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NEBRASKA DEER



Nebraska Deer

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Nebraska Game, Forestation and Parks Commission

Introduction

M. O. Steen, director

IN COMMON with the experience of most states, Nebraska's deer herds were reduced to a very low level by excessive harvests in our early history. Most American big-game animals were overharvested in the early history of this nation because of commercialization. Buffalo were killed for their hides, deer for their meat. This slaughter continued as long as the hunter (or poacher) could sell his take at a profit.

Modern game management and public opinion reversed this trend. Deer are on the way back all over America, and in some states the protection-complex was so strong that deer were restored to such high population levels as to be detrimental to the deer, their range, and the crops of the men who own that range.

In Nebraska our restoration efforts have borne fruit, and we have reached that stage where adequate harvest is becoming a major factor in our deer management problems.

This bulletin is intended to give the reader essential information concerning deer, their management, and their harvest. Public understanding and active participation in the management and use of this great resource is essential. In truth, the most important factor of all in this restoration and use of a great wildlife resource, is you, Mr. Citizen. May we have your understanding and help?

NEBRASKA'S appearance today is greatly changed from its pre-statehood days, so much so that it is difficult to imagine our vast grass-covered plains without today's cities, roads, barbwire fences, billboards, and autos. This "sea of grass" of yesteryear was liberally sprinkled with sunflowers, asters, wild legumes, low-growing shrubs of wild rose, buckbrush, and redroot. Streams in central and eastern Nebraska—the

Deer vital to inhabitants of area as far back as 300 A.D.

Loups, Cedar, Dismal, Calamus, Blue, Nemaha, Elkhorn, Niobrara Rivers, and many of their tributaries—added variety by supporting a scrubby growth of wild plum and chokecherry along their banks. Timbered areas were restricted to the Missouri River region and to other stream banks in the eastern portion of the state.

Diaries of some of the thousands of gold-seekers and settlers who followed the Platte River across this territory in 1849 and the early 1850's repeatedly tell of a treeless country from the large island in the Platte River near Grand Island, to the Roubadeau Pass west of Scotts-bluff.

Emigrants observed very few deer along this part of the Platte. However, when they reached what is now Scotts Bluff County, they found the hills "finely stored with game such as black-tailed deer, antelope, mountain sheep . . ." ¹ Cedars, pine, hackberry, and ash, along with such shrubs as wild currant, plum, chokecherries, and wild rose flourished in the ravines.

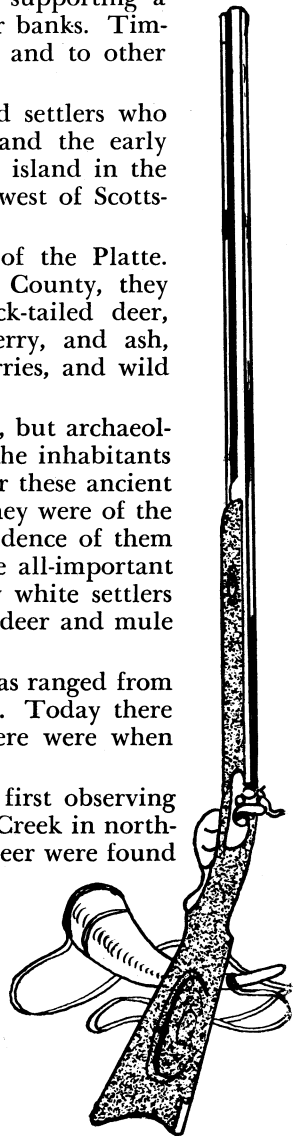
How long deer have been in Nebraska we cannot say, but archaeologists have found that they were of great importance to the inhabitants of this area as early as 300 A.D. We do not know whether these ancient deer were of the same species we know today, only that they were of the same group (genus *Odocoileus*) as our present deer. Evidence of them fades out after about 900 A.D., when buffalo became the all-important species. During the 1800's, trappers, explorers, and early white settlers entering the Nebraska Territory found both white-tailed deer and mule deer, the same species seen today.

During the last 100 years or so, the deer population has ranged from abundant to near extinction and now is abundant again. Today there are probably more deer within our boundaries than there were when the settlers began arriving in numbers in the 1850's.

In 1804, the Lewis and Clark expedition ² reported first observing the Rocky Mountain mule deer near the mouth of Ponca Creek in north-western Knox County. Clark also commented that mule deer were found

¹ Camp Charles L. 1928. James Clyman—American Frontiersman. 1792-1881. Special Pub. No. 3, California Historical Society. Cleveland. 247 pp.

² Thwaites, Reuben Gold. 1907. Original journals of the Lewis and Clark Expedition. (Edited by Thwaites) Dodd, N.Y.



as low as the ancient fortification on Bon Homme Island, about 25 miles down the Missouri from the mouth of Ponca Creek.

In his "History of Antelope County" covering the period 1868 to 1883, Leach³ states: "The blacktail or mule deer were found here but they were not at all abundant. Two at least were killed in the rough part of Logan township, one in Lincoln township, and a few were seen in the rough lands of the Verdigris and the northwestern part of the county."

Leach reported a mule deer shot on July 4, 1879, across the southern boundary in Boone County, and mentioned that they were very numerous in the rough country bordering the Loup and Cedar Rivers as late as 1880. The most eastern indication of mule deer was one reported shot in Dakota County in 1871; the most southeastern record was one shot near Fullerton in Nance County, in 1880.

Aughey⁴ wrote that the "special habitat of the black-tailed deer was north Nebraska and especially the Niobrara region."

Frequent reports of mule deer across the remainder of northern Nebraska west to the rim-rock country of Sioux County, establishes this, along with the Wildcat Hills area in Scotts Bluff and Banner Counties as previous mule-deer range. An account by George Banks⁵ from Chase County about 1887, mentioned "quite a few deer here" and "one family whose winter supply of meat consisted of five or six deer." It is quite possible that these were mule deer, and if so, this would extend its range to the southwestern corner of the state.

Whitetails were abundant along the Missouri River on our eastern boundary according to the Lewis and Clark record of 1804. Townsend,⁶ in 1834, stopped mentioning deer on his westward trip somewhere east of Grand Island. Leach, in his historical account of Antelope County, states that, "The common or white-tail deer were very plentiful in an early day along the Elkhorn and all the streams of the county, especially where there was brush or tall grass for shelter. Hundreds of them were killed by the settlers, but they held their own pretty well . . . until the winter of 1880."

Swenk⁷ says of the former status of whitetails, "fairly common in the wooded portions of the state, especially along the river bottoms. It was most often met with along the northern border, in the Niobrara valley."

Nebraska's deer population declined rapidly through the 1880's and 1890's. Leach states, "This winter (1880) was very severe . . . snow that

³ Leach, A. J. 1909. History of Antelope County—1868-1883. The Lakeside Press, R. R. Donnelley & Sons, Chicago, 262 pp.

⁴ Aughey, Samuel. 1880. Sketches of the Physical Geography and Geology of Nebraska. Omaha, 326 pp.

⁵ Anon. 1938. Chase County Historical Society. Mimeographed copy, 41 pp.

⁶ Thwaites, R. G. 1905. Early Western Travels. Vol. XXI. Arthur H. Clark Co. Cleveland.

⁷ Swenk, Myron H. 1907. A Preliminary Review of the Mammals of Nebraska. Publications of the Nebraska Academy of Sciences, Vol. 8, No. 3.

**Pioneers found hills in western Nebraska
finely stored with deer, antelope, sheep**



fell in October still lay in drifts next May. . . . The deer were killed by hunters in considerable numbers. Others were killed by the prairie wolves and some perished from the severity of the weather and the scarcity of food. They completely disappeared from the county in five or six more years."

Cary,⁸ following a two months' survey in 1901 of the flora and fauna of Hat Creek basin in Sioux County, states: "This deer (blacktailed) must be extremely rare in the region at present, or even extinct. . . ." Swenk (1907) asserts that the mule deer "has practically disappeared (from the Pine Ridge), where the whitetailed still persists." His only other reference was an estimate of about 25 mule deer in Thomas and Hooker Counties.

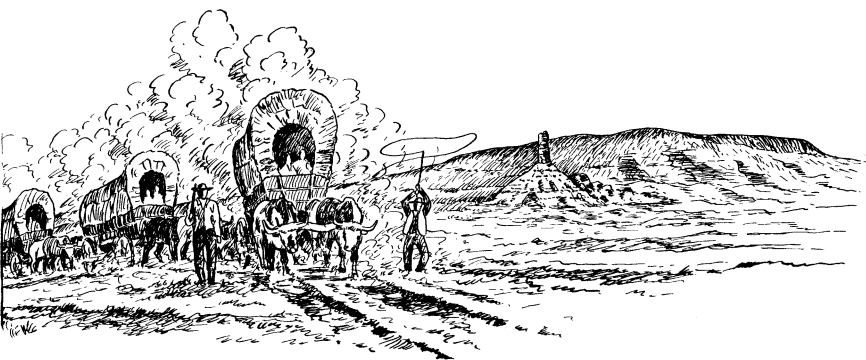
The Game and Fish Commission's biennial report for 1901-1902 estimated there were about 100 antelope and 50 deer in the state. A report from 61 of the 93 counties surveyed listed the following: Cherry County, 8 deer; Lincoln, 6; Deuel, few; and Thomas, 12-15.

Wolcott and Shoemaker⁹ says of the white-tailed deer: ". . . at the present time it is found only in the northwest corner, in the wildest canyons of the Pine Ridge, and in very limited numbers."

