

IOWA CONSERVATIONIST

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THE IOWA DEER PROBLEM AND ITS SOLUTION

OUR DEER 1936-1952

By E. B. Speaker
Superintendent of Biology

While there is no accurate information on the total population of deer in Iowa in 1936, it is conservatively estimated it numbered somewhere between 500 and 700 animals. At first, increases in the herds were small, but in 1940, deer were well-established in the woodlands along many of the principal waterways.

To quote from the 1940 biennial report of the State Conservation Commission, "Many people do not realize that there are deer in the wild in the state of Iowa. However, such is the case and although an accurate census of these animals cannot be taken due to the fact that they are widely scattered over the state at points where the environment is suitable, it is nevertheless reasonable to assume that there are at least 1,000 wild deer at large in the state. At some points where there are rather large concentrations, from 50 to 150 deer make up the herd. Numerous complaints have been received of damage to crops and it seems that legislation should be enacted for reducing the population of surplus deer."

Two years later a quotation from the 1952 biennial report states: "At the time the last biennial report was published, it was thought that at least 1,000 wild deer roamed at large in the state. This number has not only increased but the complaints of crop damage and the hazard to motorists where regular deer crossings intersect paved highways have increased."

The 50th General Assembly enacted a bill empowering the State Conservation Commission to reduce the number of deer in Iowa in areas where depredation was serious. During the biennium ending June 30, 1944, state crews live-trapped 44 animals from heavily populated areas and transplanted them in various areas. At the same time state hunters killed 68

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From both an agricultural and highway hazard standpoint, the whitetail deer has become a serious wildlife problem in Iowa. Jim Sherman Photo.

THE WHITETAIL CALENDAR

By John Madson
Education Assistant

JANUARY, 1953. The bucks are tired now, for the peak of their year has passed. The crisp days that were loud with battle are gone, and with them the anger, antlers, and swollen necks of the breeding season. Without their racks the bucks are meek again, and have joined the herds of does and older fawns in the protected valleys.

This is the hard time, for spring is far away. With the coming of winter their reddish summer coats

have thickened and turned gray, and hunters say that the herd is "in the blue." The whitetails are warm enough, but cold is not the prime winter enemy. Food is one of the major problems. Through the winter the deer are depending on the buds of cottonwood, elm, and basswood, and the growths of sumac and poison ivy. The grain and acorns that fed the herd in autumn may be covered with snow and ice, and the sharp, dainty hooves are not made for pawing.

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By James R. Harlan
Assistant Director

During the past 15 years the white-tailed deer has become a serious wildlife problem from both an agricultural and a highway hazard standpoint. This is a turn of events little envisioned by the Conservation Commission in the early thirties when experimental stockings were being made from captive deer herds.

The early stockings were primarily for esthetic reasons and to relieve pressure on the enclosed deer range in Ledges State Park. The popularity of the deer stocking program was universal and the Conservation Commission was besieged with requests from landowners who were anxious to have a few deer on their properties.

The esthetic success of the experiment exceeded even the management success. As the deer multiplied rapidly in perfect environment and herds split up and spread, their unexpected appearance in new communities was greeted with public pleasure and editorial surprise. In some areas this is still the case, in others the exact opposite is true.

In many Iowa areas only a few deer can survive and large herds can not be established. A half dozen deer in a township give no concern and are unquestionably an addition to the community, adding to the beauty and interest of the landscape. In such areas we have no problem.

In townships that can support hundreds of deer (and many can) they become, without control, a liability to agriculture and a serious highway threat, offsetting their very real esthetic values. It is in these areas that can and are supporting large wild deer populations and where they will continue to increase, that our problem centers.

Deer Crop Damage

It is axiomatic in the agricultural midwest, that when wildlife becomes seriously incompatible with agriculture the problem must be resolved in the favor of agriculture. Where the involved wildlife is a game species and can be uti-

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Iowa Conservationist

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AERIAL DEER SURVEY

By Glen C. Sanderson
Game Biologist

Several special checks of deer concentration areas were made in Iowa during 1952. One of these was an aerial survey of the Pottawattamie-Shelby County herd in the vicinity of Avoca and along the Missouri River from Glenwood north to Crescent City. This survey was made April 22-23, 1952.

At this time the snow cover had disappeared, but in this particular area it is believed that this is the most advantageous time to make the survey. The oak trees have dropped their persistent leaves and the new leaves are not large enough to interfere with vision. The light colored deer are easily observed against the contrasting background of the new growth of green grass.

Although a few bucks still carrying racks were observed, most bucks have dropped their antlers by this time, consequently it was not possible to accurately separate bucks and does from the air. The yearlings are so large they cannot be accurately distinguished from the older deer from the air.

The plane used was a two-piece Super Cub, piloted by John Talbot, then pilot for the Conservation Commission, with the writer as observer. After experimenting with

various altitudes it was learned that for timbered areas such as are found in Iowa, approximately 300 feet is the best altitude for locating and counting deer. At higher altitudes deer in the timber are difficult to see, especially if they are lying down. They are usually not frightened by a plane and will not move. At lower altitudes it is not possible to "see down into the timber" the way it is at 300 feet. While looking for deer or counting them, a low speed was maintained, making it easier to see them. Once deer were located, the area was circled several times to make certain that an accurate count was obtained.

