and unloaded firearm or bow to your treestand once you have reached your desired hunting height. If hauling up a firearm, be sure the muzzle points away from you. Never climb with anything in your hands or on your back. Prior to descending, lower your equipment on the opposite side of the tree.

ALWAYS know your physical limitations. Don't take chances. If you start thinking about how high you are, don't go any higher.

NEVER use homemade or permanently elevated treestands or make modifications to a purchased treestand without the manufacturer's written permission. Only purchase and use treestands and full-body harnesses meeting or exceeding Treestand Manufacturers Association (TMA) standards. For a detailed list of certified products, contact the TMA office or refer to the TMA web site www.TMAstands.com.



NEVER hurry! Accidents can happen when climbing into and out of a treestand. While climbing with a treestand, make slow, even movements of no more than 10 to 12 inches at a time. Make sure you have proper contact with the tree and/or treestand every time you move. On ladder-type treestands, maintain three points of contact with each step. On hanging treestands always check the steps to make sure they are securely fastened.

IN A NUTSHELL

Question:

When should treestands and full body harnesses be checked for wear and damage?

Answer:

They should be checked before each use.

Question:

What two things should you do before using a treestand?

Answer:

Always inspect trees and check the steps to make sure they are securely fastened.

Question:

What should you wear when installing, removing or using a treestand?

Answer:

Use a full body harness from the time you leave the ground until you are back down.

Question:

Why should you be careful when climbing into or out of a treestand?

Answer:

Accidents can happen.

Question:

What should you always wear when hunting from a treestand?

Answer:

A full-body harness.

Question: What should be used to get your bow or firearm into and out of your treestand?

Answer:

A haul line.

Types of Elevated Stands and Climbing Equipment

There are five common types of elevated stands:



Hang-on Stands – Chained or strapped to trees. Inexpensive and light weight. May be difficult to place in a tree and a ladder may be required. Last step of climbing aid should be installed above platform.



Ladder Stands – Stands that use a ladder to reach the perch. These are often heavy and require at least two to three people to install or remove.



Climbing Stands – Moves up and down the tree with a series of stand up/sitdown motions. Can only be used on trees that are straight and have no lower branches.



Self-supporting Stands (Tripod Stands) – Used when no trees are available. Needs to be erected on level ground.



Justin Manschall

Homemade Permanent Stands in Trees – Should never be used. Wood rots, trees grow and changing weather conditions can cause damage to the stand not seen by visual inspection. Permanent stands and screw-in steps are illegal on wildlife management areas.

About Climbing Aids

Climbing aids are often used to reach a stand. There are many types; regular ladders attach with straps, chains or ropes, hang-on steps hang from the bottom or side of a stand, climbing “sticks” are portable ladders; and screw-in steps attach with screws into the wood of the tree. All climbing aids should be used with extreme care. A full body safety harness with climbing belt should **ALWAYS** be used when installing and climbing any type of ladder. Be sure you have the landowner’s permission to install a treestand, especially if you are using screw-in steps or treestand that may damage the tree. Carefully inspect the treestand and climbing aid before each use. What may have been safe from the last hunt may not be safe today.

NO MATTER what type of stand you use, you need to CHECK IT FOR WEAR AND TEAR, such as broken welds, cracked boards, weak spots in the expanded metal, or frayed cables, etc. every time you get into the stand!!! Any kind of stand can be dangerous depending on how it’s built, how it’s maintained and how well you inspect it.



Always wear a Personal Flotation Device while you are in a boat.

Water Safety

OBJECTIVE 11

Boating

Hunters that use boats often think of boating and boat safety as secondary to their primary pursuit. You should keep in mind that safety starts long before you start hunting when boats are involved.

- Do not overload your boat.
- Keep the center of gravity low.
- Always wear a Personal Flotation Device (PFD) while you are in the boat.
- Stay with your vessel if it capsizes.
- Carry dry clothes in a waterproof sack.
- Take a boating safety course.
- Follow boating laws.

Hypothermia

Hypothermia is one of the biggest dangers to hunters during bad weather or near water. Hypothermia occurs when you get too cold for too long and your body's internal temperature drops. A person does not have to fall completely into water to get hypothermia. Just getting sweaty dampens clothing enough to allow the body to chill.

Hypothermia symptoms include:

- Shivering (although, at extremely low body temperatures, shivering may stop).
- Weakness and loss of coordination.
- Confusion.
- Pale skin.
- Drowsiness – especially in more severe stages.
- Slowed breathing or heart rate.

Hypothermia can even be fatal.

Treat mild hypothermia by getting into a warm and dry area and away from wind and wet conditions as soon as possible. If you do get wet,

- Change wet clothing for windproof, waterproof gear.
- Add heat – if safe, start a fire.
- Increase exercise, if possible.
- Get into a pre-warmed sleeping bag or blanket.
- Drink hot drinks, followed by candy or other high-sugar foods.
- Apply heat to neck, armpits and groin.

Dress

- To avoid hypothermia do not wear cotton.
- Wear layers of wool or synthetic clothing.
- Wear a windproof/waterproof outershell.



Question:

What should you wear to avoid hypothermia?

Answer:

You should wear layers of clothing.

Personal Flotation Devices (PFD)

Every hunter who is on the water should wear a personal flotation device regardless whether he or she knows how to swim. Children and non-swimmers should always wear them when near water. If you do fall into the water while hunting, conserve your body heat by keeping your arms as tight to your chest as possible. Your legs should also be together and as



near your torso as you can get them. If you fall into the water with another hunter huddle together to conserve heat. Even the best swimmer can chill quickly and develop hypothermia in cold water.

Remember, victims of mild to moderate hypothermia may be suffering from impaired judgment and may not be making rational decisions. They might be more prone to accidents. If you are a victim of mild to moderate hypothermia, be extra cautious! Don't make a bad situation worse!

Review

- Safely load and unload a firearm. Firearms should be kept unloaded unless they are in use.
- Five methods of carrying firearms: two-handed, cradle, elbows/side, trail, shoulder carry.
- When two hunters need to cross a fence, both hunters unload their firearms and one hunter holds the firearms while the other hunter crosses the fence. Then the firearms are handed over the fence.
- The area into which a hunter may shoot safely is referred to as a "zone of fire." When three hunters are hunting in a line and a gamebird flies up behind them – NO ONE SHOOTS IT!
- The biggest safety hazard when using tree stands is falling. You should always: 1. Wear a full-body harness, 2. Follow manufacturer's instructions, 3. Inspect treestands and fall-arrest systems for signs of wear.
- Hypothermia occurs when you get too cold for too long and your body's internal temperature drops. The first symptom of hypothermia is shivering.



Identifying Oklahoma Wildlife

Not properly identifying an animal before you shoot it can result in not only hunting fines or the suspension of your license but can also severely damage public support for hunting. A hunter who isn't cautious about what he or she shoots is a dangerous hunter and an unethical one.



IN A NUTSHELL

Question:
What is this a picture of?

Answer:
A whitetail deer.