The recovery of our deer population from the extremely low numbers of the early 1900's was very slow. As late as 1919 some authorities thought that deer were doomed to extinction in Nebraska. But by the late 1930's, deer had increased to the point where their presence was known at various points in the state. Game Commission surveys in the winter of 1939-1940 found between 2,000 and 3,000 deer, mostly of the mule species, in the Pine Ridge section and a few in the Platte and Niobrara River valleys and other areas. Deer have been observed recently in every county in the state. Game Commission surveys in the fall of 1955 and the spring of 1956 indicated the approximate population in panhandle alone at 45,000 deer.

⁸ Cary, Merritt, 1902. Some general remarks upon the distribution of life in Northwest Nebraska. Proceedings of the Nebraska Ornithologists' Union, 3:63-75.

⁹ Wolcott, Robert H. and Frank H. Shoemaker. 1919. Nebraska's Game Resources and Their Conservation. The Nebraska Conservation and Soil Survey. Lincoln, 32 pp.



IN NEBRASKA, where the range encompasses the habitats of two native species of deer, the uninitiated person may not know whether he is looking at a whitetail or a mule deer. But an experienced out-

What is it—a mule or whitetailed deer

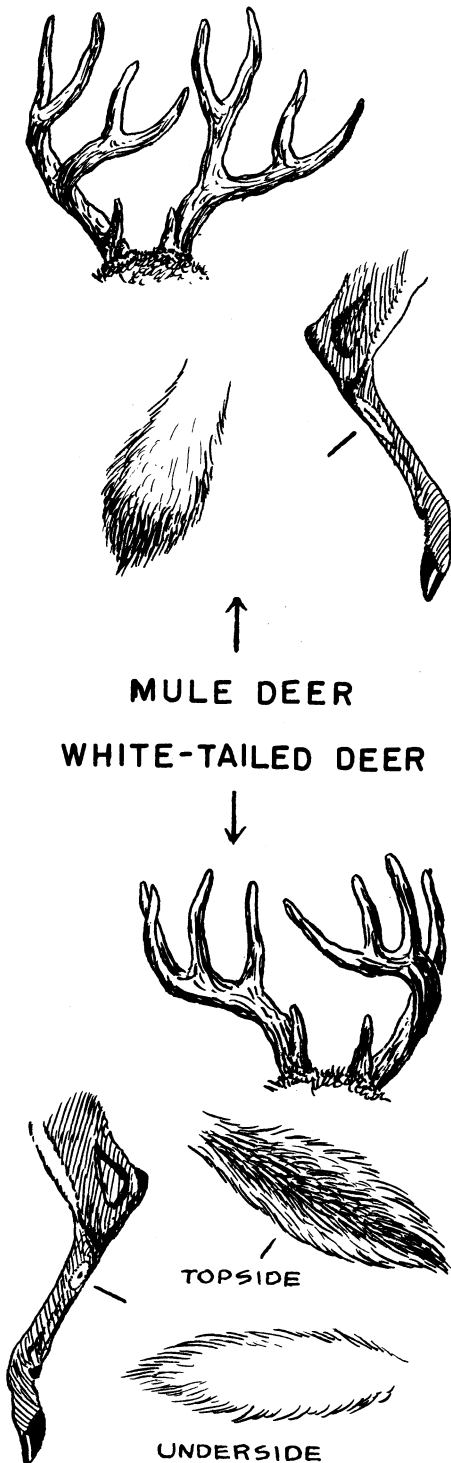
doorsman knows immediately, for each deer has several distinguishing characteristics with which he is familiar.

The mule deer was so named because of the appearance of his ears. Compared to a whitetail's, the mule's ears are noticeably oversized, measuring fully one-fourth larger. The ear size is less striking on a buck with large antlers.

The whitetail is also well named, for its most distinctive feature is the large tail or "flag." The upper surface of the tail is similar to the rest of the coat in color, but the underside is pure white and is often exposed when the deer is fleeing. This bobbing white flag probably relays alarm to other deer.

Antlers, too, serve to differentiate the species. In the whitetail, the points on each antler arise from a single main beam, much as the points on a garden rake arise from the iron crosspiece. On the other hand, the mule deer's antlers are basically in the form of the letter "Y" and the upper ends fork to form two smaller "Y's". The ends of these may fork also.

We frequently hear that a deer's age can be told by its antlers. It is true that the antlers of a six-year-old deer are usually larger and more



branched than those of a yearling. But it is also true that an old animal frequently has relatively small antlers. Antler development reflects, to a considerable degree, the physical condition of the animal.

Describing the coats of these species is not simple, for both vary with the seasons in texture and color. In summer both are generally brownish-red—the color being more vivid in the whitetail—and both are relatively fine and silky in texture. With the coming of fall the summer coat is replaced by a much coarser and thicker one which provides better insulation against icy winds.

The whitetail's winter coat has a buff cast while the mule deer's is a plain gray. Both have white bellies; however, the mule deer's brisket is a rich brown. Also, the mule deer's brow has a distinct, dark gray patch.

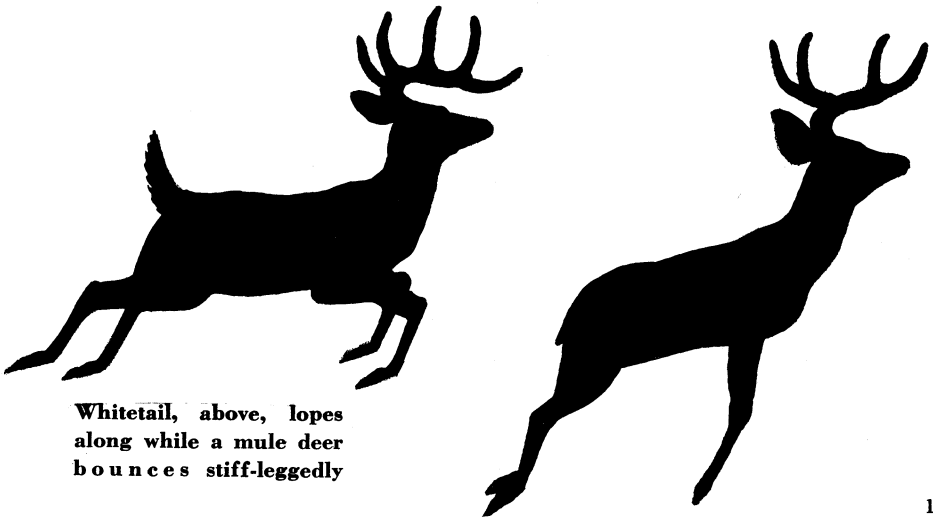
But regardless of physical appearances, the mule deer proclaims his identity in no uncertain terms when he bounds away. Unlike the loping gait characteristic of the whitetail, he bounces along stiff-leggedly, striking all four hoofs at once, reminding you of a boy on a pogo stick.

An interesting feature of both species is the four sets of specialized skin glands. The preorbital tear glands, which lie just in front of the eyes, lubricate and clean the eyes. This gland sometimes measures more than an inch long in the mule deer.

The tarsal glands, under tufts of hair on the inside of the heel joints, produce a strong smelling secretion. Deer habitually urinate on these glands. Some believe that the scent washed to the ground in this way, serves as a sign to other deer.

The metatarsal glands occupy an elongated area on the outside of the hocks. This area, which shows as a "part" in the hair, is four to five inches long in mule deer, but scarcely an inch long in whitetails. This gland also produces an oily substance having a pungent odor.

Between the toes lie the interdigital glands. They apparently deposit a scented secretion in every track. It is probably this scent that enables a deer to follow its own back trail.

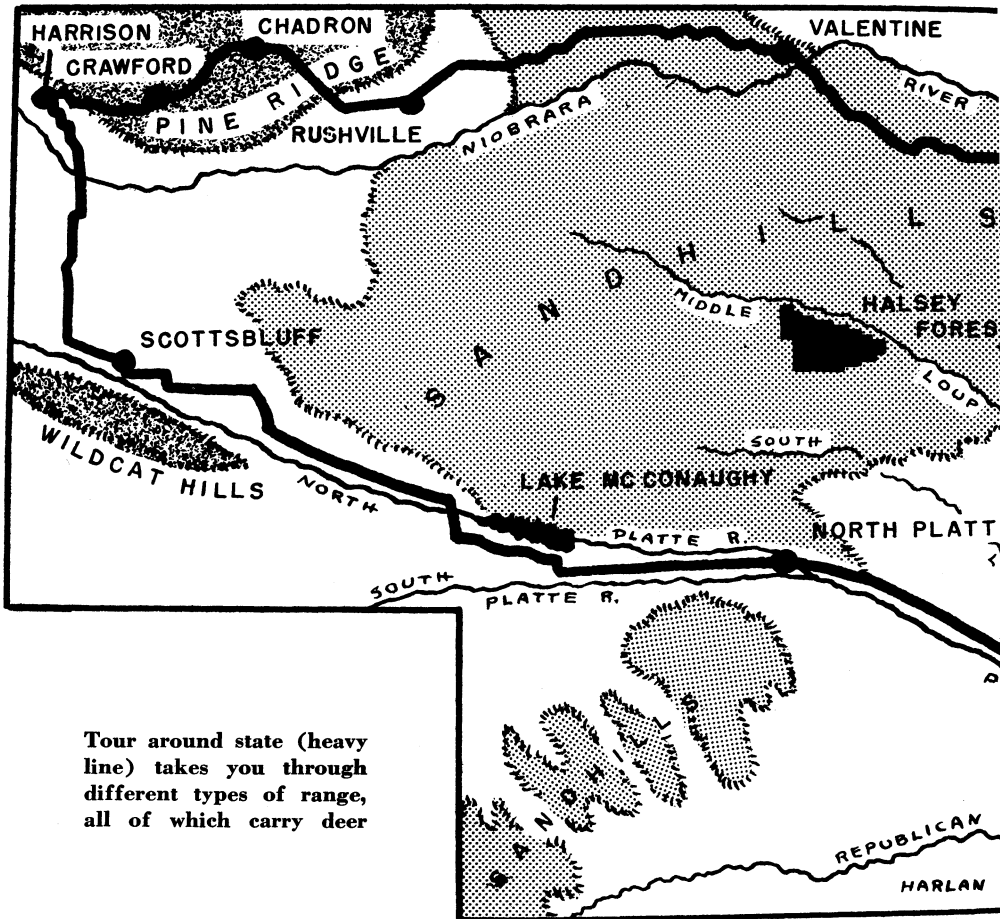


Whitetail, above, lopes along while a mule deer bounces stiff-leggedly

NEBRASKANS are fortunate in having two native species of deer—the mule deer and the white-tailed deer. Both species can be seen over much of the deer range in the state, but the picture of predominance changes from east to west.