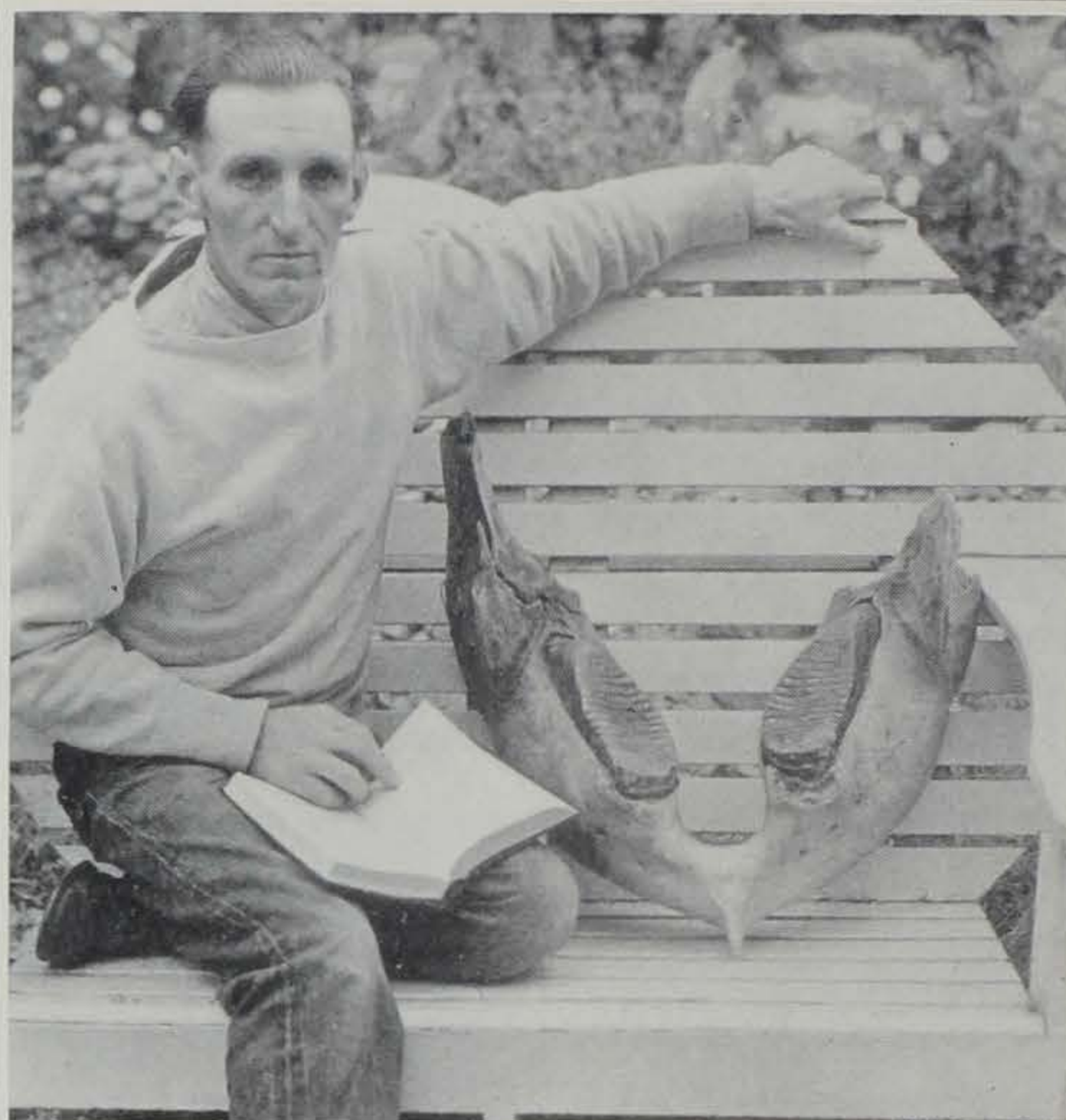
The Avoca herd is a special case and the results obtained there are not necessarily applicable to other areas. Of the deer observed in the Avoca area, approximately half were in small timber and the rest were in open fields. Timbered areas in this vicinity are relatively small, making it much easier to locate deer than in the more extensive timbered areas elsewhere.

In three hours and 20 minutes of actual flying time, 325 deer were counted, principally within a five-mile radius of Avoca. Most of these were seen east of Avoca but they all belong to the Avoca herd and range along the Nishnabotna River and adjacent territory in Pottawattamie and Shelby counties. The deer were in groups ranging from three to 40 animals, with the majority numbering from 12 to 25. It is estimated that 75 per cent of the deer in the area were observed.

In 3½ hours flying time only 25 deer were counted along the Missouri River hills and valleys from Glenwood north to Crescent City. Ward Garrett, conservation officer from Pottawattamie County, estimates that there are more deer in this territory than there are in the Avoca vicinity. This apparent discrepancy can be explained by the fact that timbered areas are more extensive along the Missouri River than they are in the Avoca area. The deer are harder to locate and groups ranged from one to six animals, with two and three the number seen most



For timbered areas in April, 300 feet is the best altitude for counting deer from the air.



Deer remains undistinguishable from the modern whitetail have been found in glacial deposits along with Pleistocene mammal bones like this mammoth jaw.

ANCIENT IOWA DEER

By Jack Musgrove

Museum Director
Department History and Archives

The question of how long deer have existed in our state takes us back thousands of years to a period known as the Pleistocene, this period which is not wholly understood and difficult to describe, being a time when vast sheets of ice covered our country and left deposits of gravel, boulders and clay as layers in our soil. It was the age when nature was still in the experimental stages, the period when the mastodon and mammoth and the large Pleistocene bison roamed this portion of the country. Evidence of the animals that lived

commonly in aerial checks. At the time survey was made the Missouri River was just past its highest flood peak in many years, so all the deer normally found in the bottoms were widely scattered through the adjacent hills.

It is possible to tell whether or not a deer died of starvation by the color of its bone marrow. If the marrow is white, death was not caused by starvation. If pink to cranberry red, the deer starved.—J. M.

Deer have scent glands located at the hooves. Some hunters claim that fresh tracks have a scent which can be detected by a human, and so they sniff the tracks to determine how long before the deer had passed by.—J.M.

in this period are to be found in the gravel layers that resulted from these sheets of ice which pushed down across our state.

Of common occurrence in the gravel pits of Iowa are the remains of antlers, bones and teeth of members of the deer family as well as extinct species. Those who have studied Pleistocene fauna believe that the white-tailed deer occurred during the early portion of this period and may take us back as far as 200,000 years ago. From the lead regions of northeastern Iowa, Wisconsin and Illinois the teeth and bones of the white-tailed deer have been found that definitely date this animal as of the Pleistocene period. One extinct species of deer (*Odocoileus whitneyi*) has also been found in this state.

It is often difficult to definitely establish the age of the skeletal remains of animals found, particularly those found in streams where they may date back to the Pleistocene times or may be the remains of recent animals. Indications are that the white-tailed deer which existed many thousands of years ago was identical to the species as we know it today.

Other members of the deer family will possibly turn up in future studies but we do have ample evidence that the elk, two species of moose and the caribou were also found in Iowa in this early period. Many specimens that are turned up in the gravel pits cannot be positively identified and many are definitely overlooked, but it is established that members of the deer family have existed in Iowa since early in the Pleistocene period 50,000 years ago.

DEER CONTROL IN THE MIDWESTERN AGRICULTURAL STATES

By Paul Leaverton
Superintendent of Game

Iowa is not alone with its deer problem. During the past 20 years deer populations have literally exploded in the midwest. South Dakota, Nebraska, Missouri, Illinois, Ohio, and Indiana have all felt the growing pains of expanding deer herds.

Control of big game is essential in agricultural areas, and at some time each of our neighboring states has been confronted with the same problem that Iowa is now facing.

South Dakota

For this reason, South Dakota opened a deer season for the first time in the eastern part of the state in 1947. With an estimated 10,000 deer in four northeastern counties, crop depredations had become serious and a season was set from December 1 through December 3, with no limit set on the number of licenses issued. In spite of heavy snows that year, nearly 4,000 licenses were sold, and 2,485 deer were harvested with shotguns using rifled slugs. Later in the winter the heavy snow caused the deer to concentrate, and corn suffered heavy damage. The next year, farmers met and demanded action in areas that had been opposed to deer hunting only the summer before! In 1951, the entire eastern portion of the state was opened. In spite of pre-season dissension, there was actually little farmer-hunter friction during the hunting period, and the 1953 season is being tentatively planned along the same lines. Little information is available yet on 1952 hunting results, but in 1951 over 11,000 hunters took 4,700 deer from a population estimated at 14,200 in the "east river" zone.