Kelley Farrar



Whitetail Deer

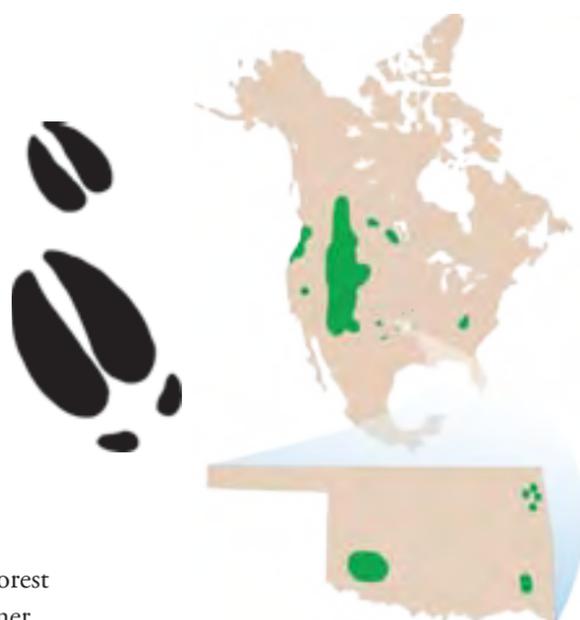
Habitat

Found across most of North America, except in northern Canada and far west United States. Prefers forests, valley bottoms and farmland. Often found along streams and rivers.

Size

About 3 ft. high at shoulder. Weighs 150 to 225 lbs. Generally smaller than mule deer and bigger than black-tailed deer.

LARGE MAMMALS



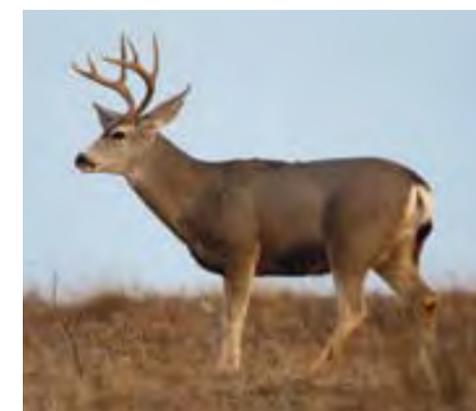
Elk

Habitat

Mountainous areas ranging from dense coastal forest to semi-open interior forest. In spring and summer they prefer higher elevations.

Size

4 to 5 ft. high at the shoulder. Males weigh 580 to 1,000 lbs. Females are smaller at 420 to 600 lbs.



Mule Deer

Habitat

Lives in a wide variety of areas such as coniferous forests, desert shrubland, grassland with shrubs and the mixed boreal forests of the north. Favors openings in these areas, browsing on shrubs and twigs (and grass and herbs at times).

Size

3 ft. high at shoulder. Bucks (males) weigh up to 405 lbs.; does (females) up to 160 lbs.



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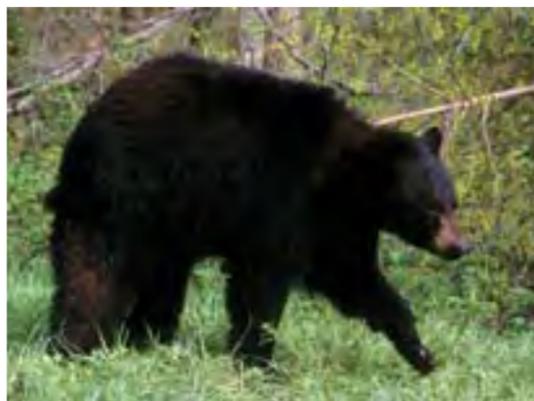
Pronghorn Antelope

Habitat

Grasslands; also grassy brushlands; and bunchgrass-sagebrush areas.

Size

3 ft. high at shoulder. Males weigh up to 140 lbs.; females weigh up to 105 lbs.



Virginia Game & Fish

Black Bear

Habitat

From coastal beaches and estuaries to dry grasslands, forests and sub-alpine and alpine areas. Prefers open forests where dense thickets of timber provide cover and seclusion. May be found in or near suburban areas.

Size

5 to 6 ft. high when standing on its hind legs. 2 to 3-1/2 ft. high at the shoulder. Weighs 200 to 475 lbs. or more.



Warren Williams

Mountain Lion

Habitat

Prefers mature and second-growth forests in rocky and mountainous terrain.

Size

26 to 30 in. high at shoulder. About 6 to 7 ft. long (including 3 ft. tail). Weighs 100 to 200 lbs. Females are smaller than males.



MEDIUM TO SMALL MAMMALS



Russell Graves

Coyote

Habitat

Mountainous areas ranging from dense coastal forest to prairies. In spring and summer they prefer higher elevations.

Size

23 to 26 in. high at the shoulder. 39 to 55 in. long, including a 12 to 18 in. tail. Weighs 20 to 50 lbs.





Bobcat

Habitat

Prefers open brushland or semi-wooded country. Inhabits from valley bottoms to timberline, though generally found in mixed cover at lower elevations.

Size

Up to 22 in. high at the shoulder. 25 to 30 in. long. 5 in. tail. Weighs 15 to 35 lbs.



Red Fox

Habitat

Very adaptable to living in almost any environment – even close to humans. Often inhabits the edges of parklands, lake and river shores, logged areas and farmland.

Size

15 to 16 in. high at the shoulder. Weighs 7 to 15 lbs.



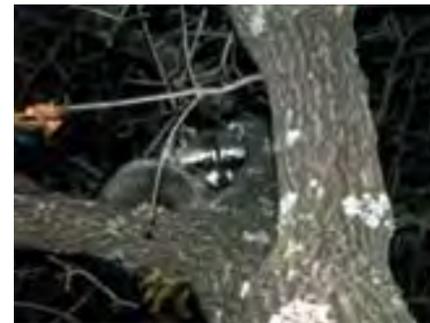
Gray Fox

Habitat

Varied, more often in wooded and brushy habitats than red fox.

Size

15 to 16 in. high at the shoulder. Weighs 8 to 15 lbs.



Raccoon

Habitat

Along waterways near forests or rocky banks. Nocturnal and omnivorous. Frequently dunks food in water before eating. Dens in hollows of trees, logs or ground burrows and rock crevices.

Size

18 to 28 in. long not including tail. Tail length is up to 12 in. Weighs 11 to 35 lbs.



UPLAND GAME BIRDS



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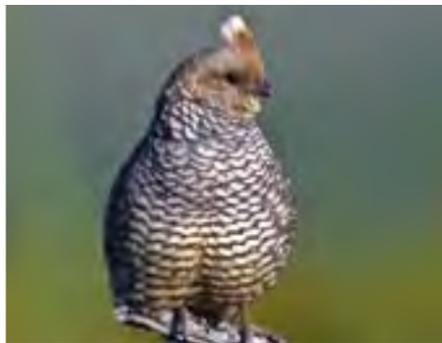
Wild Turkey

Habitat

Oak woodlands, pine-oak forests. The two main subspecies in Oklahoma are the Eastern wild turkey in the southeastern quadrant of the state and the Rio Grande wild turkey in the rest of the state.

Size

37 to 46 in. high. Weighs 17 to 28 lbs.