Perhaps the best way to illustrate this distribution would be to take a sight-seeing tour. Leaving Lincoln by bus, we go north to Fremont, where we cross the Platte River. A few miles north of there we

Deer found today in all of state's 93 counties

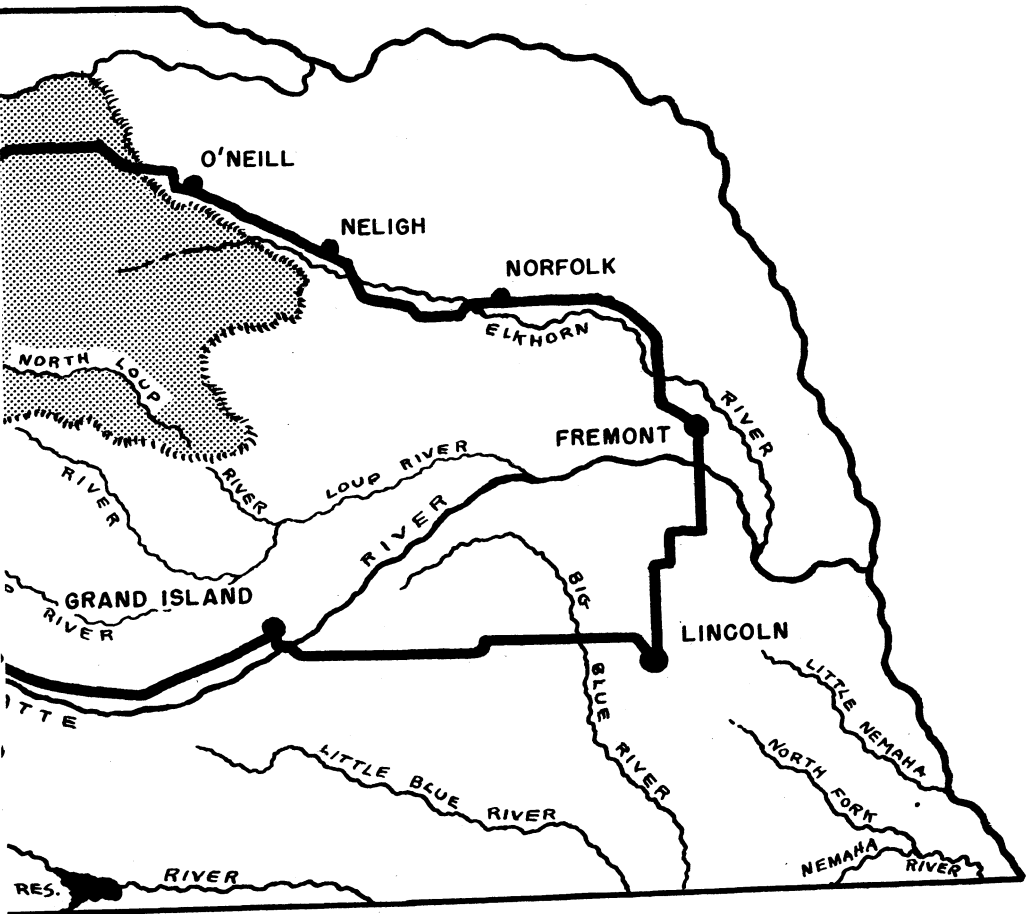


Tour around state (heavy line) takes you through different types of range, all of which carry deer

come to the Elkhorn River, which we follow to O'Neill in Holt County. Chances of seeing white-tailed deer along the river systems are good. Actually the cover along streams is a big factor in deer distribution in eastern Nebraska. If we hadn't followed the river valleys our chances of seeing deer would not have been as good.

Between the Platte River and Norfolk we may catch a glimpse of a fleeting whitetail, and we may be fortunate enough to see a mule deer in Stanton or Madison Counties. This area, though, is mostly inhabited by whitetails. By the time we reach Neligh in Antelope County the picture has changed, for here the mule deer and whitetail are about equal in numbers. Holt County is the transition area where the mule deer becomes the dominant species from here on west.

As the bus leaves Holt County we enter another important type of deer range, the Sandhills. Covering about 20,000 square miles, this



is one of the largest single types of deer habitat found in Nebraska. Here, as in eastern Nebraska, many of the deer are found along the stream courses. But we also find them in the choppy hills, especially where ranchers are practicing limited crop farming. If we should be lucky enough to observe 100 deer as we cross this area, chances are that only five or six would be whitetails.

When we reach Rushville in Sheridan County, we are just a few miles south of the eastern end of the Pine Ridge. It will not be difficult to recognize because of the great contrast between the steep hillsides covered with ponderosa pine and the treeless sandhills and plains through which we have passed. This is the region of our greatest deer populations, particularly in the Chadron-Crawford-Harrison area. Open stands of ponderosa pine and deep canyons interspersed with farmlands are ideal conditions for supporting large numbers of deer. Here the mule deer reigns supreme, and whitetails occur only in small colonies.

At Harrison our bus swings south through the high plains toward Scottsbluff. Only small colonies of mule deer occur here. At Scottsbluff we come to the North Platte River. Looking south we can see the Wildcat Hills. These resemble the Pine Ridge but are not so heavily timbered. Although small in area it is another important deer range in Nebraska.

Following the North Platte River eastward we see several deer along the river and in the river breaks. But, until we reach Lake McConaughy in Keith County, we have little chance to see a whitetail. There, about one of every 25 we see will be a whitetail. By the time we reach North Platte and follow the Platte River, our chances for observing whitetails increase to 1 in 10, for we are now moving eastward, back to the farmlands and stream systems where whitetails are predominant.

Deer are distributed all along the Platte River and we see several before reaching Grand Island where we turn due east for Lincoln. After leaving the Platte we may be lucky enough to see deer, but from there to Lincoln deer are seldom seen.

On our tour we saw that there were three basic types of country in which deer occur in Nebraska: (1) river courses and river breaks; (2) the Sandhills; and (3) areas which have a natural growth of ponderosa pine. Actually there is another important type that we were not able to see on the tour—the Bessey Division of the Nebraska National Forest at Halsey. This area has been artificially forested by man.

As we moved across the state we observed that the whitetail predominates in extreme eastern Nebraska and occurs mostly along the stream courses. Proceeding west, the mule deer becomes predominant in the vicinity of Antelope and Holt Counties. Deer occur throughout the sandhills. We observed the most productive deer range and highest deer populations in Nebraska on the timbered slopes of the Pine Ridge. Deer were few in number through the high plains but relatively abundant along the North Platte River and in the Wildcat Hills. They were fairly well distributed throughout the Platte River system, and our chances for observing whitetails increased as we moved east.

YOU ARE moving slowly along the crest of a sparsely timbered ridge in Sioux County, watching intently for the movement of a deer. As you stop to enjoy the view and early morning sun, four mule deer move into view on the opposite hill. You drop to your stomach, gripping your rifle tightly. The four deer—one large buck and three does—move slowly down the slope. You decide to wait until they have moved within

Life of a buck deer—from fawn to a hunter's target

50 yards before pulling down on the buck. This gives you time to admire the large animal.

It's a safe bet your buck's life story runs like this: Like most other deer, he was born during the latter part of June. Not always a large majestic animal, he weighed only about seven pounds when born and for a few days he was weak, helpless, and unable to follow his mother as she foraged for food. Often she left him hidden in low ground cover, where his spotted coat served as a camouflage. But she always returned at intervals to check and feed him.

The fawn began to forage as soon as he became physically able. He followed the doe closely for the next two or three months, supplementing his green browse with her milk. These were weeks of growing and learning many of the rules of survival. In October the fawn received the first hard knock of life—he was weaned. From this time on the fawn had to depend entirely upon plant life for his food.

In November came two more jolts. His mother would not allow the same close association that he had experienced, and several older

**Fawn's spotted coat
camouflages it well**





**Velvety sheath covers
young buck's antlers.
They are soft, tender**

bucks vied for her attentions. In late November the doe accepted a large four-point buck as a mate. But this buck was not the fawn's father, for last year's mate had been forgotten soon after that mating season.

In April another important phase of the fawn's life took place. Antlers, covered by a brown, velvety sheath, began to grow from his skull above and behind his eyes. About this time his mother began to seek solitude, and in June gave birth to twin fawns. After this, the maternal bond between him and his mother was completely broken.

The young buck's antlers continued to develop throughout most of the summer and by August he had grown a typical set of antlers for a yearling mule deer—forked and about twelve inches long. During this period of growth the antlers were soft and tender, and the buck avoided bumps that might injure them. Later the antlers hardened, and during August he began to rub them against trees, tearing the velvety covering and exposing the hardened bone.

