



WHITETAIL WONDERS

The World of The White-tailed DEER

By Dale Deckman

By far the most common deer inhabiting North America is the white-tailed deer. Its total population is millions ahead of the mule and black-tailed deer combined. The whitetail is truly a story of an animal meeting the challenges of an ever changing world, instinctively and with the help of wildlife management. Few animals have shown the capability of adapting to habitat alterations as successfully as the whitetail.

With today's estimated whitetail population exceeding 25 million on the North American continent, this member of the Cervidae, or deer family is the most prolific on record. It has infiltrated nearly all corners of the United States, with populations known in all contiguous states, Canadian Provinces, and throughout most of Mexico. In all, more than 30 subspecies of the whitetail inhabit North

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Photos by John R. Ford

America, plus an additional eight subspecies live in South America, an amazing example of both adaptability and perseverance.

From a historical perspective, the whitetail has been known to exist for over 20 million years, and for the past one million years in the same basic form we see the animal today. Through evolution, some physical characteristics have been altered, most significantly, the feet. What used to be a five-toed mammal has developed into a sleek and swift two-toed ruminant (four stomachs) with two unusable dewclaws several inches above the main toes. The fifth toe, corresponding to the thumb on a person's hand, was eliminated over time, probably due to non-use.

SCIENTIFIC NAME

All animals of the world are placed in a category and classified in accordance with a scientific name. The whitetail has been classified into the genus - *Odocoileus*, and the species - *virginianus*. The arrangement value of the two-word classification has great significance in the world of science. The most widely accepted application of the name was given the deer by a scientist named Rafinesque in 1832. The scientist was believed to have found the tooth of a deer in a cave in Virginia, and upon examination noted that the tooth was hollow. *Odocoileus* corresponds closely with the Greek word for "hollow tooth." The species name, *virginianus*, denotes the location of the find as being the state of Virginia.

WHAT MAKES A WHITETAIL DIFFERENT?



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TEETH

Mature whitetails have a total of 32 teeth, consisting of 12 molars, 12 premolars, 6 incisors and 2 canines. With a basic diet consisting of plants, the lower front incisors and canines clip food off, while the rear molars and premolars grind and break down the food. Front teeth in the upper jaw are absent, replaced with a tough pad that aids the incisors by securing food. Biologists can determine the age of the deer quite closely by examining the wear on the molars and premolars. As deer age, their teeth generally wear down, losing the sharp cutting edges. As the teeth wear, feeding can become very difficult for the deer.

Other physical traits

Unless you've had the opportunity to see a deer close up, most assume the size of the animal to be larger than it actually is. On the average, a mature deer stands about

38 inches at the shoulder, somewhere around the belt line height of a man. Northern subspecies of the whitetail are typically larger animals than their southern relatives. The length of a deer can range from under 60 inches, to more than 70 inches, again depending on the subspecies.

The weight of a deer also varies. For example, one of the smallest subspecies, the Key deer of Florida, doesn't reach over 100 pounds full grown. Deer of the northern range can tip the scale at over 300 pounds.

The stomach of a deer is a very complicated system. Whitetails are classified as ruminants, possessing a four-chambered stomach. They include the rumen, reticulum, omasum, and abomasum. Similar to the milk cow, but developed for different reasons, deer generally feed quickly and store food first in the rumen. Quick feeding allows deer to expose themselves for only brief periods, avoiding the perils of predation. After eating the food, deer will generally retreat to a more confined resting area, not only for safety, but to finish digesting their food. Food

ANTLERS

Almost without exception, members of the deer family have at least one trait in common, the males have a set of antlers that fall off and regrow every year.

Whitetail antlers distinguish this species from others in the deer family primarily by the way the bone develops. All points of the whitetail antler generally protrude off one main beam on each side of the head with a single, noticeable brow tine at the antler base. In most cases the typical antler begins growth out of the head in a backward motion, then quickly changes direction and sweeps forward. Mule and black-tailed deer found mostly in the western United States; unlike the whitetail, exhibit branched antlers that fork, rather than come off a main beam. The antler also rises off the head more to the sides of the skull, without the forward sweep.

Know how fast I can run?



© John Mielcarek Photo

Over 35 MPH

stored in the rumen regurgitates up in a partially digested form to be rechewed before entering the other stomach chambers. This process of “cud chewing” is characteristic of many herbivores, better known as plant eaters.