Reid Allen

Scaled Quail

Habitat

Dry grasslands and brushy deserts.

Size

10 to 12 in. long. Weighs 6 to 8 oz.



■ Easterns
■ Rio-Eastern Hybrid
■ Rio Grande
■ Merriams Rio Hybrid



Kelly Murrain

Bobwhite Quail

Habitat

Farmland areas, open brushy country, roadsides and forest edge. Prefers open forests, grasslands, pastures, meadows and shrub cover.

Size

8 1/2 to 10-1/2 in. high. Weighs 6 to 8 oz.



Wade Free





Dave and Steve Maslowki

Ring-necked Pheasant

Habitat

Farmlands, pastures, and grassy woodland edges. Although successful in most grassland habitats, this species most commonly found in the central plains.

Size

Male 33 in. high; female 21 in. high. Weighs 2 to 3 lbs.



One of the main concerns of new and experienced waterfowl hunters alike is correct identification. While it might seem like a hard skill to develop, there are a few simple things you can do to improve your identification skills. Go with an experienced waterfowl hunter, study a waterfowl I.D. guide or practice by watching waterfowl when not hunting.



Tom Martineau / www.therawspirit.com

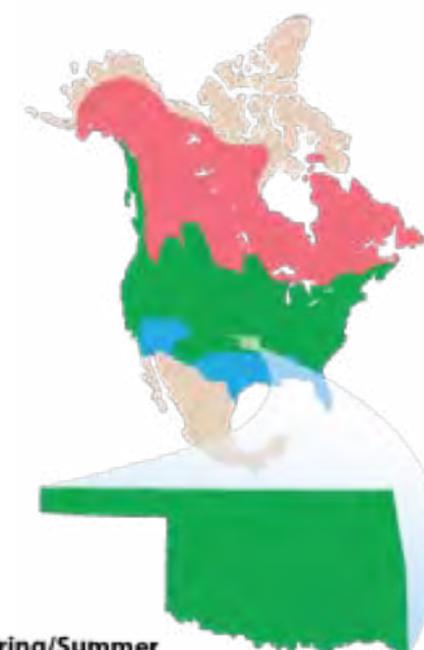
Canada Goose

Habitat

Near water, grassy fields, and grain fields.

Size

30 to 44 in. long. Weighs 7 - 20 lbs.



MIGRATORY BIRDS



wildlifedepartment.com

Mourning Dove

Habitat

Open lands including prairies and open forest as well as suburban areas.

Size

10 to 12 in. high. Weighs 4 to 6 oz.



Tom Martineau / www.therawspirit.com

Mallard

Habitat

Grasslands areas around a pond or small lake with lots of reeds or marshy areas.

Size

24 to 28 in. long. Weighs 2 1/2 to 3 lbs.



Game Care

Oklahoma Hunter Education

Field Dressing and the Care of Game

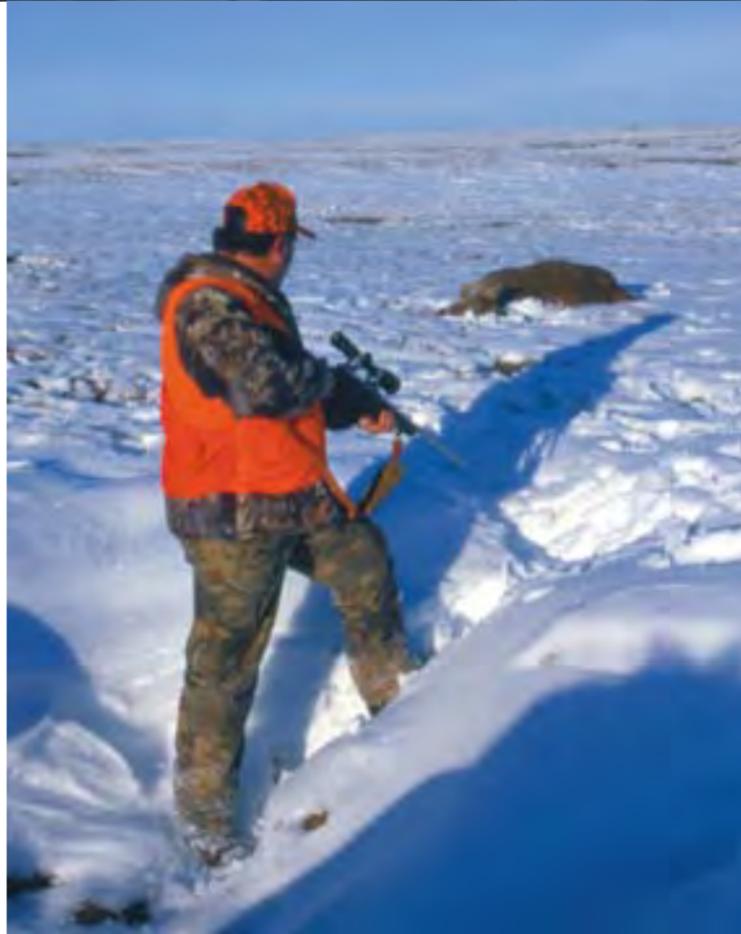
Ethical and responsible hunter's:

- Know the laws and use legal and ethical methods of hunting.
- Never waste game and properly care for game meat.
- Tag and check in game if required.

The Hunt: One Shot Harvests

The hunter is responsible for proper care and use of a harvested game animal. Proper care starts with the first shot. Responsible hunters strive for clean, one-shot harvests.

How you hunt an animal and how you immediately care for it affects the taste of the meat. An animal that is shot while resting will not have a gamey taste while an animal that is chased for a distance will secrete waste products into the muscles that affect the taste of the meat.



Nels Rodefeld

Words to Know

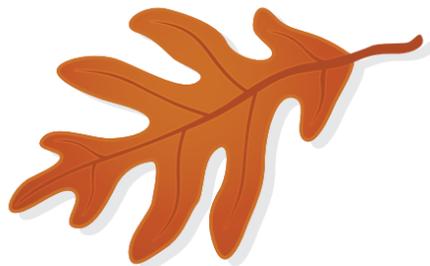
Game Care – The process of taking care of the meat immediately after an animal has been harvested.

Field Dressing – A method of cleaning a dead animal to preserve the meat.

Carcass – Body of a dead animal.

Entrails – Waste products left over from field dressing.

Aging Meat – A method of tenderizing meat.



After the Harvest

OBJECTIVE 1

Once a deer, elk, antelope, bear or turkey has been harvested, you must tag it immediately with name, license number, date and time of harvest. You should also make sure that evidence of sex and species of animal is clearly attached and evident.

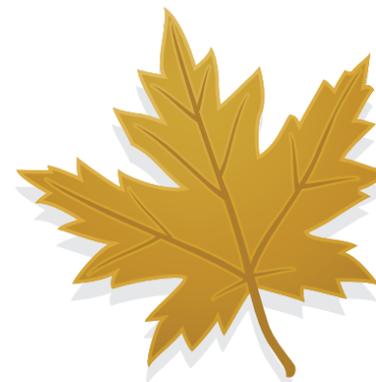
Game wardens will want to know the species and sex of both birds and animals that you shoot.