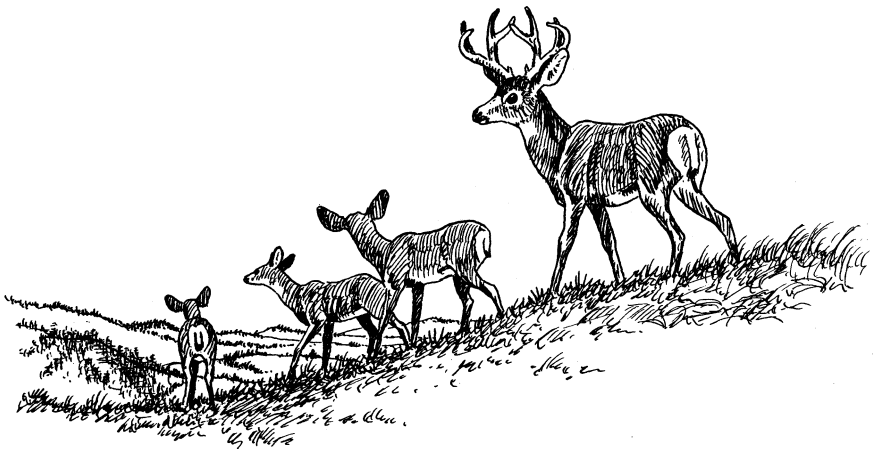
In October he was about 17 months old and was entering the mating season for the first time as a sexually mature buck. He began to shadowbox and to feign fighting with some of the other yearling bucks. Many does came into heat during the middle of November, but

the young, inexperienced buck was frustrated in most of his mating attempts by the older bucks. Finally, though, he was successful in taking a small yearling doe for a mate.

Hunting season opened shortly after that and the shooters were out in force. The inexperienced yearling buck hardly knew how to pit his skill against that of the hunter. But he was lucky and survived the season, while some of the other bucks became trophies.

During his second winter the buck ran with a large herd of does and young bucks. This winter was marked by deep snows that lasted until early April. He and the herd were hard-put to forage for food. Before the snow began to thaw, practically all the food in the area had been utilized and many of the deer were suffering from malnutrition. Had more deer been harvested during the hunting season, there would have been more food for those remaining. But after the snow melted additional food was available and this decreased the number of deer suffering from malnutrition.

In February he lost his first set of antlers, but it wasn't long before he began to develop a new set. But this time, instead of developing just forks, each antler had four points. With the shedding of the velvet and entrance into the mating season, he was older and wiser than before and better able to compete with the other bucks. This November he was successful in mating with three does, the three moving down the slope toward you. The buck is now within 50 yards. Center him in your scope, squeeze the trigger, and take home a handsome trophy.



IN MANAGEMENT of deer the knowledge of what, how much, and when they eat is essential. Deer are commonly known as browsers and generally feed on leaves, buds, and tips of twigs. Especially relished are the tender growing tips and flowering heads of herbs. Mushrooms, fruits, grass, and cultivated crops are other favorites.


The growth, reproduction, and health of a herd depend upon the quality and quantity of available food. Because deer eat the most nutritious plants first, quality may disappear from an otherwise abundant

Winter is most critical from standpoint of food

supply of browse. And once deer exceed the carrying capacity of their range, they can and will eat themselves out of house and home. Corn and alfalfa are preferred foods but apparently do not supply all their nutritional needs. Native browse plants such as buckbrush, chokecherry, and sunflower seem to be a necessary part of their diet.


Variety is the essence of a deer's diet, daily as well as seasonally. Analyses of mule-deer stomach contents taken in December showed an average of nearly seven species of plants in each.

In spring, as soon as the new growth of green grasses and weeds appears, the deer's menu changes to include these protein-rich plants. Summer produces a variety and abundance of vegetative growth, and



DEER MANOR

Menu



<u>SUMMER</u>	<u>FALL</u>	<u>WINTER</u>	<u>SPRING</u>
WEEDS (Stems, Leaves, Flowers)	WEEDS	CORN	GRASS (Variety)
BUCKBRUSH	CORN	BUCKBRUSH	TENDER NEW WEEDS (Great Variety)
CHOCHECHERRY	BUCKBRUSH	CHOCHECHERRY	NEW ALFALFA
ALFALFA	TREE LEAVES	WINTER WHEAT	WINTER WHEAT
	VAREITY OF SHRUBS	YUCCA	TENDER NEW SHRUB GROWTH
		PINE NEEDLES	

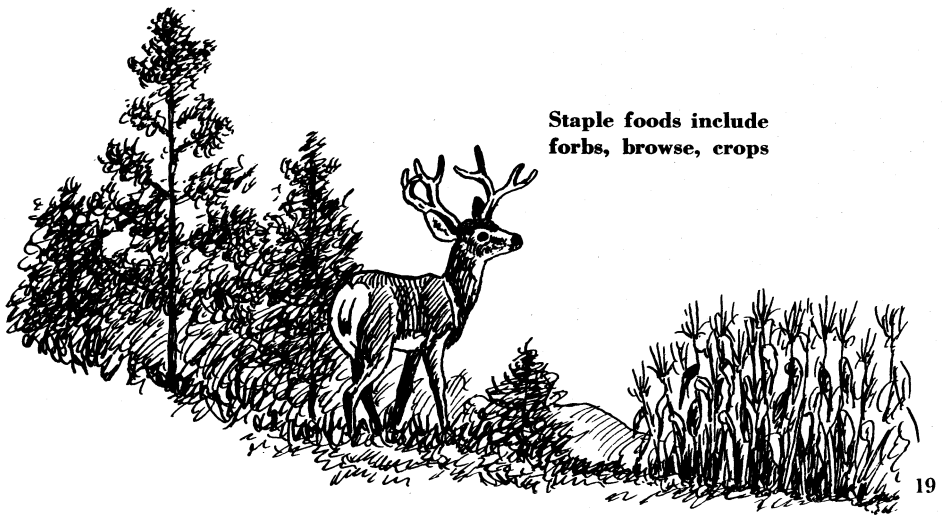
with food supplies no longer a problem, the deer disperse over a greater area. Leaves, tender stems, and flower head of herbaceous plants furnish the bulk of their diet. Corn silks, too, are tasty.

Feeding habits shift again in late summer and fall, with the consumption of herbs lessened but still important. There is an increased use of browse from trees and shrubs. Acorns, where available, are a favorite.

Winter months are the most critical from the standpoint of foods. The deer range then is more restricted, consequently we have more deer in a smaller area with less available food. Deep snows sometimes aggravate the situation by burying existing food.

Native foods consist chiefly of leaves, buds, and twigs of shrubs and trees. Probably the most important browse species is buckbrush, also known as coralberry and snowberry. Buckbrush accounted for one-eighth of the contents of 227 mule-deer stomachs from samples taken in Nebraska. Herbs, yucca (or soapweed), and pine needles accounted for another 30 per cent.

With most of Nebraska's deer range interspersed with cultivation, up to as much as one-half of their winter diet consists of cultivated plants. Green winter wheat, corn, alfalfa, and sugar-beet tops are choice supplements to their winter diet.



A DEER'S RULE for a long and prosperous life might well be an ounce of prevention is worth a pound of cure. Caution is a must. Through evolution, nature's long-range program of research and improvement, deer have developed highly sensitive "alarm" systems to warn them of possible dangers.

The fine art of detecting danger is not miraculously instilled into a fawn at birth. The senses must sharpen as physical development

Deer sharpen their senses as they develop physically

progresses, and the young must learn the ways of the wild. During the first few weeks the fawn's safety is dependent upon concealment, and upon the keen senses and habits of the doe. Thereafter he is able to be as elusive as a wisp of smoke.

Smell is probably the most acute sense. Every hunter will agree that under proper conditions a deer can detect an approaching enemy and slip quietly away sight unseen. This sense of smell also enables deer to identify other deer and to follow their trails. A fawn separated from its mother may trail her by scent, or the doe may backtrack on her own trail to find the fawn. And during the rut, bucks have been seen to follow does by scent.

While scent must be carried on a breeze, sounds of nearby movement will travel to the deer without such aid. Deer have good-sized ears to gather in even the faintest sounds. The familiar, everyday sounds of a squirrel in the leaves, a bawling calf, or a passing train are ignored, but a new sound brings instant attention. Even the slightest sound will

Smell is probably most
acute of deer's senses



make a fawn, only hours old, snuggle closer to the ground in its hiding place.

Often, though, deer have difficulty in telling the direction of the sound. This may cause the deer to stand for several minutes, moving only its head and ears in an attempt to get a "line" on the disturbance.

A deer's eyes serve him well in two ways. They are large, and enable the deer to see well during twilight's dim hours. Then, too, they are quick to detect movements, but a deer may look directly at a hunter who is standing still and show no fear, just nervousness and curiosity. After a time he may resort to stamping the ground, snorting through his nostrils, hopping about, and may even approach the hunter to investigate. But when a telltale movement, perhaps just the blinking of an eye, or noise or scent "sounds alarm," the deer becomes a bounding blur on the landscape.

Deer Legislation, 1873-1957

1873—The Legislature made it unlawful to kill, ensnare, or trap any deer between January 1 and September 1.

1897—In 1897 the open season was between November 1 and January 1

1907—In 1907 the Legislature passed a provision (Session Laws, 1907, Chap. 58, 59) which provided that "No person shall at any time of the year or in any manner pursue, take, wound, or kill any elk, deer, antelope, or beaver. . . ."

1945—The above law was rewritten in 1945 to make possible a limited harvest: "The Game, Forestation and Parks Commission is authorized to issue special permits for the killing of deer when the same become prevalent enough to allow a limited season, for the purpose of reducing the number thereof in limited areas." The areas in which the killing of deer could be permitted included Dawes and Sioux Counties, that portion of Sheridan County north of the Niobrara River, the Nebraska National Forest, and other game reserves.

1947—In 1947 the law was amended, giving the Commission authority to issue permits for the killing of "male deer" only. The area in which deer could be taken was expanded to include Scotts Bluff and Morrill Counties.