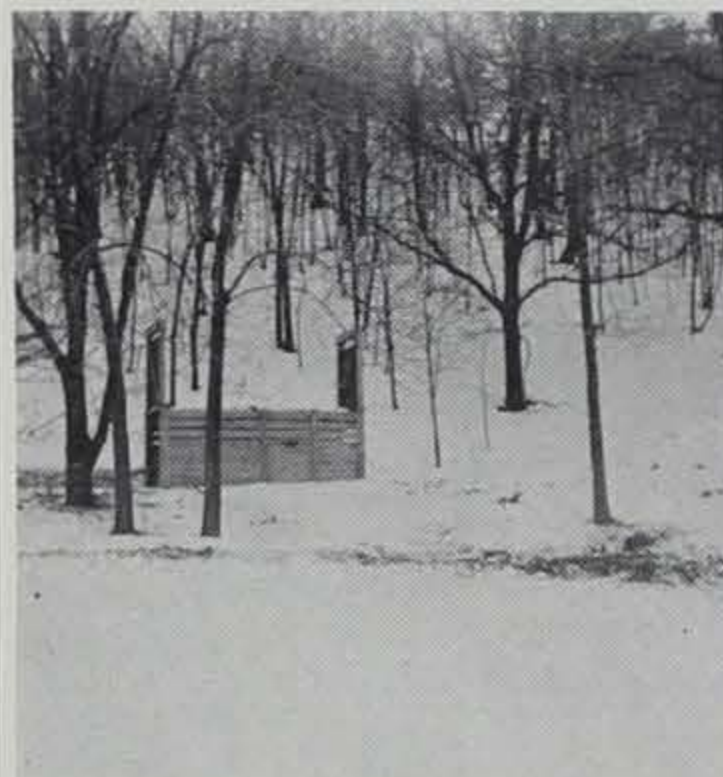
Nebraska

Nebraska believes that deer hunting is an important part of the animals' successful manage-

ment and that it helps insure the well-being of the entire herd. The first deer season was opened in a limited area in 1945. Because of large deer numbers and crop damage, it has been decided to reduce the herd by the removal of does. This year's season was a split one, with consecutive seven-day seasons for bucks and does. A total of 1,905 deer were taken in 1952, including 1,073 bucks and 832 does. Permits were issued by lottery at a cost of \$10 each. No rifle delivering less than 900 foot pounds of energy at 100 yards may now be used, and full metal-cased bullets are prohibited.

Missouri

It is said that the Missouri deer herd has increased over 1,200 per cent in the last 18 years. Much of this increase has been in the "prairie" counties of the north and not in the traditional deer country of the Ozarks. Each year finds more of the northern counties being opened to deer hunting. In 1952, Missouri nimrods killed over 7,000 deer during the three-day season which closed December 6. Forty-two counties were open and about 40,000 hunters turned out. The total kill was below that desired by biologists, who believed that 10,000 should be taken in the interests of good management. The Missouri firearms law has set a minimum weight of 60 grains on legal rifle bullets, outlawed self-loading rifles, and banned all rim-fire and full metal case or military type ammunition. It also limited shotgun users to 10, 12, 16, or 20 gauge guns using a single ball or rifled slug. In 1947, muzzleloading rifles of not less than .40 caliber were added to the list of legal arms. In addition to the regular season, an archery season opens earlier, and several archers brought in their deer in the 1952 season.



At the Ledges, live trapping was successful only when snow covered the ground.

Illinois

The Illinois deer situation has not yet become critical. Much of the herd is concentrated along the Rock River in northern Illinois, from which animals are live-trapped and stocked in the southern part of the state. Deer are becoming well-established throughout Illinois, and there is some talk of deer hunting, although the problem has not yet reached a serious stage.

Ohio

Ohio's main reasons for deer control are crop depredations and car-deer accidents. In 1952 about 500 deer were killed on Ohio highways, more than were killed by Buckeye hunters during that year's hunting season! Approximately 10,000 permits were sold in 1952. Twenty-seven counties were open for three days last year, with shooting hours from 9 a.m. to 4 p.m. One county was reserved for bow hunting only, and the others were limited to bows and shotguns with rifled slugs. The estimated population in the open counties was 11,000 deer, and returns from 4,500 hunters show 263 deer taken. Although this herd is in an agricultural state and is increasing at about 25 per cent each year, hunters complained that deer were hard to find.

Indiana

In the fall of 1951, Indiana opened a deer season for the first time in 58 years. A three-day season was set on any deer from November 1 through November 3. Shotguns of 12, 16, and 20 gauge with rifled slugs, and bows with not less than 40 pounds pull were allowed. Seventeen counties were opened and 12,212 licenses were sold on an unlimited basis. The total harvest was about 1,600 animals. In 1952, with an estimated herd of 4,500 whitetails, Indiana opened the deer season in 18 counties. Over 20,000 licenses were sold and 1,150 deer were killed. As a safety measure, hunting was permitted only between the hours of 8 a.m. and 4 p.m. daily. Any age or sex of deer was legal, with a bag and possession limit of one.

As we stated at the beginning, Iowa is not unique in having a deer

problem. It is only unique in that the problem has been more delayed than in other states. These are some of the things that these other states have done to relieve the situation . . . now it's our turn.

Wardens Tales

Shop Talk from the Field

From Jim Gregory, in charge of Butler and Franklin counties, comes an example of the potential danger of a buck deer in breeding season.

On November 29, Dick Schaffer, an Allison grocer, and John Harms, an Allison implement dealer, were duck hunting on the west fork of the Cedar River south of Allison. They were hunting the river alternately, and it was Schaffer's turn to walk a mile of the stream. As he traveled alone along the river bank, he suddenly awakened a buck deer that had been sleeping by a fallen tree. The deer leaped to his feet, shook his head, and charged Schaffer.

Since Dick did not wish to shoot the deer, he kept waving his arms and firing his shotgun into the air. The deer advanced until it was within 30 feet of him, and then stopped. After looking at the hunter for a moment, it trotted off into the woods, leaving Schaffer with a feeling of relief and a good duck-hunting yarn.