LOCOMOTION

The ability to run is a tremendous asset to the life and livelihood of deer. They are a prey species, hunted by numerous predatory animals including wolves, bear and eagles. Domestic dogs, and the automobile also take their toll on the whitetail. In most situations, without the ability to escape, deer would fall victim to their stalkers.

Depending on the situation, whitetails will run quickly in a galloping motion or bound into timber. They also trot, walk, and at times crawl under obstacles. This wide variation of locomotion increases their chances for survival. If required, deer can reach top speeds in excess of 35 miles per hour for short amounts of time.

HOME RANGE

Contrary to many beliefs, most deer don't travel far in a lifetime. One square mile seems to indicate a close approximation of the home range of deer. Within these borders they can usually find all the necessary requirements for survival. They include food, water, escape cover, and retreat. Some deer have been known to travel or migrate great distances during a lifetime but this

would be considered out of the ordinary. During the breeding season, bucks will at times overstep their normal boundaries in search of a mating partner. Male deer also mark territories during “rut” by leaving scent and urine in “scrapes” pawed into the earth. These territories can be found on the perimeter of the buck's home range.

SIGHT-SOUND-SMELL

Nature has perfected the senses of the whitetail giving it every advantage when it comes to survival. Deer have particularly keen eyesight.

Their eyes are located on the sides of their head allowing for excellent peripheral vision, an indication of a prey species. They can detect movement at great distances.

The ability to hear is also critical for deer survival. Whitetails use their ears in conjunction with other senses to identify danger.

Smell is the most useful sense a deer possesses. Air currents often times bring the scent of alarm long before the eyes or ears can detect danger.



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SEASONS OF THE WHITETAIL

Wet, Muddy, windy, snow, sleet, cold, warm, or sunny. Springtime in whitetail country can be one or many of these conditions. The weather is generally uncertain, but the birthing process is a miracle that doesn't wait.

Whitetail fawns are born during the months of May and June, after a gestation period of around 200 days. Sometimes a bit earlier, sometimes a bit later, but the majority of newborns arrive in these two months. Fawns usually emerge into the world front feet first followed by the head and the rest of the body. The female doe, typically without regard for a pre-selected birthing site enters labor for a time period of as little as 10 minutes up to an hour or more before actual birth.



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Kevin R. Spatt Photo

Does have four nipples located on their underside, enough for four young to suckle up to. However, most first year mothers bear a single fawn, while second time mothers and beyond, give birth to twins as a rule. Fawns stay at sites selected by the doe for about a month, or until they are strong enough to follow their mother. Deer milk provides high nutrition and fawns grow quickly. As the fawns age, they experiment with new food types, browse, shoots, and other tender growth. After a time they begin to demand less and less milk from the doe. Soon, they are completely weaned and feed entirely on plants.

The buck or male deer takes on a somewhat sedentary role in the spring, concentrating heavily on feeding to replace weight lost in the winter months. At this time, usually around April, bucks will begin the annual process of antler growth. The scars or pedicles left in the head from dropping of the prior years antlers soon fill with new growth tissue. As spring advances, both bucks and does shed their long hollow, highly insulated hair of winter. The old coat is replaced with a short flat hair, sometimes red in color. This hair is more advantageous to warm weather.

SPRING

Fawns weigh between four to six pounds when they are born, with the males a bit heavier. The familiar spotted coat of young deer aids in concealing the newborn by blending with the surrounding woodlands or habitat. They are colored in shades of brown, red, white, and black. Immediately after giving birth, the doe will lick the fawn clean, and sometimes in as little as 10 to 15 minutes, the young deer, on unsteady legs, stands up and soon follows the doe away from the birth site. This is instinctive for does. They are aware of the fact that they must remove the young deer from the birth area, because during birth, fluids from the doe soak the earth and leave a scent detectable by predators.

From April through late August the buck's antlers continue to grow rapidly, nourished by an outside covering of skin called velvet. Velvet is made up of millions of tiny blood vessels that carry proper nutrition to the developing antler.

Spring, for the most part, is a prosperous time of year for whitetails.

As spring changes to summer, the general health of the deer herd is good. Water, food, and escape cover are plentiful in both the forest, and agricultural fields.