Once you've tagged the animal, you need to do two things quickly to prevent the meat from spoiling – field dress it and cool the meat.

Field dressing is simply removing the entrails. It prevents the meat from absorbing waste products from the body cavity organs. Three environmental factors affect the taste of your meat: temperature, dirt and moisture. Meat that has been kept cool, dry and clean tastes better than meat that has been allowed to get warm, wet and tainted with dirt.



Jerry Shaw



Care of the Carcass

OBJECTIVE 2

Meat should be kept cool by:

- Keeping it in the shade.
- Keeping it in moving air or a breeze.
- Hanging it from a tree or post.

Never transport carcasses of large animals on the hood of a vehicle. The heat will spoil the meat. Hunters need support from the public. An animal's carcass in plain view can offend non-hunters. Cover it with canvas or place it in a closed area inside the vehicle. Always be responsible and thoughtful of the opinions of others.

Meat should be kept dry by:

- Immediate field dressing.
- Wiping off excess blood or fluids.

Meat should be kept clean by:

- Not allowing meat to be drug through dirt.
- Covering with a cheesecloth.



Question:

Who is responsible for the proper care and use of a harvested game animal?

Answer:

The hunter who harvested it.

Question:

When should deer, elk, antelope, bear and turkey be tagged?

Answer:

Immediately after being harvested.

Field Dressing

OBJECTIVE 3

Field dress wildlife immediately. The extra time spent taking care of the meat will pay off when it comes time to make a meal from that meat. Field dressing can be messy so remove any heavy coats and roll up your sleeves.

Disposable vinyl or latex gloves lessen the chances of catching infectious diseases and make hand cleaning easier.

Blood and digestive juices from organs possibly penetrated by the shot must be removed from the body cavity quickly. Organs deteriorate rapidly so remove them quickly. The faster they are removed, the faster the meat will cool and the better it will be preserved. Field dressing will eliminate quite a bit of weight so it is better to field dress the animal before you transport it.

Remember that it is important to keep dirt and foreign objects away from the exposed body cavity. Removing the scent glands is not considered necessary but if you wish to do so, be careful as they can taint the meat if broken or smeared on the carcass.



Jerry Shaw

Basic Field Dressing Tools

Perhaps the most important tools you can carry for field dressing are a sharp knife and a good sharpener. These will be the primary implements you use for skinning and cleaning carcasses. Other tools you might include in your field dressing bag are:

- A small axe or saw for cutting through bone.
- Rope for tying the carcass together or dragging it.
- Latex or rubber gloves.



Jerry Shaw

Steps in Field Dressing

Roll the deer carcass over on its back with the rump lower than the shoulders and spread the hind legs. Make a cut along the center line of belly from breastbone to base of tail. First cut through the hide, then through belly muscle. Avoid cutting into the paunch and intestines by holding them away from the knife with the free hand, while guiding the knife with the other.

Unless the deer head will be mounted, the cut should pass through the sternum and extend up the neck to the chin to allow removal of as much of the windpipe as possible.



Jerry Shaw

With a small sharp knife, cut around the anus and draw it into the body cavity, so it comes free with the complete intestines. In doing this, avoid cutting or breaking the bladder. Loosen and roll out the stomach and intestines. Split the pelvic bone to hasten cooling.



Jerry Shaw

Cut around the edge of the diaphragm, which separates the chest and stomach cavities, and split the breastbone. Then, reach forward to cut the windpipe and gullet ahead of the lungs. This should allow you to pull the lungs and heart from the chest cavity. Drain excess blood from the body cavity by turning the body belly down or hanging animal head down. Prop the body cavity open with a stick to allow better air circulation and faster cooling.

A clean cloth may be useful to clean your hands. If you puncture the entrails with a bullet or your knife, wipe the body cavity as clean as possible or flush with water and dry with a cloth. Don't use water to wash out the body cavity unless the paunch or intestines are badly damaged.

Part of the satisfaction of the hunt comes with making a clean kill and in doing a neat job of field dressing your deer. Veteran hunters may have variations in the steps of field dressing. The important points are to remove the internal organs immediately without contaminating the body cavity with dirt, hair, or contents of the digestive tract and to drain all excess blood from the body cavity.

All parts damaged by gunshot should be trimmed away. If the weather is warm or if the deer is to be left in the field for a day or more, it may be skinned, except for the head, and washed clean of dirt and hair. It should be placed in a shroud sack or wrapped with porous cloth to cool (cheesecloth is ideal). The cloth covering should be porous enough to allow air circulation but firmly woven enough to give good protection from insects and dirt. Adequate cooling may take six hours or more, depending on weather conditions.

Aging the Meat

Age the deer carcass in a cool, dry place. Aging of a well cared for carcass at correct temperatures yields better flavored, more tender meat. Best results are obtained in a near-constant temperature, preferably from 34 to 36 degrees Fahrenheit. Since it is rarely that cold in Oklahoma, hunters should not age their carcasses outside.

Aging for one to two weeks is about right for the best quality venison, depending on the age and condition of the animal.

7 Game Care

Oklahoma Hunter Education



Colin Berg

Disposal of Entrails and Carcasses

OBJECTIVE 4

The Oklahoma carcass disposal regulations are: No person may dump the carcass of any dead animal in any well, spring, pond or stream of water or leave it within 1/4 mile of any occupied dwelling or public highway without burying the carcass in an appropriate manner where it is not liable to become exposed through erosion of the soil or where such land is subject to overflow.

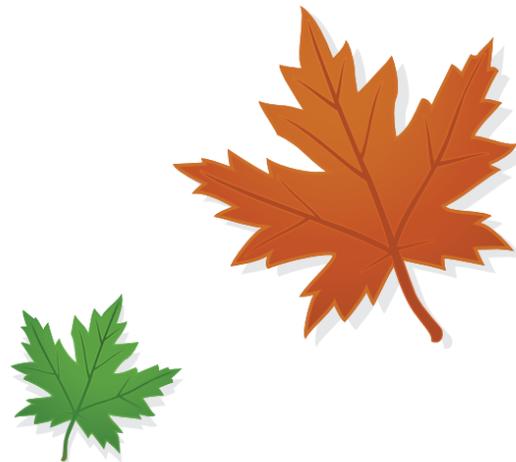
Other states may have different laws about how you should dispose of the unused parts of a game animal. Never leave the waste remains out where other people may see them. Remember that the land you hunt is often used for other purposes. Many people will be offended if they find the unused parts of a game animal.

Careless behaviors such as this can result in poor public opinion of hunting and end up damaging the sport and hurting your opportunities to participate in the future. Be aware of your actions; how they affect others and how they affect the sport.

Appreciate the Gift!

Never forget to appreciate the gift! Hunting an animal is a great privilege that can be immensely rewarding.

A responsible hunter never forgets to give back when opportunities rise.