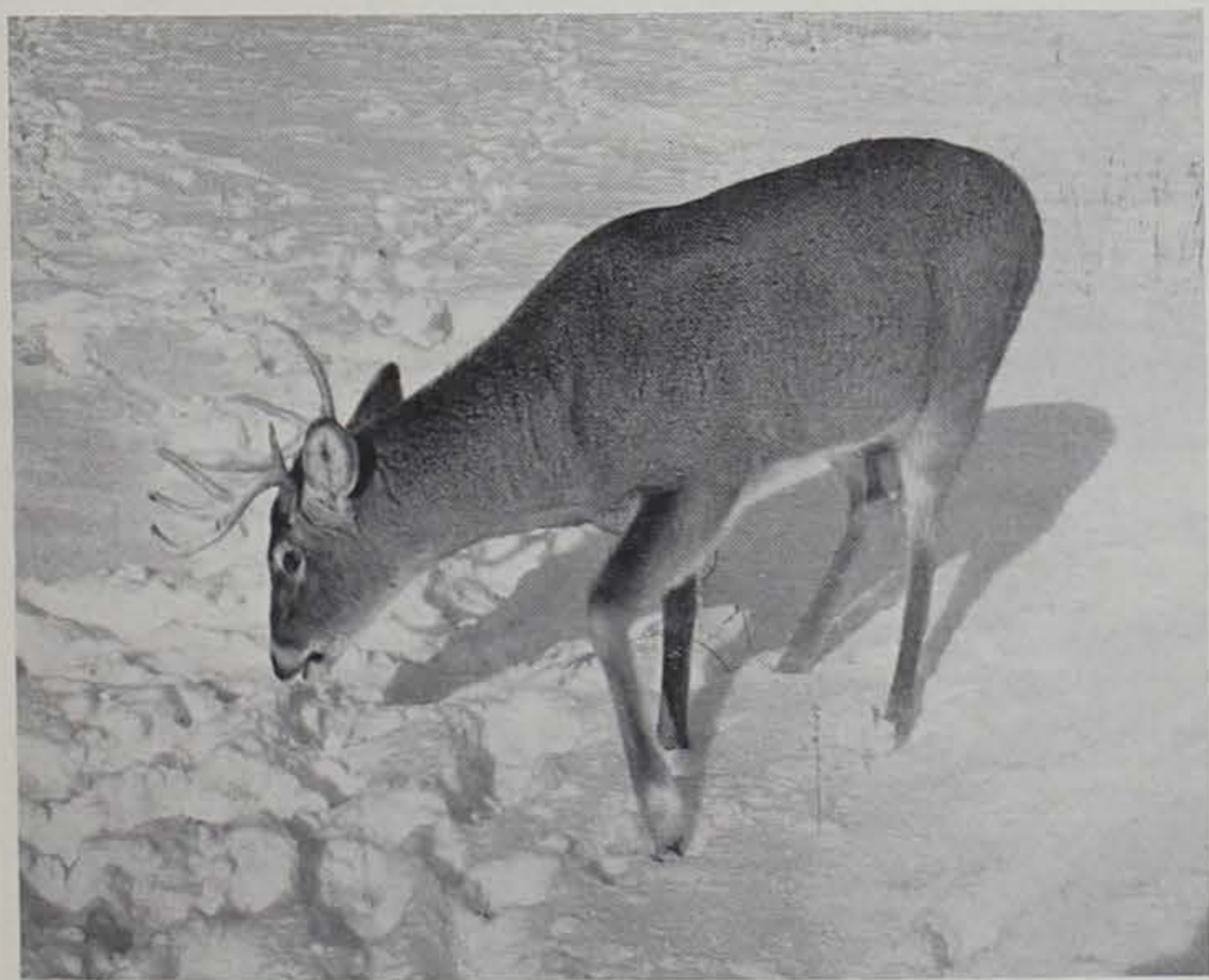


Walt Harvey, Conservation Officer in charge of Grundy and Marshall counties, advised us that in 1934, when he was first assigned to the central Iowa counties (Story, Boone, Greene and Marshall), deer were very rare except in the vicinity of the Ledges State Park in Boone County. About 1936 Walt was assigned the duty of trapping deer from this area because of heavy depredation to farm crops. Like others who followed Walt in the program of trapping and restocking deer from congested areas, he and the consignees felt the problem of population control would never be of serious concern.

Here's a true confession by Walt Harvey, officer in charge of Marshall and Grundy counties:

"While I was trapping surplus deer at Ledges State Park in the late winter of 1936, a request for a doe deer was received from the state school at Woodward. Soon afterwards I had a call from Carl Henning at the Ledges that we had trapped a deer, and upon checking the trap we found a fine, unantlered animal."

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In 1952, with an estimated herd of 4,500 deer, Indiana opened the season. Over 20,000 hunters killed 1,150 deer.



By 1951, only three counties in Iowa had no resident deer reported. Jerry Jauron Photo.

Our Deer . . .

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deer and distributed the meat to charitable institutions. Most of the trapping and harvest took place in the Ledges State Park area. Even after this reduction and an explosive dispersal it was estimated that more than 100 deer remained in the Ledges herd.

In the biennium ending June 30, 1946, it was felt there was little change in the statewide population, and complaints from farmers were less serious and less numerous than in the preceding biennium.

It was felt more accurate information was needed on the population status and statewide distribution of deer in Iowa, and in 1947, Mr. L. F. Faber, biologist for the State Conservation Commission, inaugurated a survey of the state, the conservation officers securing the information desired. Each officer was supplied with county maps and asked to secure the information from his respective territory and plot it on the maps.

The 1947 estimate indicated there were 1,650 deer in Iowa distributed in 88 counties. A similar survey was conducted again in 1948, at which time the deer had increased to about 2,000 animals and were reported from all but four counties in the state.

No survey was conducted in 1949. In 1950, Mr. Glen Sanderson, game biologist for the Commission, conducted a deer survey of Iowa utilizing the services of the conservation officers and supplementing the data with aerial

observations in certain sections of the state. At this time, the population had increased from 2,000 in 1948 to 4,500 in 1950. In the 1950 survey, four counties were reported without deer, and those counties included Franklin, Henry, Jackson, and Page. This survey further showed that 89 of Iowa's 99 counties had herds (two or more animals) as compared to 78 counties in 1948.

A comparison of the data collected in the 1948 and 1950 deer surveys indicated that deer extended their range in several places during the past two years. The spread in range seems to be more apparent in northeastern Iowa, especially in Allamakee, Clayton, and Dubuque counties; in central Iowa along the Des Moines and Raccoon rivers, especially in Dallas, Madison, and Polk counties; and along the Missouri River north of Council Bluffs and Big Sioux River in western Iowa. By 1950, all of the major water courses in the state had a fairly good deer population and it was no longer surprising to receive reports of deer from any location in the state. Probably every county in the state was visited by one or more deer sometime during the year.

Plans were made to make deer surveys every two years but with the increased interest shown in Iowa's deer population it was decided to make a survey again in 1951. Mr. Sanderson reported that according to the survey received from conservation officers in 1951, Iowa's deer had shown a decided

increase since 1950. In the 1951 survey a total of 6,900 animals were reported. This was an increase of approximately 52 per cent in the number of deer in Iowa since 1950. According to some authorities the maximum increase possible is slightly more than 66 per cent if sex ratio is even, there is no mortality, and the adult does drop twin fawns. The Iowa increase, therefore, seems normal and reasonable.

In 1951, only three counties of the state, Cerro Gordo, Franklin, and Grundy, reported no resident deer.

The results of the 1951 survey show that 93 of Iowa's 99 counties had deer herds as compared to 89 counties in 1950 and 78 counties in 1948. A total of 4,283 deer were reported in 349 herds for an average of 12.3 deer per herd. The balance of the animals were reported as individuals. In 1951, there had been no major shifts in the deer ranges since the preceding year. The woodland areas along the water courses of the state contained the major deer populations; however, each county in the state had deer at some time during the year.

In 1952, Mr. Paul Leaverton, Superintendent of Game, wrote to all of the state conservation officers asking them for their opinion on the total number of deer in each county. Information received from the conservation officers in 1952 in-

dicated they believe the total population has reached as many as 10,700 animals.