Fawns begin to take on more and more characteristics of maturing deer. By late summer most of the spots are gone, replaced by a new coat. Their diet consists almost entirely of plant foods, and they have learned and acquired many of the skills needed to survive alone if need be.

Does take on a secluded lifestyle, as much as possible. They are concerned with the everyday need to nourish their bodies with available food and water. Does now are less concerned about their offspring, and in the summer months, as well as in spring and winter, lead a solitary life away from male deer. Older does often take on the responsibility of group matriarch, keeping a lookout for danger.

Bucks are also concerned with food intake. This is the time of the year when they take advantage of the ample supply of nutritional food sources. They become more solitary during the summer but can sometimes be seen in the company of other males. The antler of the buck



WHEW!
I sure am glad
to get rid of that
insulated long
winter coat.

Kevin R. Spatt Photo

SUMMER



John R. Ford Photo

reaches its greatest size during the summer. The overall dimensions of the antler are dependent on several factors, the most important regarding size are nutrition, genetics, and age of the animal. Antlers can also be damaged during this growth period and bucks are careful not to bump, rub, or hit objects with them. Unusual growth patterns can occur as the result of an injured antler.

Therefore, the quality and quantity of food a buck eats is a factor to consider when we talk of antler size. Genetics, or his bloodline, is also important. If father and forefathers had antlers of a particular size and shape, he has a good chance to take on some of the characteristics of his ancestors. Age is also very important for maximum antler size. First year buck fawns will likely sport only “buttons” on top of their head. Male deer living through the first year and advancing to their second summer will support a small set, usually spikes or small forked antlers. After the first year, antlers can gain rapidly in size. Third, fourth, and fifth year bucks can support tremendous racks. Few deer live past the fifth year, but if lucky enough, their antlers can grow even more massive. Old bucks, nine years or more, typically have antlers that regress in size. Age here works against the animal.

Summer is a time for replenishment, a season of general calm and tranquility among the deer herd. But in late summer and early fall attitudes begin to change and deer begin to exhibit traits associated with furthering their progeny, the “rut,” or mating season.



Oh, no ...
I smell blood.
AM I HURT?

AUTUMN

begin to partake in mock sparring matches with other males. This activity is only practice for the aggressive challenges of the later rut period.

The antler of the buck now offers a real value. Larger antlers represent stronger, more dominant deer. Smaller upcoming bucks usually lose the battle with more mature bucks. Two bucks fighting usually lock antlers once, twist, shove, push, and in general try to overcome their opponent until the loser flees the area or backs down. On occasion bucks sink an antler in the body or neck area of their opponent resulting in injury. But this doesn't happen very often, injury is generally avoided.

Males eat very little during the breeding season, opting to spend their time in pursuit of a willing doe. The neck of the male in typical fashion swells from gorged blood vessels. One buck can breed with numerous females during rut, a factor that can help strengthen the overall population of the herd. The more dominant males pass along favored traits through the process of natural selection.

Autumn is also the time of the annual hunting season. During the fall a percentage of deer, both male and female are harvested to keep the overall herds in check with the available food supplies. Most states offer regulated seasons, and utilize hunting as a technique to manage deer populations.

No, you just rubbed the blood-rich velvet off your full-grown antlers — you're ready for the rut now!

As summer transforms to autumn, the whitetail habitat takes on a different character. The physical appearance of the woods changes as the hardwood leaves transform from green to the more vivid colors of yellow and red, and soon afterward fall gently to the earth.

Autumn is the breeding season for whitetails. Deer become more sociable and tend to form small groups. Fawns are still at their mothers side although in most cases don't require any assistance for survival. They have matured into young adult deer and often times female fawns will mate with a buck and bear their young the following spring.

Does are willing to breed with male suitors only during their estrus period, a window of time lasting only about a day, to a day and a half, beginning in October or November. If a doe fails to breed during this time, she will again enter estrus about a month later.

Bucks become more aggressive in the fall. From early September when bucks begin to rub the velvet off their antlers exposing hard, tough bone, they



Winter is a difficult time for most animals. Many varieties of birds and waterfowl migrate south to avoid the cold. Bear, squirrels, and numerous other mammals remain in their territory and go into hibernation to avoid the harsh reality of winter. Deer on the other hand, tough it out as best they can.