Review

- Tag your deer, elk, antelope, bear or turkey immediately with name, license number, date and time of harvest.
- A sharp knife and a good sharpener are two of the most important tools for field dressing. Rope, gloves and a game bag are handy to have in the field.
- Prevent the meat from spoiling by immediately field dressing the animal and keeping the meat cool and dry.
- Field dressing a carcass immediately helps preserve the meat. Organs deteriorate rapidly so remove them quickly. The faster they are removed, the faster the meat will cool and the better it will be preserved.
- Dispose of animal carcasses in a manner consistent with state law. Never leave waste remains out where other people can see them.

Russell Graves



Bowhunting

OBJECTIVE 1

Bowhunting is one of the oldest hunting methods. It was the main form of hunting until firearms were invented in the 14th century. Bowhunting is growing in popularity in Oklahoma.

Bowhunting requires concentration and patience. It is not a method of hunting that you can learn in a day or two. Making accurate shots with a bow takes much practice. In fact, practice is perhaps one of the main things you need to do to be a successful bowhunter. There are both classes and groups that offer instruction in the proper methods of bowhunting and a wise hunter will take advantage of all the instruction he or she can receive.

Why Do People Bowhunt?

People bowhunt for several reasons. It gives them a sense of history. After all, it is one of the oldest hunting methods. It also can be a personal challenge to master the skills of a good bowhunter.

What Do You Need To Bowhunt?

A good pro shop that specializes in bow hunting will set you up with equipment that is right for you. You must feel comfortable with your bow, how it feels in your hand and how it draws. Remember, no matter how good your equipment, it's only as good as you are so practice, practice, practice.

Judging distance

To become a good archer you must practice and develop the skill of judging distance. In order to place an arrow within the kill zone of Oklahoma's big game animals, you must judge the distance accurately.

The easiest way to judge distance is to carry a rangefinder with you while bowhunting. Otherwise it requires a lot of time and practice. You can develop your range finding skills by either joining a 3D archery club or working with a friend who will place 3D targets for you and let you practice judging their distance. Knowing your hunting area and the distance of different landmarks from your stand also helps.

Words to Know

Bow –

Longbow – One of the first bows invented. It's little more than a slim stick with a string.

Recurve – A shorter bow with recurved limbs that allow it to shoot as powerfully as a long bow.

Crossbow – A recurve or compound bow mounted on a rifle stock. String is held back by the bow requiring less movement when game approaches.

Compound – A modern bow designed to allow an archer to hold their bow at full draw with less force.

Arrow –

Field tips – Narrow arrow tips used for target shooting and hunting small game.

Broadheads – Wide, razor sharp tips used for hunting large game and turkey.

Covered quiver – A case that safely holds and carries arrows.

Equipment needed:

- A good bow
- Arrows and razor sharp broadheads
- Finger protection and/or release equipment
- A covered quiver to keep broadheads from cutting the hunter



Daniel Griffith

Matching Equipment

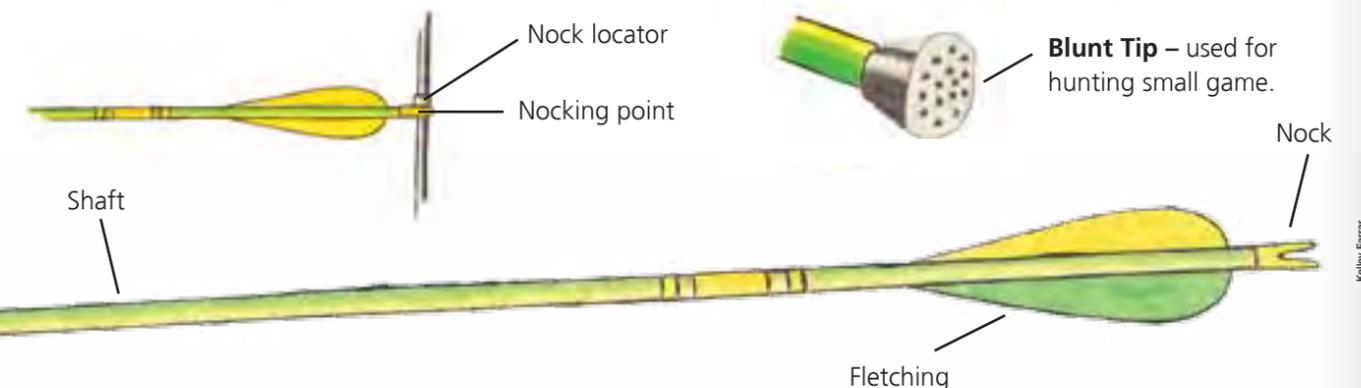
Equipment must be matched to the needs of the hunter. A bow should match the drawing ability of the hunter as well as the game being hunted.

You should have an experienced bowhunting specialist help you pick the bow that best meets your skill and strength.

Matching Arrows

Arrows should be matched to the bow and the hunter in stiffness (spine) and length.

Arrows should match each other. Not all arrows fly the same or have the same range in flight.



IN A NUTSHELL

Question:

What piece of equipment protects the hunter and other people from contact with broadheads?

Answer:

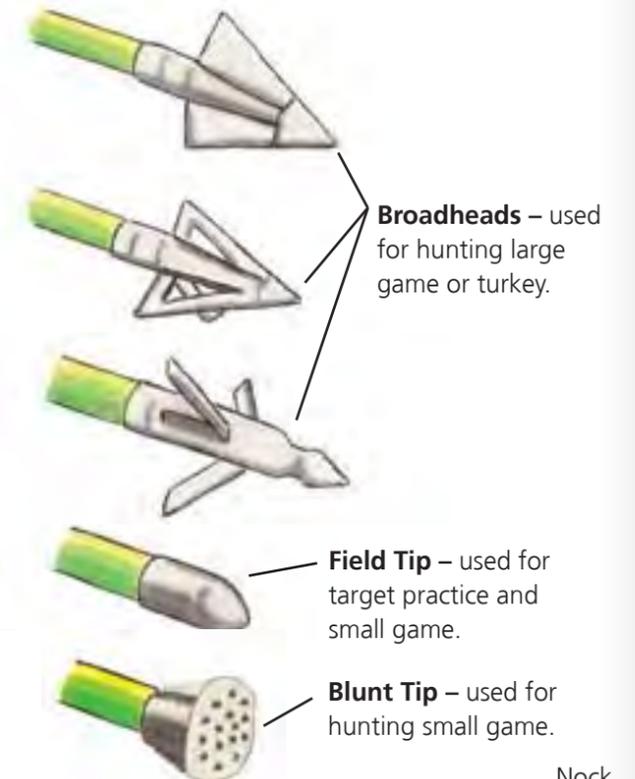
A covered quiver.

Question:

What is one of the skills should you develop to become a good archer?

Answer:

Judging distance.



Four Main Types of Bows

OBJECTIVE 2

In modern times, the recurve and compound bows dominate for sport and hunting practices. Newer materials, including flexible plastics, fiberglass, and carbon fibers, have led to increases in range and projectile velocity.

Long Bow

Sometimes called a “Stick Bow” -- the traditional bow. Usually straight until the string is attached. The bow curve and power is dependent on how far the string is pulled.

Recurve

A stick bow that curves at the ends. Smooth and quiet when shooting, a recurve has more power and is shorter than a long bow.

Compound

Most popular bow for hunting. Uses cables and pulleys to provide more power with less effort than pulling a long bow.