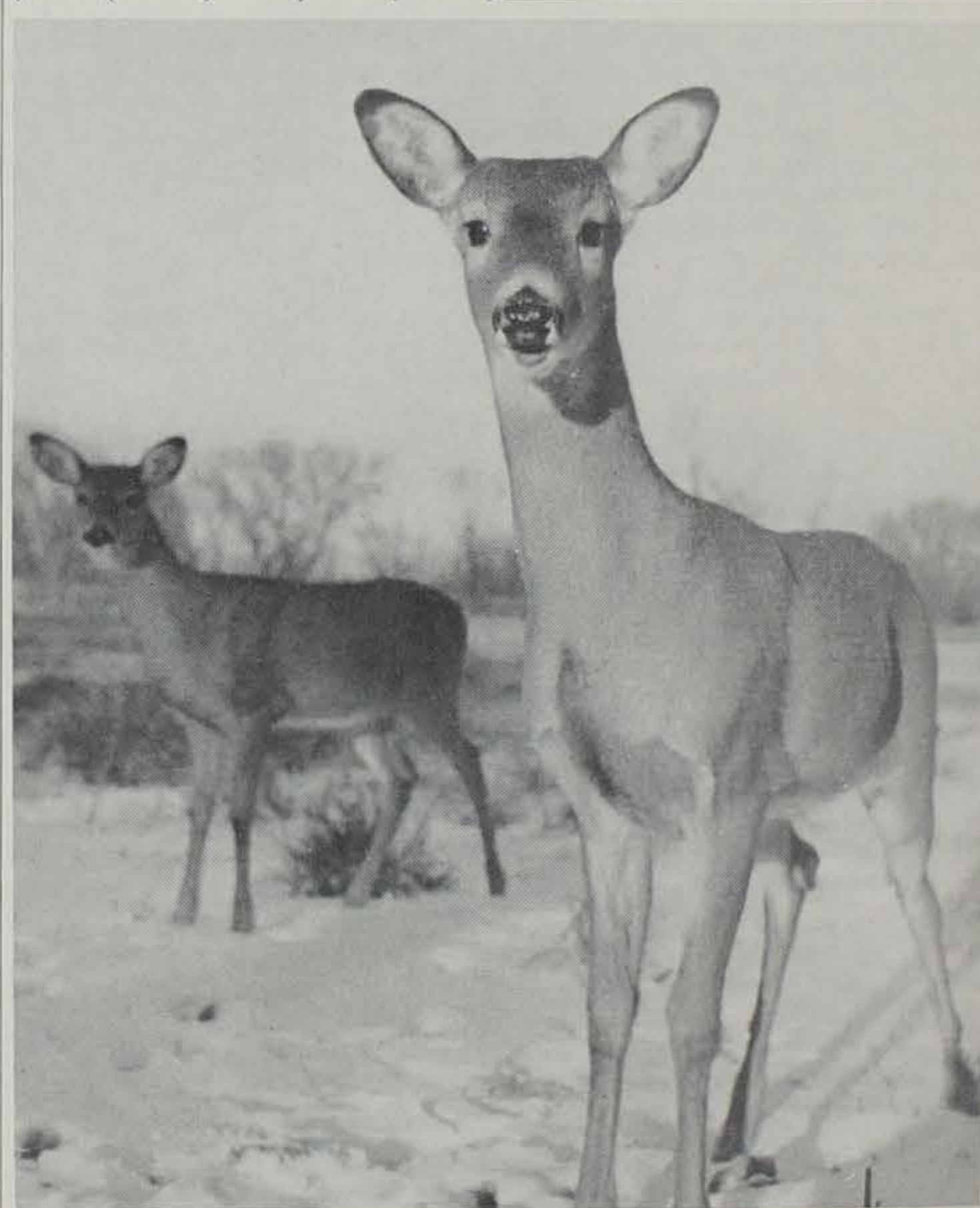
In a report from Mr. Sanderson, utilizing the data collected by Mr. Leaverton and the conservation officers, it is indicated that a 55 per cent increase occurred again from 1951 to 1952. At the present time seven counties have an estimated population of over 250 resident deer, and 39 counties have 100 or more, according to the 1952 report. Only 23 counties have less than 25 animals at this time.

Deer surveys conducted since 1947, although not as comprehensive as could be desired, do definitely show the upward trend in the population level. Deer are becoming more numerous each year and have established resident herds in nearly all counties of the state.

Hearing is the keenest of the whitetail's senses. They have poor vision for stationary objects, but are quick to catch motion.—J.M.

Age and antler points are not correlated, but there is a correlation between age and the thickness of the antlers at their base.—J.M.

Buckskin is of a higher grade in summer than in winter. Since winter hair is coarser, winter leather is not fine-grained.—J.M.



As late as 1936, many people were not aware of wild deer in this state. Jim Sherman Photo.

The following table from Mr. Sanderson's report indicates the changes in the three surveys:

A Comparison of the 1947, 1948, and 1950 Deer Surveys

	1947	1948	1950
Occasional Sight Records in.....	8 Counties	8 Counties	5 Counties
Scattered Individuals in.....	22 Counties	9 Counties	1 County
Herds Reported in.....	58 Counties	78 Counties	89 Counties
No Deer in.....	11 Counties	4 Counties	4 Counties
Number of Herds.....	155	199	320
Number Deer Reported.....	1,650	2,024	4,530



A band of deer from the Avoca herd photographed in 1920. Six years earlier the Avoca herd was estimated at 200.

IOWA'S EARLY DEER STORY

When the first white men came to what is now Iowa, they probably didn't find vast herds of deer. Much of the landscape lent itself more to prairie chickens than to whitetails. Iowa was largely open prairie or deep woods, but prime deer habitat in neither case. However, the edges of the timber, the thickets and brakes along streams furnished food and cover, and here there was plenty of venison.

In the late 1830's, deer skins were selling in Jones County for 50 cents and venison was 2 cents a pound. In Delaware County they were taken by riflemen "almost any time they were desired." In Washington County, most men wore buckskin, in combination with wool and linsey-woolsey.

Galland's "Iowa Emigrant" in 1840 described the new territory to prospective settlers in glowing words. Deer were mentioned as "not very abundant, being hunted out by the natives, but there are still hundreds being killed annually."

One of the early reports of deer was by Audubon, the famous artist-naturalist, who made an expedition up the Missouri River in 1843. Just beyond the Little Sioux River in what is now Harrison County, he reported several black-tailed deer. This is of particular interest, since blacktails or mule deer are now found farther west.

In the early fifties, deer were on the increase in many areas. Heavily timbered tracts were being cleared, and deer habitat was improving. A Mr. Burnside of Scott County told of two men living with him in 1855 who killed 110 deer in less than two months. The carcasses were sold for \$1.00 apiece.

The settlements grew, and so did hunting pressure. From the deer standpoint this was bad enough, but then weather came into the picture. Big game populations in south central Iowa had been hard hit by the blizzards of 1848-1849, but the terrible winter of 1856 almost finished them.