If snows are infrequent and light, the vast majority of deer will survive. Longer lasting spells of both deep snow and extreme cold are detrimental to all deer, but most susceptible are the young, old and the unhealthy.

Food supply is limited, as no plant life grows in winter. If snows are deep, the forest floor offers little food value. All available forage and browse is consumed by the herd as the season progresses. Deer begin to feed heavily on trees and taller brush. Often times the younger, smaller animals can't reach the higher nutritious browse as easily as can the larger more mature deer. During long periods of unavailable food, nature chooses to eliminate many of the young, keeping the remaining herd, the strongest animals, relatively healthy and able to sustain the worst of the period.

See ya next fall guys!

John R. Ford Photo



Bucks lose their antlers during winter. They don't have a need for them anymore, as the breeding season is over. They once again take on a solitary role in the herd and are interested only in the daily requirements for survival.

In extremely severe winters, deer of the upper Midwest states will often "yard." This process includes a group of deer that stay in a confined area during deep snows and cold snaps. Safety in numbers is thought to be

WINTER

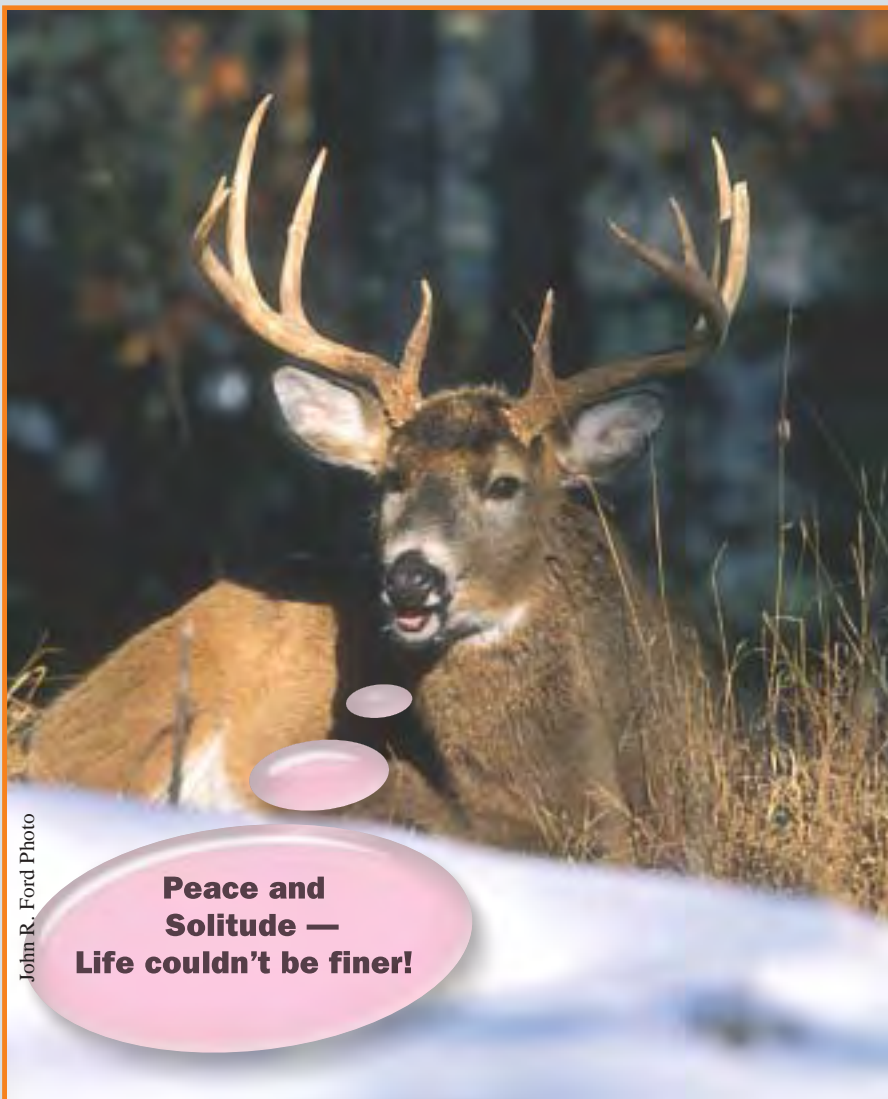
the reason for yarding, as predators are less likely to attack a grouping of deer. Yarding however presents another set of problems.