1951—Under L.B. 229, Section 37-215 was amended to provide for the killing of doe and horned buck deer. The area was enlarged to encompass Dawes, Scotts Bluff, Morrill, Banner, Sheridan, and Sioux Counties, and the Nebraska National Forest and other game reserves. This amendment also provided that "No person shall be issued a special permit to kill doe and horned buck deer oftener than once in any three consecutive open seasons."

1953—The law was changed to permit the Game Commission to designate the areas in which the killing of deer would be permitted.

1957—The law was amended to permit Nebraska residents to apply for a deer hunting permit each year. Priorities were established for the issuance based on previous possession of a permit.

A BUCK DEER is an impressive animal, and he seems to want those around him to know it, too. In late fall when he is amply charged with that strange biological medicine called sex hormones, he makes it his business to look big and magnificent to the does and big and invincible to other bucks.

If we had a chance to examine these cavorting sultans closely, though, we would find they stand no higher than 3½ feet at the shoulder and seldom exceed 300 pounds in weight.

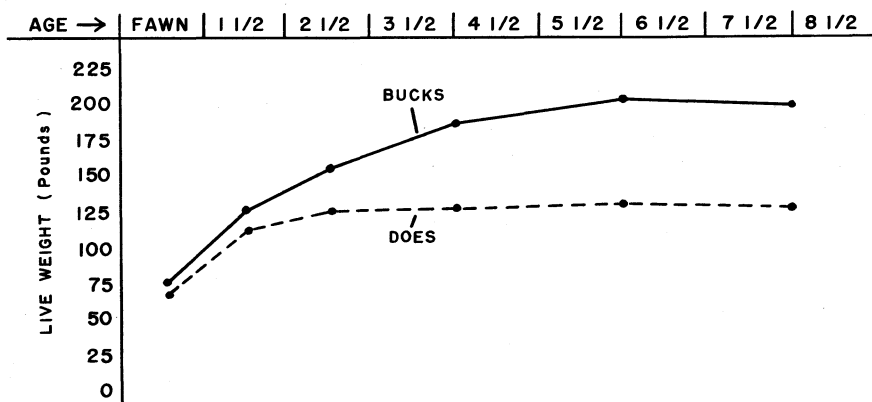
Whitetails, not mule deer, average heaviest in state

The heaviest mule deer recorded in recent years, taken near Chadron in 1952, weighed 245 pounds hog-dressed, which would amount to about 300 pounds live weight. The record whitetail, killed in Keith County in 1956, weighed 235 pounds hog-dressed, or about 294 pounds live weight. Does are notably smaller than bucks, the heaviest being about 180 pounds (live weight) for mule deer and 182 pounds for whitetails.

But these are weights of the "Paul Bunyans" among deer. What we could expect the average deer to weigh can best be told by the graph below which illustrates the average hog-dressed weight of each age class of mule deer taken during November and December in Nebraska.

Your deer's weight will not necessarily conform exactly with the graph, for in addition to sex and age, the weight of a particular animal depends on the time of year, what it has been feeding on, and its physical traits. Just as people, certain deer are destined to be larger or smaller than the average. Also, in Nebraska, whitetails usually average heavier than mule deer. The explanation is primarily one of food, for highly nutritious cultivated crops are generally more available in the whitetail's range.

MULE DEER WEIGHTS AT HUNTING SEASON



NEBRASKA'S first deer season in recent years was the controlled hunt in the Bessey Division of the Nebraska National Forest in 1945. The next open season was four years later, when 1500 permits were issued for an area encompassing all or parts of six western and north-western counties. The permittees were chosen by lottery from applicants. Nebraska has had a hunt each year since 1949, with the Commission regulating the number of permits and the open area. In 1953 the

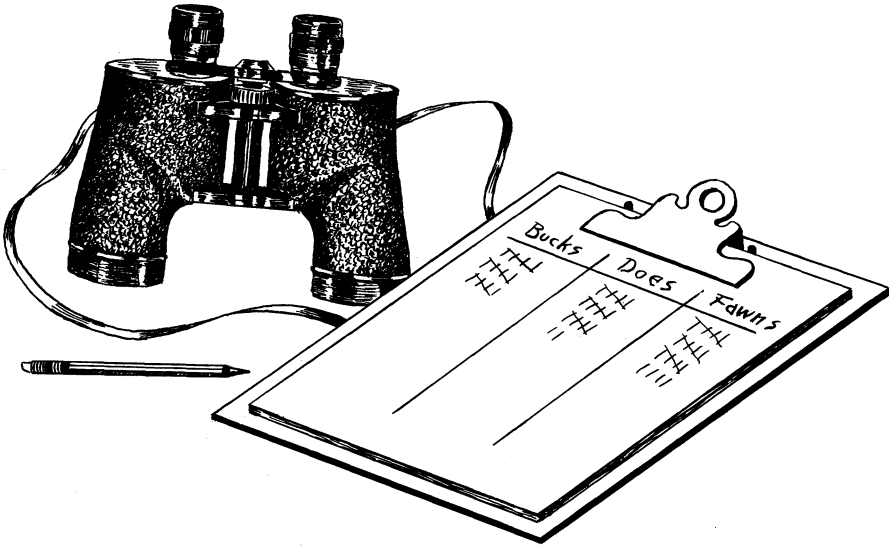
Nebraska's annual deer seasons date back to '49

remainder of the Panhandle and Keith County were added to the open area. It also extended across the northern part of the state as far east as Dakota County. The Elkhorn Valley and Lincoln County were added to the open territory in 1956.

The state's first archery deer season was in 1955 in four Missouri River counties (Washington to Thurston). In 1956, bow-and-arrow hunting was permitted in all or parts of 21 counties and the Bessey Division of the Nebraska National Forest. The open-area included all the Missouri River counties south of Dakota County, the lower Platte River counties east of Hall County, and Wheeler, Greeley, Howard, Boone, and Nance Counties.

SUMMARY OF DEER SEASONS 1945-1956

Year	Permits Authorized	Permits Issued	Total Deer Taken	No. of Females
1945	500	500	361	207
1949	1500	1500	910	0
1950	1000	1000	680	0
1951	1200	1200	712	0
1952	2500	2500	1921	841
1953	5300	5300	4083	1083
1954	4000	4000	2574	482
1955	6250	5567	4300	1466
1955 archery	unlimited	173	7	4
1956	9600	8198	6561	2870
1956 archery	unlimited	275	28	12



Good deer and cattle-herd management are much alike

ONE OF THE most important phases of the deer picture in Nebraska is the management of our deer herd. This is one phase in which everyone should take vital interest, for we all have a stake in the successful management of our game resources.

Perhaps we should compare deer management to the management of cattle, for the two have much in common. The handling of our wildlife resources, though, cannot be controlled as well as domestic livestock because of the wild character of game and the uncontrolled conditions with which a wildlife manager is forced to contend.

Authorities tell us that good deer management is made of: 1, **adequate inventories**; 2, **proper protection**; 3, **maintenance of suitable habitat**; and 4, **proper harvest**. With only a little modification we can extend this thought and say that good cattle-herd management is also made up of these four phases.

Before a rancher can practice successful cattle management, he must know how many animals he has, the age composition of his herd, the numbers of each sex, and the annual increase. This information is just as basic to management of deer as it is for cattle. It is not too difficult for the rancher to get this information, for he is working with domestic animals that are confined to pastures. He can count age and maintain records on each individual animal if necessary. But with deer the wildlife manager has to be satisfied with sampling a herd, that is, a small portion of the total population. He has to use survey methods that give trends rather than absolute numbers. The results of a survey



Deer poaching slows herd build-up in areas where population is far below that which can be supported

may indicate whether or not a herd is increasing, decreasing, or remaining the same; whether or not reproduction is greater, less, or the same as in past years. It is necessary to have this kind of information for proper planning of other phases of management.

The second phase of management, **adequate protection**, is obvious. In some areas we still have deer populations below that which can be carried. If we are to realize the full potential of such herds as quickly as possible, each animal must have adequate protection. The breeding stock that remains after our annual harvests must be protected to insure a good crop for the following year.

The third phase of management may not be quite so obvious—**the maintenance of suitable habitat**. The rancher knows that the number of animals he will be able to produce and carry on any particular pasture depends upon the quality and amount of good forage on that pasture. If he is to increase production, he must improve his pasture. Just to maintain production he must guard against factors that may destroy the quality of the pasture. It is the same with deer. The number of deer that any given range can support is determined by the amount of **good** deer food and cover. We must be on the lookout for methods of improving our deer range and guard against those factors that tend to destroy the quality.

Now comes one of the most important steps of deer management—**proper harvests**, and you, the hunter, play the important role. It is the end result of the other phases.

The rancher recognizes that if he is to stay in business he must have proper and adequate harvests of his cattle. He cannot stockpile

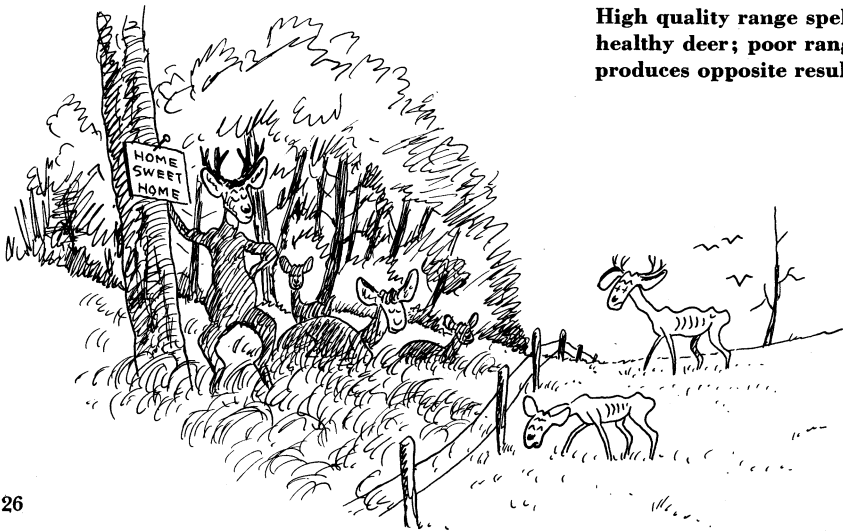
cattle on limited range, so he sells the annual surplus (his crop) . Neither can we stockpile deer on limited range, so the wildlife manager attempts to distribute the surplus animals (his crop) to the hunters for recreational harvests.