Old reports say the storm left snow three feet deep. The storm was followed by a slight thaw and

then a cold snap. Men and dogs could walk on the crusted drifts, but deer and elk broke through with their sharp hooves and were easily killed. Brainard gives a vivid picture of the slaughter: "Another lamentable effect of the ice cap of that winter was the cruel and wanton destruction of wild game. Prior to that season the groves bordering the streams in northern Iowa were well stocked with deer, elk, foxes, wolves, etc. The ice drove these out from sheltering timber to seek food about the farmers' stacks. Men and boys with dogs and guns made savage onslaught upon these. The sharp feet of the larger game cut through the ice (crust) and rendered escape impossible. In some instances they were run down by men on foot, with no other weapon than the family butcher knife, which was all too effective."

One hunter killed 78 deer that winter, and hundreds of men hunted with guns, axes, clubs, dogs, and knives. A fine buck deer could be bought in the street for \$2.50 and hides sold for a dollar. (One writer called this a godsend, since it gave the poor people cheap meat at a time when beef was going for the high price of 25c a pound.)

That blizzard broke the backs of the big game populations. Elk were nearly exterminated, and deer herds were never the same again.



Carl Fitz Henning, for many years custodian of the Ledges, with the first park doe, the mother of many deer later released in various sections of the state.

In 1859 only a few deer remained in Chickasaw County from the original hundreds. By the early 1860's, deer were practically unknown in central and eastern Iowa; at least in the more settled portions. Deer were common enough in some areas in 1869, but were "decreasing rapidly." The herds were practically gone from Muscatine County by the time of the Civil War.

Now and then the story of a successful hunt would crop up, such as one in Allamakee County, where native whitetails lingered the longest. "Deer were very plentiful for many years after Allamakee County was settled, and in 1882 some are still being killed along the bluffs of the Iowa and Yellow Rivers. In December, 1870, ten whitetails were shot in three days by four hunters in the Iowa River Valley."

The eradication of Iowa's deer was discussed in 1905 by Professor Herbert Osborn, who believed that "large game animals in Iowa were lost chiefly because there was no waste land, deserts, or mountains for them to retreat to. Every nook and corner of the state is under scrutiny, and extermination of deer followed rapidly on the settlement of Iowa."

Prior to the turn of the century, the deer were gone. But in 1894 a farmer named William Cuppy of Avoca penned up 35 whitetails. One night several years later, when the gate of the pen was left open, the entire herd escaped to the nearby hills and timber. With no competition they waxed fat and their tribe increased, and it wasn't long until complaints of depredations began rolling in. In 1905 the *Des Moines Register and Leader* stated that there were 40 deer in the herd. By 1907, there were "droves" of deer in northern Pottawattamie County and Shelby County. The *Council Bluffs Nonpareil* reported that in 1910 Cuppy's fugitive herd was up to 400, and attacking crops in bands of 10 to 150 animals.

Farmers were literally up in arms demanding state action and threatening the herds with disaster.

But George Lincoln, the state fish and game warden, stood behind the complete protection of deer and nothing came of the threats.

The pendulum soon swung the other way. The *Shelby County Republican* claimed there was actually little damage by deer, and many farmers wanted the herd protected. In 1914 the state issued a legal brief on the matter, stating that since deer are "ferae naturae" they are permitted to roam at will, and cannot be killed for trespassing. While farmers still had the right to protect their crops, the state nevertheless asked them to use discretion, even though killing seemed justified. In 1914, it was estimated that there were 200 deer in Pottawattamie County.

While all this was going on, another herd was being established near Keota in Washington County, where the Singmaster family purchased a small group from Nebraska. In the early 1920's about 60 of the deer escaped and became established in the Skunk River Valley. There are reports of 300 deer in the valley by 1924, and they were personal wards of Game Warden Gene Breitenbach. Following Breitenbach's death the herd declined slightly, but the people of the Keota area, their enthusiasm kindled by the old game warden, took over protection of the herd. The word soon got around that poachers were, to say the least, frowned upon.

Still another herd was being set up in Ledges State Park, when two deer were purchased from Minnesota in 1928. Several more were captured from the Avoca herd, and by 1933, 14 deer were released. They continued to increase, and in the following year 20 more were set free, and the central Iowa herd was begun. In addition to these three artificial herds, deer began filtering into the rugged hills of Allamakee and Clayton counties from Minnesota and Wisconsin, and northeastern Iowa was deer country once again.

With four herds established in strategic points through the state, the stage was set. The deer were coming back, and the curtain was going up on a new phase of game management in Iowa.—J.M.

The only valid way by which a hunter can tell the age of a buck is by its tooth development.—J.M.

Contrary to logic, an old, heavy, senile buck usually has few antler points and furnishes excellent venison.—J.M.

The record North American antler spread of a whitetail buck is 33½ inches. This buck was shot in British Columbia in 1905.—J.M.

By use of the precipitin test, venison can be distinguished from pork, beef, mutton, and goat. It can even be detected in a sausage with other meats.—J.M.



WINTER DEER RANGE 1951

Deer Problem . . .

(Continued from page 97)

lized for human food and sport the problem is solved by declaring open seasons and allowing licensed hunters to "harvest the surplus game crop" while enjoying healthful outdoor recreation.

In the areas of heavy deer concentration, the animals have definitely become incompatible with agriculture and some landowners are being seriously injured by deer depredations. Many are complaining to the Conservation Commission and demanding relief that, under present law, the Commission is unable to give.

To complicate the problem some landowners who have major deer damage do not want deer control and will suffer, at least for the present, hundreds of dollars in crop loss annually for the pleasure of seeing deer herds on their property. However, deer are not confined to one farm but range over extensive distances and sometimes collect in herds up to one hundred animals. Under such conditions no individual farmer can suffer the damage uncompromisingly.

One of the most difficult aspects of the problems facing the Conservation Commission and the legislature is to convince citizens living in areas of small deer populations of the seriousness of the

damage in areas of large populations.

Damage to agricultural crops is primarily confined to corn, oats, beans and alfalfa at the present time. Limited damage is being done to orchard trees, shrubs, garden crops and other plant growths.

The greatest damage to corn is done when the ear is silking. Deer entering the field in the evening move along the corn rows nipping the emerging silks. Each ear so nipped fails to develop. With each deer of a 15 animal herd nipping only ten ears of corn, in an evening, 150 ears are destroyed. If the deer return 10 nights, 1,500 ears may be destroyed. The animals may return more often and they may be expected to destroy more than 10 ears per animal. And it is to be remembered that herds of over 100 animals exist in the state.

Damage to soy beans is done primarily as the beans are setting on and until they reach maturity. While not showing an especial fondness for the pods the deer do nip the tender leaves destroying or greatly reducing the plants' production.

Deer damage alfalfa in two primary ways. One is their fondness for frolicking in alfalfa fields in the spring while the ground is wet and plants are just beginning to grow. It is amazing the amount of

damage done to the plants by their hooves.

Where alfalfa joins woodlands, especially along stream and river bottoms, deer graze large quantities of alfalfa returning night after night. Complete loss of 10, 15 and 20 acre alfalfa patches are not uncommon.