Food supplies in a confined area are very limited. Sometimes when supplies are exhausted, deer will opt not to move out of the area. Their instinct to conserve energy and remain in the area is that strong. By not seeking food elsewhere, starvation comes to many in the herd as conditions become intolerable.

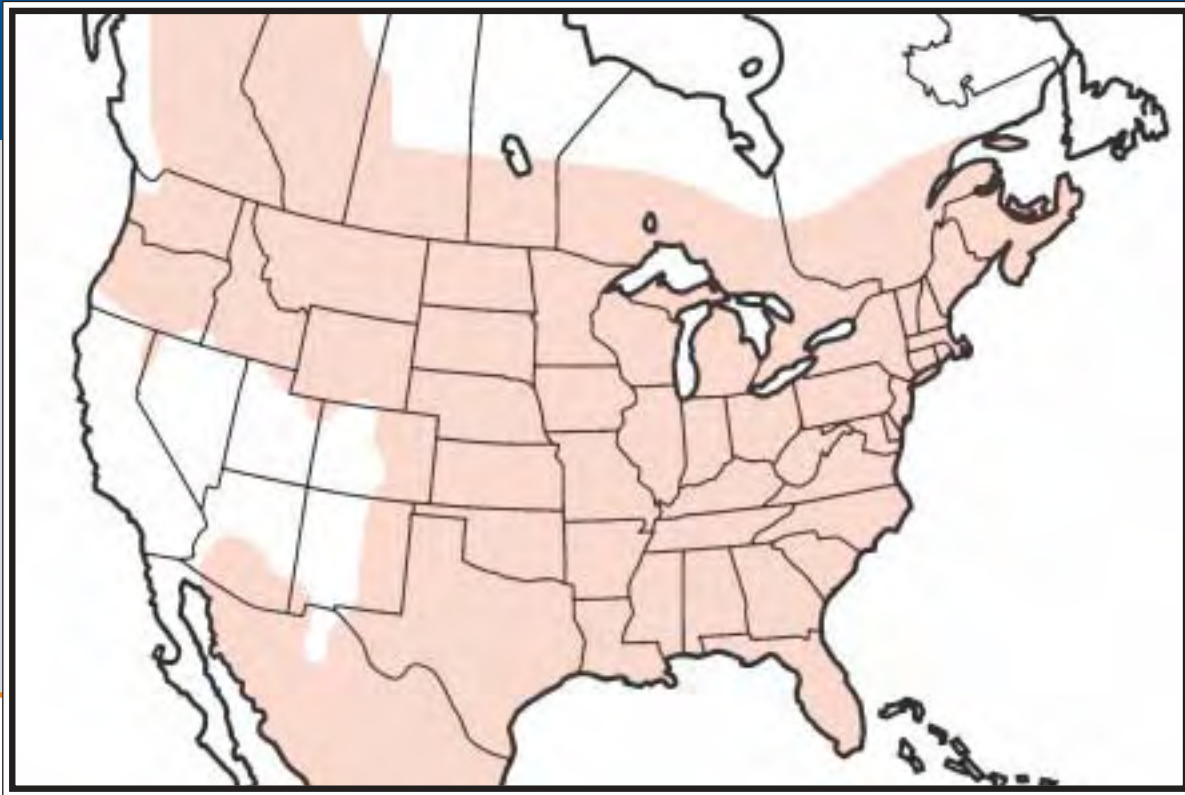
Winter is by far the most strenuous season for the whitetail. Fawns surviving through the first year have an excellent chance at life's second year. As the season nears the end, cold and snow depths lessen, more food is available on the forest floor, and the hint of warm weather and new growth signals the coming of spring and the beginning of a new year.

Peace and Solitude —
Life couldn't be finer!

John R. Ford Photo



Range Of The Whitetail



Ideal wildlife habitat provides whitetails with proper amounts of food, water, escape cover and space.

If these requirements are met, they contribute to a healthy environment in which wildlife can survive. All animals rely on humans to protect existing habitat from being destroyed and to improve or create new habitat. This will be the key to the future success of wildlife survival.

State Whitetail Populations

How many whitetails live in your state ?