If a rancher builds a herd beyond the point his range will support, he will lose rather than gain. Soon the quality and quantity of his forage is reduced by overgrazing, the physical condition and health of his cattle decline, and his calf crop decreases. He will produce more beef in the long run if he does not try to carry more animals than the land will readily support.

You will be able to see a striking similarity in comparing cattle pastures to deer range. When we carry deer beyond that point the land will support, the result will be the same as with overgrazed pastures—the quality and quantity of the range deteriorate through overbrowsing. When this happens the production of fawns will decrease, for the nutrition and physical condition of the does is reflected in the production of fawns. To carry more deer than their range should have is to have a large capital investment—the deer herd—producing a low rate of return—production of fawns. In addition we lose more of our capital than necessary because of undue natural mortality in the entire herd. But by proper harvests the capital investment can be kept at a minimum and a high rate of return maintained.

The management of deer is not a simple problem, further complicated in Nebraska by the lack of public lands. Most of our deer are produced on private lands from which the owners are making their living. We must consider their interests in our deer-management program, and populations of deer must be kept in harmony with other land uses.

The goals of our deer-management program here in Nebraska can be summed up as follows: (1), to produce deer populations that will provide the greatest amount of recreation for Nebraska's big-game hunters over the longest period of time, and (2), to maintain populations that are consistent with the many other land uses.



High quality range spells healthy deer; poor range produces opposite results

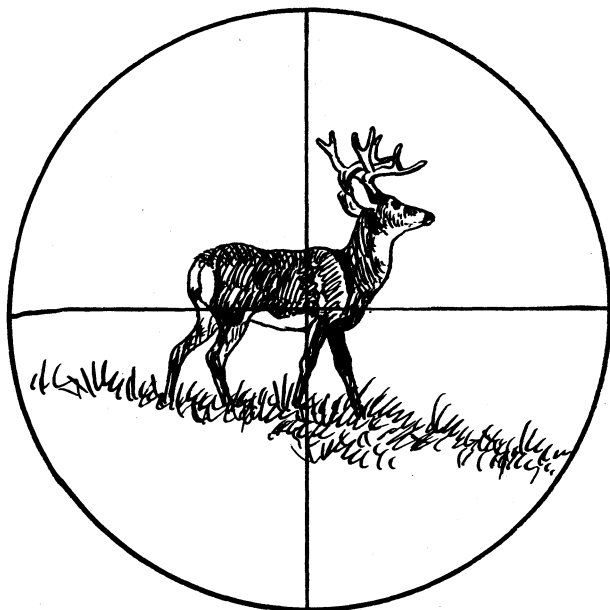
TO TEACH A sportsman all he must know to be a finished deer hunter would be impossible in a few paragraphs. We can only list a few of the rules for a good deer hunter. These should serve only as a foundation on which to build a complete code of courtesy, sportsmanship, and woodsmanship.

Pointers to help improve yourself as a deer hunter

Go prepared. You need more than a rifle. Before you start be sure that you are equipped with plenty of warm, lightweight clothing and footwear, a sharp knife, a belt axe if you have one, a few feet of light rope for dragging your deer, a clean cloth sack in which to carry the deer's heart and liver, and your signed permit.

Arrange for a place to hunt. Since most deer hunting in Nebraska is done on privately owned land, you should plan to get permission from the owner before you hunt. If you have friends or relatives in the area you can make this contact well before the season. If not, take advantage of the assistance offered by the chambers of commerce in many of the towns in the deer areas, or ask representatives of the Game Commission for help. And when you have found a place to hunt, conduct yourself in such a manner that next deer season you will be welcomed back.

Know your rifle. Never go into the field carrying a rifle with which you are not completely familiar. Only rifles delivering more than



Take your time and be deliberate when scoping in on game

900 foot-pounds of energy at 100 yards may be used. In addition muzzle-loading rifles of 40 caliber or larger may be used during the rifle season in any area open to rifle hunting. Arms which do not meet this standard are illegal, for they are considered too light to kill deer humanely under most conditions. A partial list of legal rifles is given below. If you do not find your caliber listed, check a table of ballistics or contact a sporting-goods dealer before you use the rifle.

**REPRESENTATIVE LEGAL CALIBERS AND LOADS
FOR BIG GAME HUNTING IN NEBRASKA**

Caliber	Bullet Weight (grains)	Velocity at 100 yards, feet per second	Energy at 100 yards, foot- pounds
.243 Winchester	100	2790	1730
.244 Remington	90	2850	1630
.250 Savage	100	2500	1390
.257 Roberts	117	2250	1350
6.5 mm. Mannlicher-Schoenauer	160	1950	1350
6.5 mm. Jap	140	2450 (est.)	1860 (est.)
.270 Winchester	130	2850	2340
7 mm. Mauser	175	2170	1830
.30/30 Winchester	170	1890	1350
.30 Remington	170	1890	1350
.308 Winchester	150	2570	2200
.30/06	150	2870	2370
.300 H. & H. Magnum	180	2870	2850
.30/40 Krag	180	2250	2020
.300 Savage	150	2390	1900
.303 Savage	180	1810	1310
.303 British	215	1900	1720
7.62 mm. Russian	150	2570	2205
7.7 mm. Jap	150	2420 (est.)	1950 (est.)
8 mm. Mauser	170	2140	1730
8 mm. Lebel	170	2280	1930
.32 Remington Automatic	170	1900	1325
.32 Winchester Special	170	1920	1390
.33 Winchester	200	1870	1555
.348 Winchester	200	2140	2030
.35 Winchester	250	1910	2025
.35 Remington	200	1830	1490
.358 Winchester	200	2210	2160
.375 H. & H. Magnum	270	2460	3620
.401 Winchester Automatic	200	1750	1360
.405 Winchester	300	1940	2510
.45/70 Government	405	1160	1210

The following calibers and loads are legal but not recommended. In the hands of an expert they may be satisfactory.

.220 Swift	48	3490	1300
.22 Savage High Power	70	2480	955
.25 Remington Automatic	117	2020	1060
.25/35 Winchester	117	1950	985
.32/40 High Velocity	165	1650	1000
.351 Winchester Self-Loading	180	1560	975

ILLEGAL CALIBERS FOR BIG GAME HUNTING IN NEBRASKA
These loads do not have 900 foot-pounds at 100 yards*

.22 Long Rifle	40	1045	97
.22 W.R.F. (Remington Special)	45	1110	123
.218 Bee	48	2160	475
.219 Zipper	58	2440	740
.22 Hornet	45	2030	410
.222 Remington	50	2650	780
.225 Stevens Rim Fire	67	985	140
.25/20	86	1180	265
.30 M1 U.S. Carbine	111	1580	617
.32/20	100	1060	250
.32/40	165	1250	570
.38/55	255	1160	760
.44/40	200	1050	490

*Note: Other loads and calibers which develop less than 900 foot-pounds at 100 yards are also illegal, however, it should be pointed out that hand loads to higher velocity levels, which may be safe in some rifles, could make calibers such as .32/40 and .38/55 legal. Also, all types of semiautomatic rifles are legal in Nebraska provided the load meets the energy requirement. This is not intended to be and cannot be a complete list of rifles, but should serve as an adequate guide. Due to the wide range of possible ballistics, "wildcats" cannot be included, but most "wildcats" of .240 caliber or larger probably are legal. Full metal-jacket bullets and incendiary bullets are illegal for use on game.

You should know exactly how to operate and dismantle your rifle, and what to do if it jams or misfires, or if the barrel becomes obstructed. If you must borrow or buy a gun shortly before the hunt, have the

owner or salesman explain its operation, then take it out and shoot it. Handle it every day and above all, learn how to do so with safety to yourself and to others.

Take your time and be deliberate. "Buck fever" has probably accounted for more "muffed" chances and poor hits than will ever be admitted. A good deer hunter knows that sudden, excited movements disturb not only the hunter, but also the deer. Unless a deer has been thoroughly frightened, he will not flee wildly at the first sight of you. There is a good chance that it will take a few seconds to figure you out, and if you do a good job of "playing stump," the deer may actually approach closer to investigate. This is the moment that separates the hunters from the novices, for it takes a good deal of self-control to pick your animal (if there is more than one), estimate your range, wait for the proper time, and make a clean kill. To drop a standing deer at 75 yards with a single, well placed bullet compliments the hunter's ability far more than killing a fleeing animal with a shower of bullets at 300 yards.

Follow your deer. A question that invariably comes up among deer hunters is whether or not to follow a wounded deer immediately or to wait a few minutes. There are arguments on both sides. But by all means you should follow any deer that you shoot at. It is impossible to say with certainty that a deer has not been hit, judging by his actions. Frequently, when hit, a deer will bolt, kick like a mule, tuck its tail down, or falter in its stride. Then, too, it may show no outward sign and disappear behind a hill and drop dead. If you cannot watch the deer, it is only good sportsmanship and wise conservation to find its tracks and follow them at least 100 yards, watching for blood or any irregularity.