Crossbow

Short bows mounted on a stock so they can be aimed, cocked and fired. Hunters who use crossbows need to exercise the same restraint that hunters do using stick bows. In other words, shooting distance is less than compound bows.

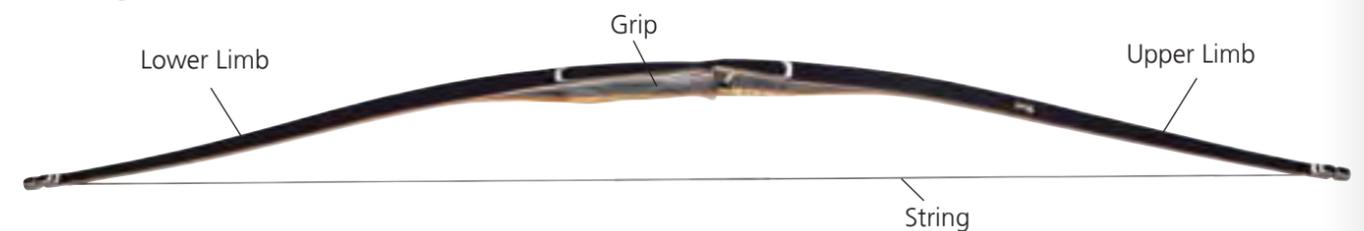


This program hits the bulls-eye in education by providing archery training to the nation's youth. Designed for 4th to 12th graders, Oklahoma National Archery in the Schools curriculum covers archery history, safety, techniques, equipment, mental concentration and self-improvement. To get your school involved call 405-522-1857.

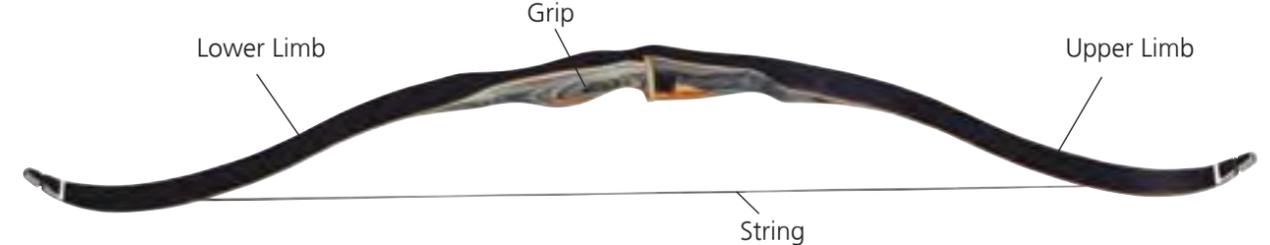


Ben Davis

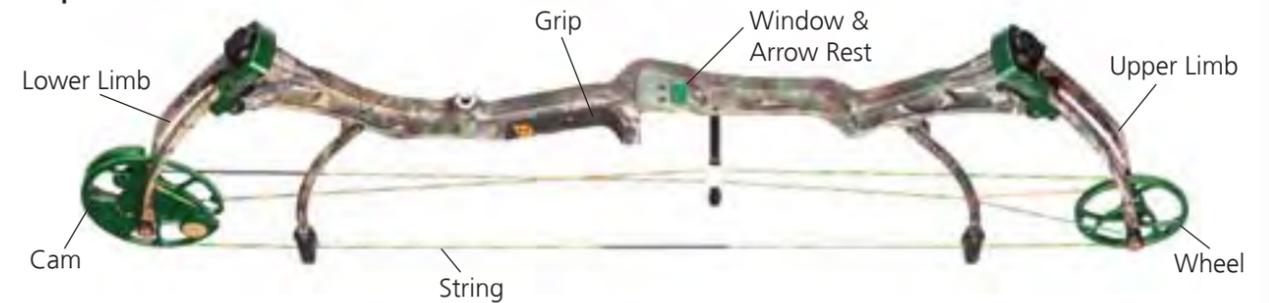
Long Bow



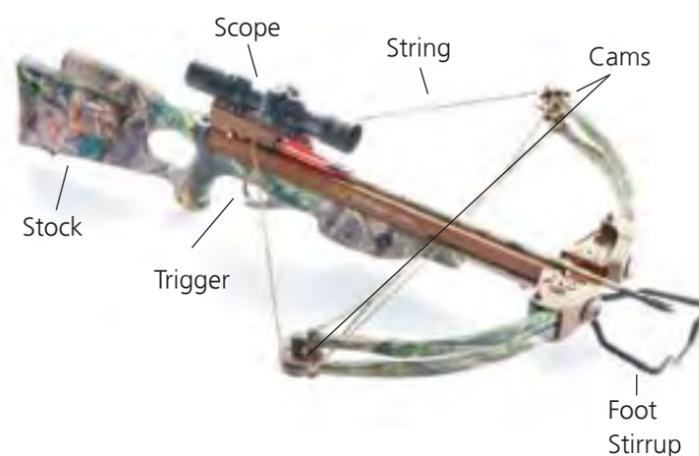
Recurve Bow



Compound Bow



Crossbow



Review

- Blunts, field tips and broadheads are three types of points commonly used in the field.
- Arrows should be matched to the bow and to the hunter. They should also be matched to each other.
- Recurve and compound bows are most popular for sport and hunting.
- The long bow, recurve, compound and crossbow are the four types of bows.

Muzzleloaders

Hunting with equipment other than modern firearms can be both exciting and challenging. A hunter can find that a special style of hunting game provides a sense of personal satisfaction.

Muzzleloaders were originally developed in the 14th century. Over the years they became more refined but they were finally replaced by the modern firearm.

Muzzleloaders are loaded directly through the muzzle of the firearm. Their range is less than a modern rifle, so making a clean shot with a muzzleloader is a challenge to the hunter. He or she must get close enough to hit a vital area.

People like the challenge of hunting with a muzzleloader as well as the sense of heritage that comes with using such a specialized, historical firearm. However, special precautions must be taken with both the firearm and the powder to ensure that the muzzleloader is safe to fire and to store.



Ben Davis

Words to Know

Muzzleloader – Firearm that uses black powder and loads through the barrel.

Black powder – Combustible powder for firing a muzzleloader.

Black powder substitute – Replacement for black powder that is less sensitive, cleaner and more efficient.

Percussion Caps – Ignites black powder

Ramrod – Stiff rod used to load a muzzleloader.

Safety Comes First!

OBJECTIVE 1

Mastering hunting with a muzzleloader can be both exciting and challenging. Many hunters want to use historic guns in the field. However, old metal may not be strong enough to withstand the rigors of black powder explosions. Always consult a gunsmith before using any historic firearm.

Remember that black powder is an explosive. If not handled responsibly, it can be dangerous. Do not expose black powder to an open flame or store it anywhere there is a possibility of a spark.