Estimated totals

Alabama	1,500,000
Alaska	0
Arizona	135,000
Arkansas	675,000
California	Minimal
Colorado	7,000
Connecticut	50,000
Delaware	14,000
Florida	850,000
Georgia	1,210,000
Hawaii	0
Idaho	75,000
Illinois	300,000

Indiana	350,000
Iowa	200,000
Kansas	250,000
Kentucky	400,000
Louisiana	650,000
Maine	50,000
Maryland	160,000
Massachusetts	50,000
Michigan	1,700,000
Minnesota	800,000
Mississippi	1,500,000
Missouri	750,000
Montana	Unknown

Nebraska	150,000
Nevada	Minimal
New Hampshire	42,000
New Jersey	155,000
New Mexico	Unknown
New York	750,000
North Carolina	750,000
North Dakota	145,000
Ohio	250,000
Oklahoma	250,000
Oregon	7,000
Pennsylvania	1,175,000
Rhode Island	4,500
South Carolina	750,000
South Dakota	225,000
Tennessee	700,000
Texas	3,200,000
Utah	Unknown
Vermont	850,000
Virginia	500,000
Washington	70,000
West Virginia	800,000
Wisconsin	1,300,000
Wyoming	60,000

PREFERRED FOODS AND FEEDING HABITS



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The feeding habits and nutritional requirements of the whitetail vary by season and by region. In times of plant abundance, usually during the growing season, adult deer will consume nearly 10 pounds of food per day. In winter, when food

resources are scarce they eat what they can find, sometimes as little as a few pounds per day.

Deer become active, typically feeding about an hour before sunset, and continue until about an hour after sunrise. This nocturnal behavior gives deer the edge, opting for little exposure during the daylight

hours. Not always holding to the rule, deer can be spotted feeding at midday.

Deer select foods that are not only available, but those that taste good. Food preference is seasonal and is determined by availability. Listed below are some of the favorites.

Corn	Grasses	Blackberries
Soybeans	Cranberries	Sumac Bushes
Alfalfa	Oak Buds	Maple Buds
Blueberries	Grapes	Shin Oak
Forbs	Persimmon	Wheat
Sunflower	Snowberry	Cottonwood
Blackgum	Honeysuckle	Pokeberry
Coralberry	Greenbrier	Goldenrod
albells	Acorn Mast	Cor-Clover

WORDS TO KNOW

What is a . . . ?

1. RUB
2. FAWN
3. YARD
4. SCRAPE
5. BUCK
6. RACK
7. VELVET
8. DOE
9. RUT
10. SPARRING
11. SHED



John R. Ford Photo

Whitetail Fun Facts

Antler growth usually begins during the month of April or May, and by the early part of August, antlers are fully grown.

Whitetails have extraordinary senses. Their ability to smell is probably their greatest asset, but deer also have exceptionally keen ears for hearing, and eyes for spotting danger.

A mature doe will typically bear twins, which usually double in size during the first two weeks of life.

Most whitetails are born in late May or early June, depending upon geographic location. The normal pregnancy lasts approximately 200 days.

Whitetails can run to speeds in excess of 35 miles per hour. They are also capable of clearing a vertical object up to 8 feet in height.

The whitetail is considered a “browser” because they wander, feeding on tender buds, twigs, and leaves, yet they remain close to the woods for quick escape cover.

ANSWERS:

1) The mark on a tree trunk where a buck rubs his antlers. 2) A young deer, normally under a year old. 3) A confined area in which deer will group together to live during severe winter conditions. 4) An area on the ground that a buck digs up during the breeding season. This will alert does that he is in the area. 5) The adult male of the deer family. 6) A term used to refer to a deer's antlers. 7) A soft coating on the newly developing antlers of a deer. 8) The adult female of the deer family. 9) A period of time in the fall when breeding takes place. 10) When two bucks use their antlers to twist, shove, and push each other, in order to test each others strength. 11) A name used to refer to a deer's antler after it has been dropped (or shed) during the winter months.

Throughout the years, *Whitetails Unlimited* has built a reputation based on conservation measures tailored to our nation's wildlife and natural resources, with major emphasis on the white-tailed deer.

WTU has established strategies and implemented programs to sustain traditional values and promote the philosophy that wildlife is a cherished resource. Our belief is that future programs must continue to be fostered to ensure that the delicate balance between man and nature is maintained.



*A National Organization
"Working For An American Tradition"*

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