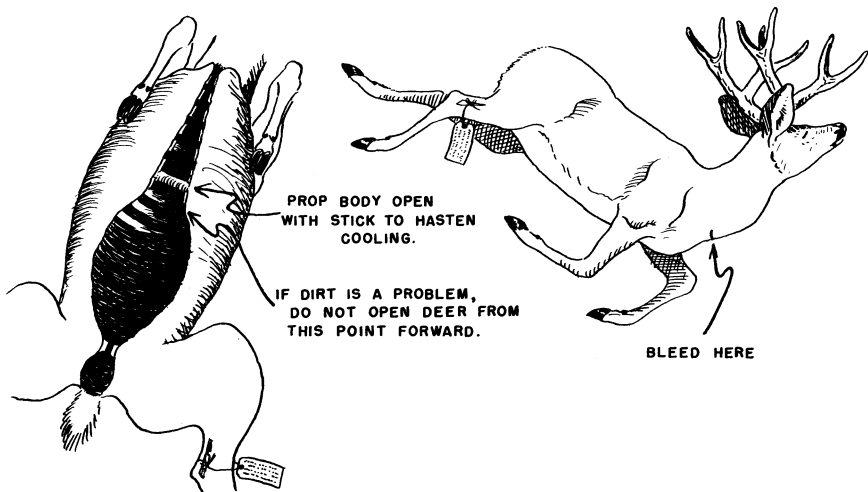
You've downed your deer—what next? The fact that a deer is down does not necessarily mean that it is out. Sometimes a bullet only stuns a deer. The sharp hoofs of a wounded deer can be dangerous, so approach the animal from the back side and keep your rifle with you. When you are sure your deer is dead, attach your tag.

There are two points to remember in field dressing your deer if you are to enjoy fine venison: (1), your deer must be bled well, and (2), the carcass must be cooled out as soon as possible. Most modern, high-powered ammunition will bleed a deer quite adequately and if you begin butchering immediately, as you should, major veins and arteries will almost certainly be severed. However, to assure thorough bleeding, it is a good idea to turn the deer so that the head is downhill and to make a deep cut across the throat through the jugular vein.

If you exercise reasonable care, it is not necessary to remove any glands. It is possible, however, to impart an undesirable flavor by accidentally transferring musk from the glands on the hind legs to the meat with your hands.

Removing the entrails from a deer is a simple job. Even a novice can turn out a clean, well butchered deer if he is careful.

To work on your deer you can either hoist it by a rope attached to the head, or lay it on the ground on its back. Your first cut is an incision along the midline of the body, from the end of the breastbone back as far as the reproductive organs. Make this cut only through the skin first, working the skin free from the flesh beneath it with your



fingers as you go. Next, cut through the layer of flesh, being careful not to puncture any part of the digestive tract, for a very small puncture can make the job a disagreeable task. Your cut should continue back and completely encircle the anus—and the reproductive organs, if it is a doe—so that it will be possible to pull the entire rectal area forward into the body cavity. If you have a belt axe or cleaver, cut through the pelvic bone between the hind legs.

If dirt or debris are not going to be troublesome when moving your deer to your car, complete the opening of the body by extending the cut in the skin forward to the brisket and then splitting the breastbone with your belt axe. This simplifies field dressing and hastens cooling, but it also makes a much larger opening through which foreign matter can enter.

You should now free the viscera and lungs by pulling them away from the body wall and cutting the anchoring tissue where necessary. Cut away the diaphragm—the “plate” of muscle that separates the lungs from the viscera—and then reach in ahead of the lungs and sever the windpipe. You are now ready to turn the animal on its side and dump out the entrails and lungs. Be sure that the intestine pulls free without breaking, particularly where you cut around the anus.

The liver and heart should certainly be salvaged, for they can provide some enjoyable eating as soon as they are cooled out. Don't bother looking for a gall bladder on the liver—a deer has none. Place these parts in a cloth bag to keep them clean and permit cooling.

After removing any parts that failed to pull out with the viscera, place your deer belly-down on a log or a clean, grassy spot for a few minutes so that any blood remaining can drain out. Then wipe the body cavity dry if you have a spare cloth.

There are several methods of moving a deer to where it can be reached by a car, but unless you have a saddle horse or a good-natured hunting partner, you are in for a job. If the ground is not covered by deep snow or jagged rocks, the simplest way is to drag the deer by a rope tied around the base of the antlers. If it has no antlers, the rope can be pushed into a hole made through the lower jaw two or three inches back from the tip, and out the mouth. If you try to drag by a rope

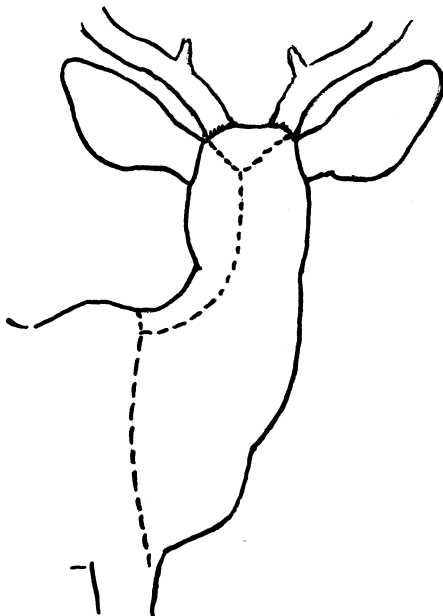
attached to the hind legs you will find your deer snagged on every tree and rock.

Dragging will almost certainly damage the hide, so if you intend to have the hide tanned or the head mounted, handle it accordingly. If there is good snow cover, a toboggan improvised from a piece of sheet metal may do very well. If you find that you must carry the deer, be sure to tie a cloth over the head and antlers and make plenty of noise as you move along by whistling or singing. Without these precautions, you are inviting trouble from an overly anxious hunter.

As soon as you get your deer to camp, prop the body cavity open with a couple of sticks and hang it in a cool, shady place so that it will cool out quickly. This should be done in the field if you anticipate a delay in moving the deer. During warm weather, precautions must be taken against flies. A covering of clean cheesecloth should do the trick.

Handling a trophy head. Any game that is taken in a sportsmanlike manner by a method that compliments the ability of the hunter is worthy of the term "trophy." If it is an exceptionally handsome specimen, so much the better. A good mount preserves not only the trophy but also the thrill and satisfaction of the hunt as well.

The quality of the mount depends in part on the taxidermist's skill, and also on the care you exercise in preparing the cape—the skin of the head and neck. A point to remember is make only the cuts on the cape that are absolutely necessary. Any extra cuts have to be repaired by the taxidermist and may affect the appearance of the head. To skin out the cape, split the skin up the middle of one shoulder to the backbone. From this point cut forward along the back of the neck to a



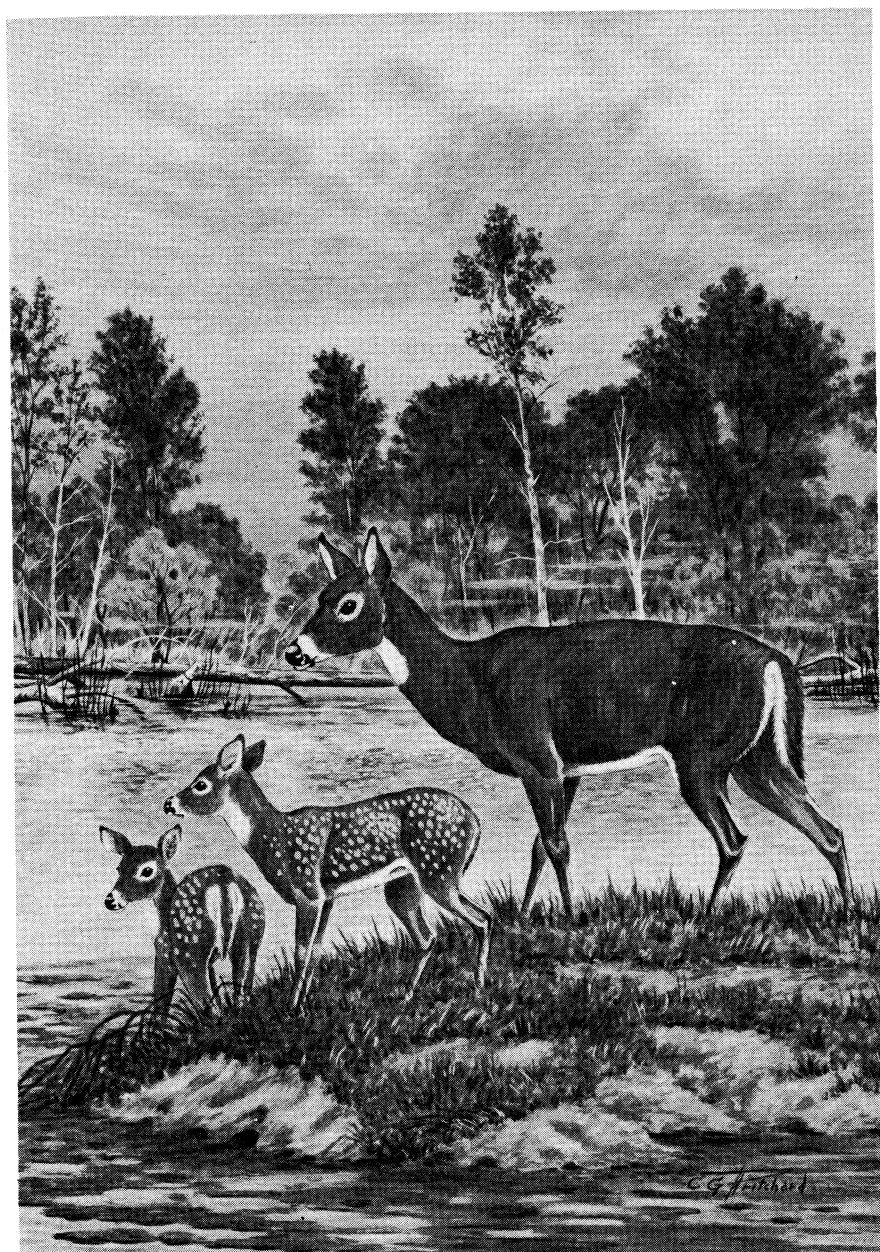
For a good mount make only the cuts on the cape that are absolutely essential

point between the ears, then to the right and to the left to the bases of the antlers. Turn your animal over and cut down the middle of the other shoulder and across the brisket to join the first cut you made. Remove the skin, working toward the head. When you reach the ears, cut the cartilage close to the skin. Be sure you don't cut the skin when working around the eyes, nostrils, or lips. Spread salt on the flesh side of the cape liberally and rub it into folds and wrinkles. Fold the cape with the salted side in and ship it with the fleshed skull to the taxidermist. If shipment is delayed, keep both the skin and the skull in a cool place. A good photograph of your deer will be of help to the taxidermist.