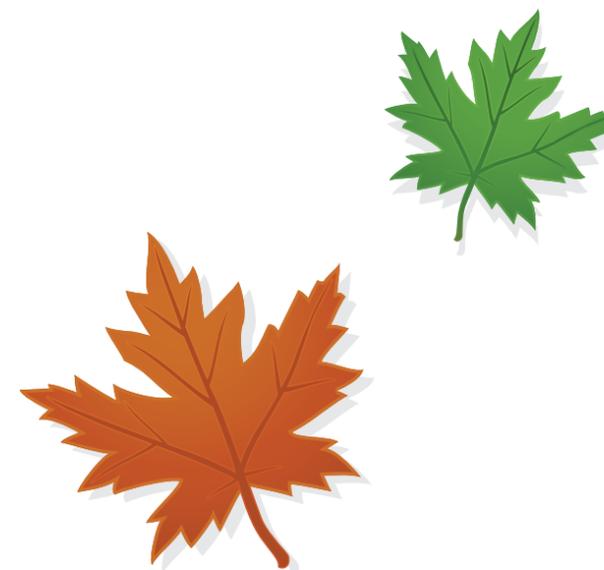
Black Powder

OBJECTIVE 2

Smokeless powder is not safe to use in most muzzleloaders on the market. Check your owner's manual to find out which powder is safe to use in your muzzleloader. Most muzzleloaders use black powder or a synthetic powder. Both can be ignited from sparks, heat, impact, static electricity and even sunlight. When ignited, they burn hot and fast. They will not ignite when damp or wet. All gun powders need to be stored and handled safely. Store in correctly labeled original manufacturer's containers to prevent accidental ignition.

Black or synthetic powder is highly corrosive and will damage your muzzleloader if not cleaned with soap and water after every use.

These powders are ignited by using percussion caps that are coated on the inside with an explosive substance. These should be stored separately from gun powder.



Loading a Muzzleloader

OBJECTIVE 3

Loading a muzzleloader should be done with great care. Black powder is an explosive. Always follow your owner's manual for the correct loading procedure.

The first thing you must do is to prove that the muzzleloader is unloaded. Check the barrel by inserting a marked ramrod. If empty, point the firearm in a safe direction and fire a cap. This will remove oil from the barrel and clear the flash point.

Making the Marked Ramrod

You should always use a marked ramrod to prevent double loading and to make sure the bullet is firmly seated against the powder charge. To make a marked ramrod, you should first determine the optimum powder charge and bullet for your muzzleloader. Consult your owner's manual for this step.

- Be certain the muzzleloader is unloaded.
- Put your ramrod down the barrel.
- Make a mark all the way around the ramrod where it comes out of the barrel.
- With your muzzleloader loaded, put your ramrod down the barrel.
- Make a mark all the way around the ramrod where it comes out of the barrel.
- Use the marked ramrod to determine whether or not the muzzleloader is loaded before loading.
- When loading, use the marked ramrod to make sure there is no air space between the bullet or shot and the powder.



Review

- Follow manufacturer's procedures and get help from a qualified instructor. Loading a muzzleloader should be done with great care. Always follow your owner's manual for the correct loading.
- Use a marked ramrod to find out if a muzzleloader is unloaded.
- Use a marked ramrod to make sure there is no air space between the bullet or shot and powder.
- Always consult a gunsmith before using any historic firearm.
- Do not expose gun powder to an open flame or store it anywhere there is a possibility of a spark.
- The two types of powder most commonly used in muzzleloaders are black powder and synthetic.

IN A NUTSHELL

Question:

What should you use to find out if a muzzleloader is loaded?

Answer:

The marked ramrod.

Question:

Where should the bullet and patch be when a muzzleloader is properly loaded?

Answer:

Firmly seated against the powder.

Surviving Being Lost

OBJECTIVE 1

Enjoying the outdoors is one of the primary reasons why hunters love their sport. As with any sport, however, there are certain skills a person must know in order to be safe. One of these is how to survive if you get lost or are injured while hunting. While you may think you know the area you are hunting in, it's often very easy to get turned around or confused about your location. This can be dangerous if you aren't prepared.

I'm Lost! Now What?

The most important thing to do when lost is to stop, don't panic and think before you act. As darkness nears, it is much more important to make a plan for staying warm and alive overnight than to try to find a way home. You must make a conscious decision to ignore your other obligations such as making it home in time for dinner or to work in the morning. Since Oklahoma has few remote wilderness areas, you will likely be found the next day.

When you are lost all you have to save yourself is what's in your survival kit and the clothes on your back. Therefore, survival starts before you go afield. You should bring a survival kit every time you go afield. The best survival kit will do you no good if it's left in your vehicle. It is also very important that you tell someone where you are going and when you will return. If you don't return at the right time, they can contact the authorities and launch a search party.

A person's attitude and emotional state can make all the difference in finding a way out of difficult situations. Stop, think and do not wander around. That is dangerous and can lead to disorientation and confusion. Lastly, plan on what to do next!

A rule of thumb is that a person can survive three minutes without air, three hours without shelter in

severe weather, three days without water and three weeks without food. Assuming you have not been injured and can breathe, you have time to plan how to get out of your situation.

You require more food and water when you use lots of energy. Also, tired people don't think as well. So, relax and think about your situation before you react.

As with any problem, the best way to solve it is to not have it happen in the first place. There are several things you can do to prevent yourself from getting lost.

The first thing is to know how to use a compass and map. A good topographic map shows all details of a terrain. It shows roads, rivers, hills, elevation, and even trees and bushes. You can obtain topographic maps of the area you are hunting in from several sources including the website wildlifedepartment.com as well as bookstores. A map and a good compass can tell you exactly where you are.

Survival Kit

A survival kit is a personal item that should be adjusted for your needs, the time of year and the activity in which you will engage in. You should build, and carry, your own. There are some basic rules and items you should be aware of when putting one together. They should be lightweight and compact, while including the equipment you need to survive a night or two in the outdoors. Finally the equipment must be reliable and working order, and you must carry it each time you go afield.

Basic survival kits should contain:

Shelter material

Large, heavy duty, orange, plastic bag

Parachute line

Fire Starting Materials

Matches contained in a waterproof case

Cigarette lighter

Metal match with a scraper

Vaseline saturated cotton balls in a waterproof container

Signaling equipment

Whistle with a lanyard
Glass, or good plastic, signal mirror with a lanyard
Fluorescent plastic surveyors tape

In addition to the basic three categories of equipment also consider the following equipment:

Additional clothing for warmth and protection from wind and wet
Sturdy fixed or folding blade knife
First Aid Kit
Metal cup
Flashlight with a headband and spare bulbs/batteries
Food bars high in carbohydrate
Water purification tablets
Folding saw
Compass
Tube tent
Plastic water bag

* This survival kit is available for purchase from outdoorsafe.com. See directions for use below. This suggested survival kit is reprinted with permission from outdoorsafe.com.

Emergency blankets are not recommended because they can tear easily, are almost impossible to use if you are injured and they do not completely cover the user. We recommend instead carrying a large, heavy duty orange plastic bag.

Directions for preparing and using a plastic bag as emergency shelter.

1. Before going afield, cut a face-sized hole in the corner of the bag near the top seam.
2. To use, unfold bag and pull it over your body like a poncho.
3. Pull it completely around your body and with the opening around your face.

* See illustration to the right.

**Question:**

What is the first thing you should do when you think you are lost?