Deer in numbers can be greatly destructive to grain. Grain loss is primarily caused by the deer bedding or lying down in the fields. This occurs especially after the grain is headed and before ripening. The animals often return to the same field to sleep several days in succession. Each time matting down and completely destroying a new six to eight foot circle of grain.

It cannot be questioned that in Iowa where large deer herds exist, farmers are suffering an important economic loss. The magnitude of this loss will continue to increase as uncontrolled deer herds increase in size and numbers.

Deer a Highway Hazard

"Flash! Crash!" succinctly de-

vised the officers that they are not interested in any more venison.

To reduce the number of deer-car accidents on our highways, our major deer herds must be drastically reduced.

Deer Control By Hunters

The Conservation Commission believes that the most logical and economical method of deer herd reduction is to allow licensed hunters to harvest the surplus. Other midwestern agricultural states when confronted with this problem have followed this procedure.

It is the Commission's thinking that the use of high-powered rifles in this state is too dangerous to countenance their use in the deer harvest. It does believe, however, that deer herds can be reduced with a minimum of human danger with shotguns firing singleballs. The use of bows and arrows is also under consideration.

It is not the thought that a statewide open season be declared at this time or that unlimited numbers of hunters be licensed. It is be-

CONSERVATION OFFICER DEER CENSUS

FEBRUARY 1952

LYON	OSCEOLA	DICKINSON	EMMET	ROBERTS	WINNEBAGO	WORTH	MITCHELL	HOWARD	WINNEBAGO	ALLAMAKEE
80	50	175	150	200	200	120	57	50	100	800
SIoux	O'BRIEN	CLAY	FALG ALTO	200	HAMCOCK	CERRA WOOD	FLOYD	CHICKASAW	FAYETTE	CLAYTON
100	50	150	150	177	6	52	100	75	500	
PLYMOUTH	CHEROKEE	GENA VISTA	PEAKSHOTS	HUMBOLDT	WRIGHT	FRANKLIN	BUTLER	BREWER		
126	85	50	100	85	34	0	115	275		
WOODBURY	ISA	SAC	CALHOUN	WEBSTER	HAMILTON	MADISON	GRUNDY	BLACK HAWK	SUDBURY	DELAWARE
450	30	20	8	85	104	120	6	375	50	200
HONDRA	CRAWFORD	CARROLL	BRECKE	BOONE	STORY	MARSHALL	TAMA	BENTON	LINN	JONES
300	100	25	25	153	10	57	65	50	28	23
HARRISON	SHELBY	AUDUBON	BUTLER	DALLAS	POLK	JASPER	MONROE	JOHN	JOHNSON	CLINTON
160	240	5	83	135	110	20	5	150	50	40
POTAWATTAMIE	CASS	ADAMS	MADISON	WARREN	MARION	MAHASKA	KEOKUK	WASHINGTON		
1200	15	73	170	30	40	65	85	35		
HILLS	MONTGOMERY	ADAMS	UNION	CLARKE	LUCAS	MONROE	WAPLELL	JEFFERSON	SCOTT	DECATUR
100	50	75	100	100	75	200	20	10	6	12
FREMONT	PAGE	TAYLOR	RUSSELL	DECATUR	WAYNE	APPANOOSE	DAVIS	VAN BUREN	LEE	
35	10	100	150	150	13	85	15	4	4	

DEER KILLED BY AUTOMOBILES 1951 & 1952

LYON	OSCEOLA	DICKINSON	EMMET	ROBERTS	WINNEBAGO	WORTH	MITCHELL	HOWARD	WHITEBUSH	ALLAMAKEE
6		7	6		7	3	2	3	5	14
SIoux	O'BRIEN	CLAY	FALG ALTO	5	HAMCOCK	LEARS BORO	FLOYD	CHICKASAW		
6	2	11	2		2	2	2	3	FAYETTE	CLAYTON
PLYMOUTH	CHEROKEE	GENA VISTA	PEAKSHOTS	HUMBOLDT	WRIGHT	FRANKLIN	BUTLER	BREWER	4	4
17	5	9	2		3		10	3		
WOODSBURY	ISA	SAC	CALHOUN	WEBSTER	HAMILTON	MADISON	GRUNDY	5	SUDBURY	DELAWARE
20		1		4		5			2	DUBUQUE
HONDRA	CRAWFORD	CARROLL	BRECKE	BOONE	STORY	MARSHALL	TAMA	BENTON	LINN	JONES
5	6	2		10	1	2	2			2
HARRISON	SHELBY	AUDUBON	BUTLER	DALLAS	POLK	JASPER	MONROE	JOHN	JOHNSON	CLINTON
4	5	1	1	1	3	3		8	2	
POTAWATTAMIE	CASS	ADAMS	MADISON	WARREN	MARION	MAHASKA	KEOKUK	WASHINGTON		SCOTT
17	4	1	2	6	1	1	1		2	
HILLS	MONTGOMERY	ADAMS	UNION	CLARKE	LUCAS	MONROE	WAPLELL	JEFFERSON	SCOTT	DECATUR
2	2				1	3	1		1	
FREMONT	PAGE	TAYLOR	RUSSELL	DECATUR	WAYNE	APPANOOSE	DAVIS	VAN BUREN	LEE	
2	1			2						

scribes the experience of 475 motorists with deer on Iowa's highways in the past two years. Thirty-eight deer were killed by cars during the month of November, 1952 alone. Fortunately, to date, we have had no fatalities in these accidents, although in some instances cars have been almost total wrecks, and the average automobile damage is estimated at over \$100 per collision.

Deer do not stay on one farm or even in one immediate territory and throughout the state major deer crossings may be found along our high-speed highways. Deer travel mostly at night. They have no fear of approaching automobiles and most often bound from the roadside a fleeting instant before the crash occurs.

Deer killed in highway accidents have, under Commission policy, been taken care of by the Conservation Officers and the carcasses delivered to public institutions. In some counties, superintendents of the homes and hospitals have ad-