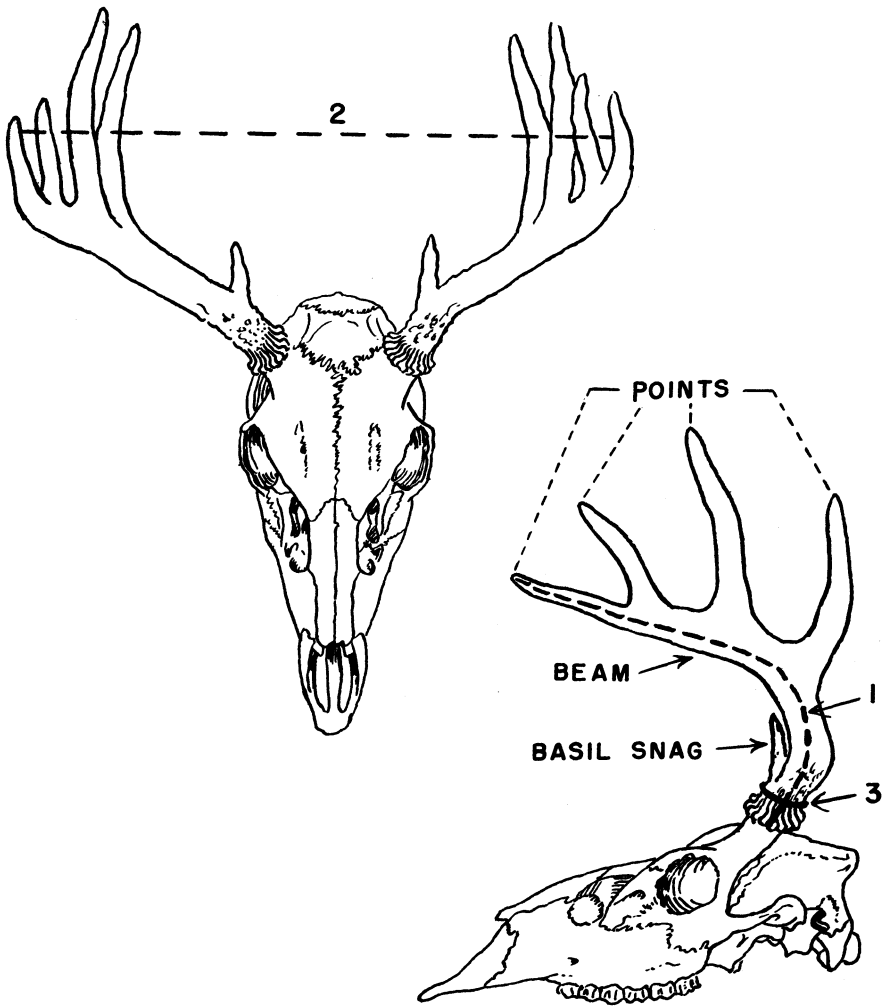
Care of the meat. As with any meat, high-quality venison is produced only if your deer has had ample supplies of nutritious foods, and in Nebraska, it's a good bet that your deer has had such rations. But unfortunately, human slips often destroy the fine quality. It is impossible to list all the things you should not do, but the most important things you should do are as follows:

1. Bleed your animal thoroughly, immediately after the kill.
2. Field dress it promptly and see that it is cooled out quickly and completely. You should facilitate cooling by skinning the carcass as soon as it has been sealed.
3. Transport your deer with the same care you would give a quarter of beef. **Do not** drape it over your car fender, for the engine heat can spot the meat quickly, or close it up in your trunk, for heat and poor circulation are at work here. A car-top carrier or trailer is excellent if your deer is covered to protect it from dust. The propped-open trunk of your car is satisfactory if you lay the deer in a position to allow free circulation of air, and if you are driving on dust-free roads. Probably one of the best methods is to have the deer quartered, chilled—most locker plants or packing companies will do this for you—and wrapped in a single thickness of light cloth so it can be carried inside your car.
4. Keep the meat free of dirt and insects by covering it with cheesecloth if necessary.
5. Hang the meat in a cool place to age for a week or two before you package and freeze it. Aging improves the flavor.
6. Venison is a delicious and versatile meat that can be a treat for the most discriminating. To most hunters, the "wild" taste is a desired part of "wild" meat. But if you wish, most of the wildness can be stopped short of the dinner table by trimming away the fat where most of this flavor is concentrated. But, don't forget that venison is normally a rather "dry" meat and removal of the fat makes it even more desirable to add suet or butter when cooking.

There are far too many methods of preparing venison to be listed here. You should refer to a good cook book for recipes to use fresh venison. However, remember that venison can be cured like ham, ground for "deerburger," or mixed with pork and seasoned to make excellent sausage. Your butcher can probably advise you on these methods.



White-tailed deer

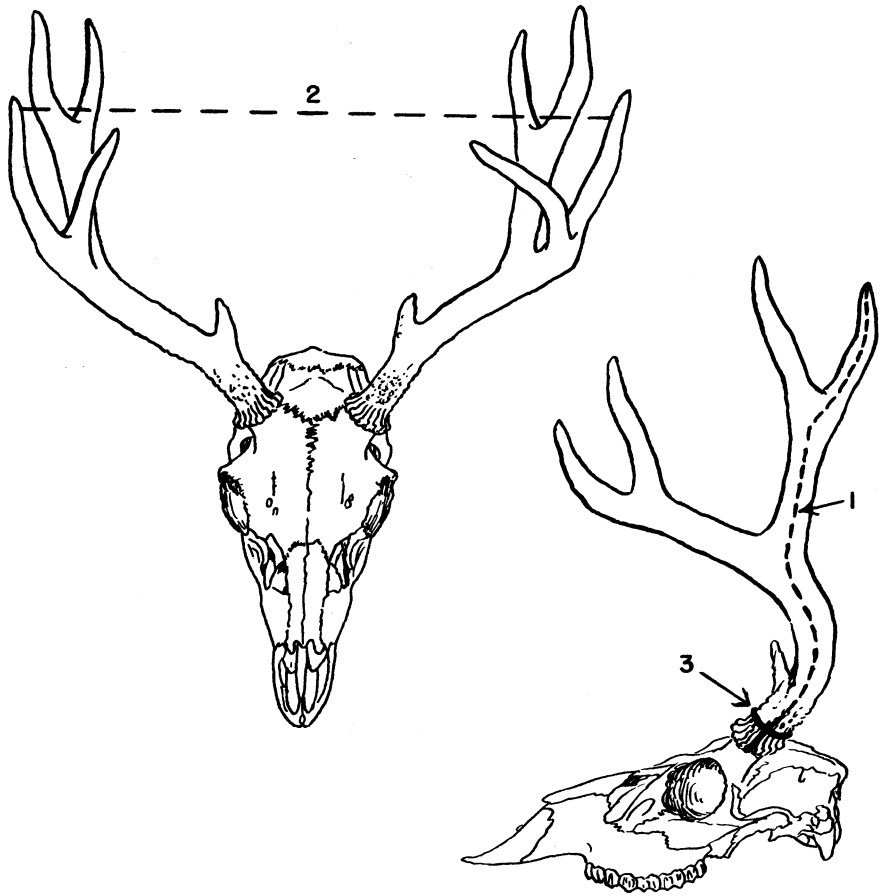


WHITE-TAILED DEER TROPHY MEASUREMENTS

The Nebraska Trophy, which was the United States record trophy since 1909 was equaled in 1947 by a head scoring $178\frac{1}{8}$ points taken at Concrete, North Dakota in 1947. Both trophies were later excelled by a deer taken in New Brunswick.

	World Record	Nebraska Record	Your Record
1. Length of Outside Curve	L. $29\frac{4}{8}$	L. $23\frac{5}{8}$	
	R. $29\frac{5}{8}$	R. $24\frac{1}{8}$	
2. Inside Spread	$18\frac{1}{8}$	$19\frac{1}{8}$	
3. Circumference, Main Beam	L. $4\frac{6}{8}$	L. $4\frac{4}{8}$	
	R. $4\frac{6}{8}$	R. $4\frac{5}{8}$	
4. Number of Points	L. 8	L. 8	
	R. 6	R. 8	

Nebraska record whitetail taken before 1909 along Dismal River & placed in National collection of Boone & Crockett Club, New York City, as gift of C. R. Grinnel.



MULE DEER TROPHY MEASUREMENTS

	World Record	Nebraska Record	Your Record
1. Length of Outside Curve	L. $26\frac{7}{8}$	L. $28\frac{3}{4}$	
	R. $27\frac{6}{8}$	R. $23\frac{3}{4}$	
2. Inside Spread	$26\frac{2}{8}$	29	
3. Circumference, Main Beam	L. 5	L. $4\frac{3}{4}$	
	R. $5\frac{1}{8}$	R. $4\frac{3}{4}$	
4. Number of Points	L. 5	L. 4	
	R. 6	R. 4	

The Nebraska Record was taken in 1952 by Allen M. Mason, R.F.D. #1, Brady, Lincoln County, Nebraska.



Mule deer