Answer:

Stop, don't panic and think before you act.

Question:

What is the first symptom of hypothermia?

Answer:

Shivering.

Review

- When you think you are lost, stop, don't panic and think before you act.
- Survival starts before you go afield.
- Before going afield tell someone where you are going.
- Learn to use a map and compass.



Lance Meek

SEAM

CUT HERE

OPENING

UPLAND URGENCY: 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

It 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

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 wild-fire 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.



BEN DAVIS

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.

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.

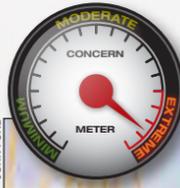
Low Fur Market



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.

No Till/Chemical-Fallow Farming



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.

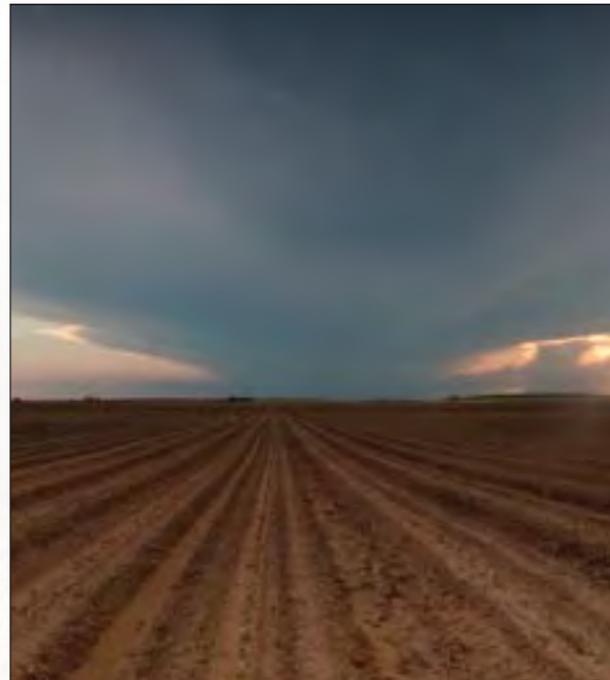
With a less diverse vegetative composition, insects may be less abundant — a problem because insects are a critical component of quail chicks' diet for the first several weeks of their life.



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.



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.

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.

Catastrophic Weather Events

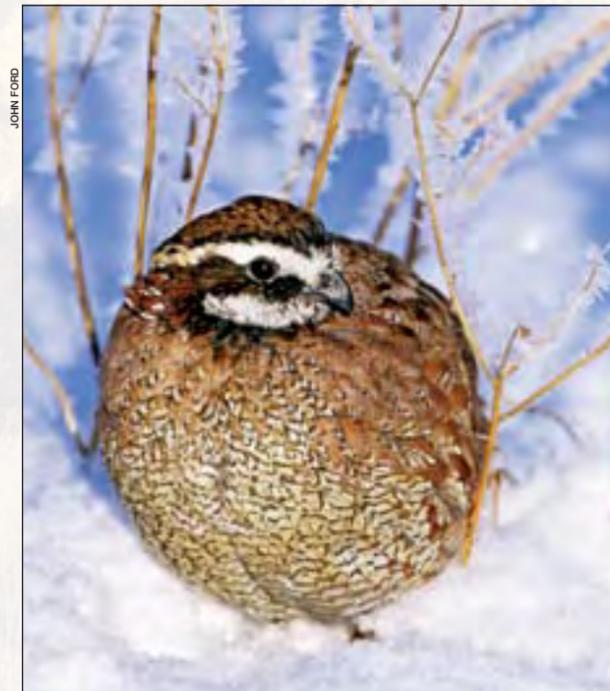


Some researcher believe annual and short-term trends in quail populations may be due in large part to weather effects on production, and we all know the state's weather can be harsh. In the past year alone, weather events have been particularly detrimental. July 2011 was the hottest July ever on record 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.



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.



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."

Disease



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.



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.

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.

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 development 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.

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



Wildlife 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.

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.

Landowners and citizens can play an important role in quail conservation by getting involved in these research projects. To find out how you can participate, please visit:

<http://www.wildlifedepartment.com/hunting/quail.htm>

The Role of the Wildlife Department

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 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 kicked off in the fall of 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

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

- 26,700 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.

to ensure all future samples are unique. Researchers hope to collect approximately 300 samples during each trapping session.

ODWC staff 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.



JEREMIAH ZURENDA

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 Pittman-Robertson Act

America is the home of large numbers and varieties of wild creatures. Yet, only a few decades ago, wildlife's survival was very much in doubt. Early settlers harvested an abundance of wildlife, wiping out some species and reducing others to just a fraction of their original numbers.

Because of this, congress passed the act known as the Pittman-Robertson Act. It was signed into law by President Franklin D. Roosevelt on September 2, 1937. This act is now administered through the Wildlife & Sport Fish Restoration Program (WSFRP).

Since then, numerous species have rebuilt their populations and extended their ranges far beyond what they were in the 1930's. Among them are the wild turkey, white-tailed deer, pronghorn antelope, wood duck, beaver, black bear, giant Canada goose, American elk, desert bighorn sheep, bobcat, mountain lion and several species of predatory birds.

Federal Funding from WSFRP pays for up to 75 percent of project costs, with the Oklahoma Department of Wildlife Conservation putting up at least 25 percent. A steady source of funding lets the ODWC make a lasting impact on species populations. The department annually receives approximately \$18 million in Federal excise taxes for wildlife restoration.

WSFRP funds are used to buy, develop, maintain and operate wildlife management areas. The ODWC manages more than a million acres for wildlife.

WSFRP has greatly aided in a nationwide effort to enlist science in the cause of wildlife conservation. About 26 percent of WSFRP funding to the States is used for surveys and research.

Surveys provide solid information on the numbers and activities of species,

which helps biologists make management decisions. This includes season dates, bag limits, controlled burns, etc.

Research findings have enabled managers to keep wild creatures in balance with their environments and to permit more people to enjoy the wildlife without endangering the future of any species.

Although WSFRP is financed wholly by firearms users and archery enthusiasts, its benefits cover a much larger number of people who never hunt but do enjoy such wildlife pastimes as birdwatching, nature photography, painting and sketching and a wide variety of other outdoor pursuits. Almost all the land in Oklahoma purchased with WSFRP money is managed both for wildlife production and other public uses.

Numerous non-game species enjoy WSFRP benefits, too. Ground cover for game birds is also used by all sorts of other birds and small animals. Bald eagles benefit significantly under careful management of forested areas where they typically nest. Fortunately, the WSFRP does not restrict use of funds to game species, but instead allows their use for any species of wild bird or mammal.

The ODWC began using WSFRP funds to run its hunter education program in 1973.

Hunter education is designed to make each hunter aware of how his/her behavior affects others.

Hunters learn safe and proper handling of hunting equipment, responsible hunting and conduct afield. They also learn identification of wildlife and understanding of its habits and habitats, and respect – for the animals, and for other hunters, landowners, and the general public.



A PUBLICATION OF THE OKLAHOMA DEPARTMENT OF WILDLIFE CONSERVATION