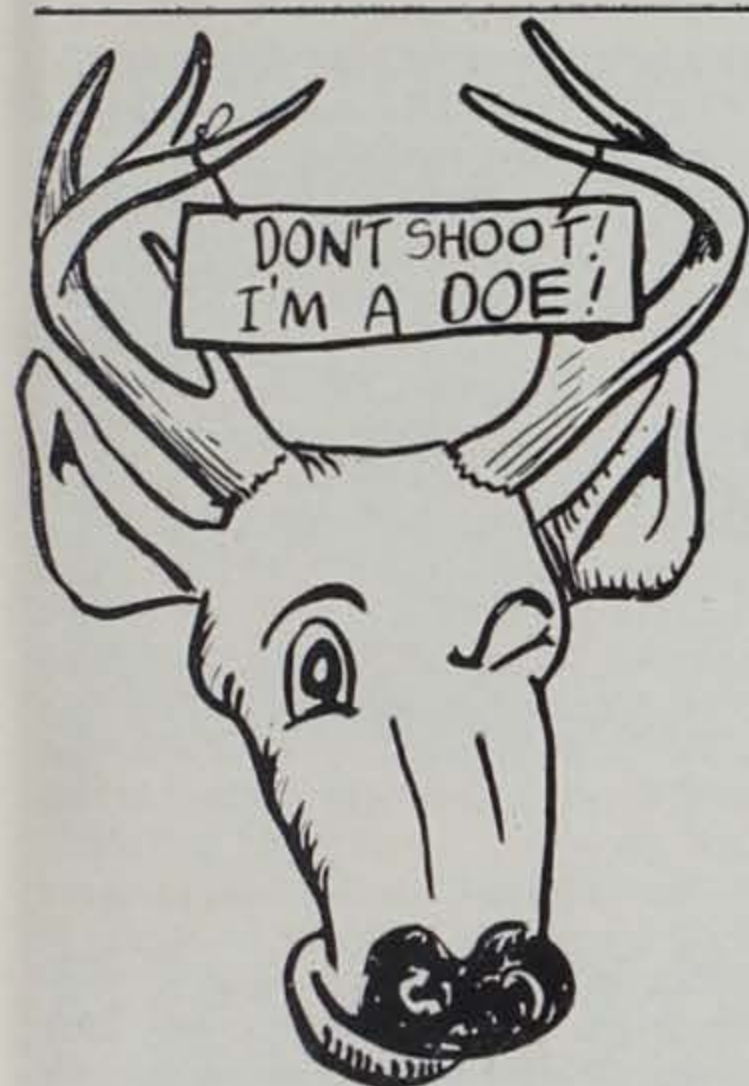
believed that in areas of high population boundaries should be marked out and a limit placed on the number of permits issued for each territory opened.

Two Laws Needed

In order to carry out a deer control program under these conditions, it would be necessary for the legislature to pass certain new laws. Two bills have been prepared by Conservation Director Bruce Stiles for submission to the Fifty-fifth General Assembly.

The two new laws in short are a "method of take" bill by which "the methods or means employed and the instruments or equipment used in taking game" could be determined by the Conservation Commission. This would authorize the Conservation Commission to allow bow-and-arrow hunting or restrict the taking of deer to shotguns only.

The second bill would allow the Commission to open the deer season and establish a special deer hunting license fee of \$15.00.



Wardens Tales . . .

(Continued from page 99)

"The doctor in charge of the state school met me and was glad to get the doe, and because of its large size, I even told him that it was probably with fawn. Everyone was happy until about a month later, when a letter was sent in saying that the beautiful doe had grown a fine set of antlers."

"To this day, I believe that someone . . . somehow . . . switched deer on me!"

A group of Sunday park visitors near Boone had front row seats at a battle between two buck deer this fall, with Clyde Updegraff of the State Game Farm acting as referee.

"On Sunday, November 16th," Clyde narrates, "we had the usual audience along the road by the deer pen. There were about 25 cars, and the visitors were watching the three-year-old doe and the two bucks in the enclosure. One buck was about two years old, and the other buck, older but smaller, had always bullied him."

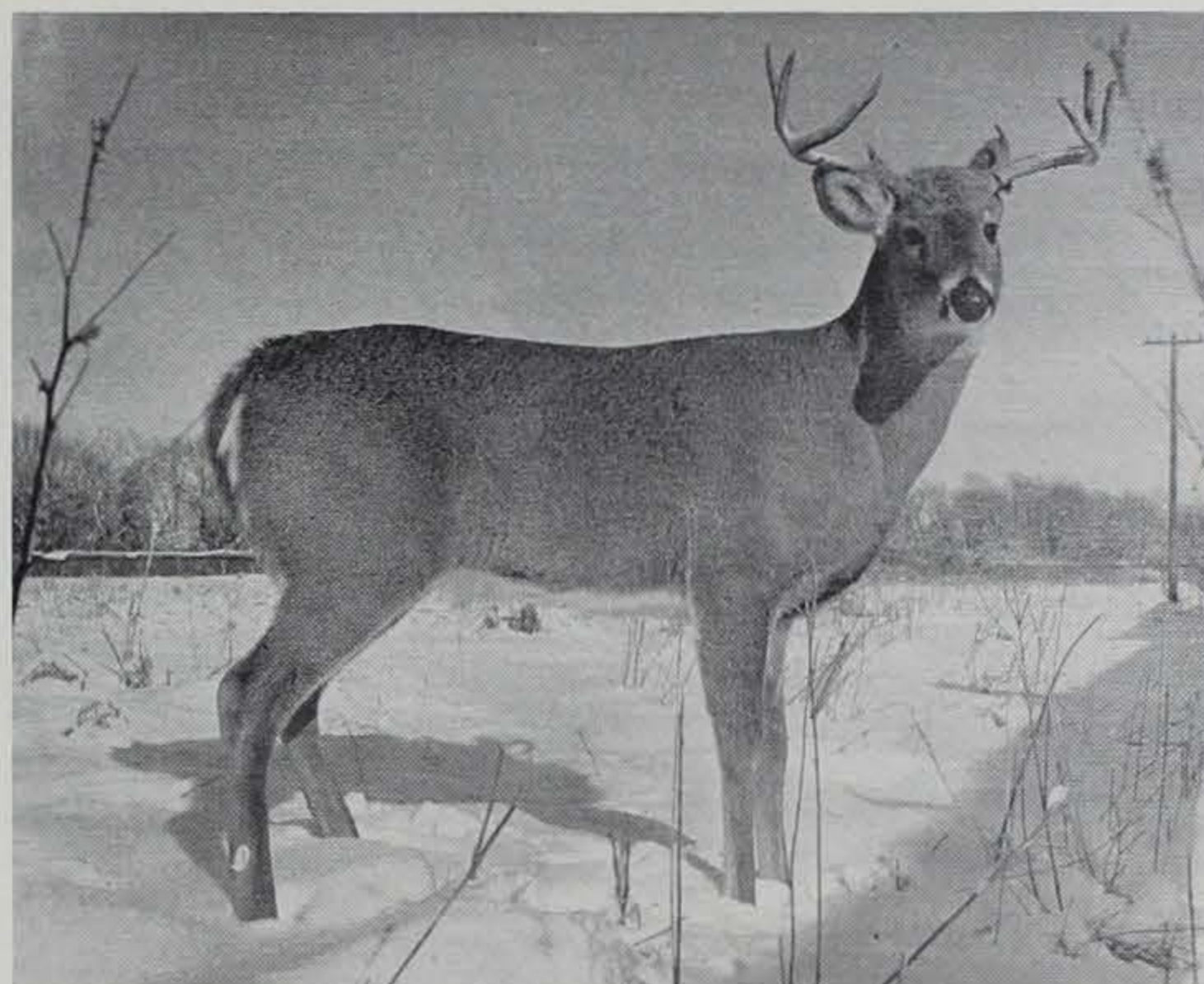
"When the younger buck started a fight, I thought he would soon run as he usually did. I tried to break up the fight by driving into the pen, but the deer showed no fear of tractor or pickup truck and we had to let them fight it out. It was soon apparent that the younger buck was carrying the fight, and his greater weight began to tell. It wasn't long until he had his former boss on the run."

"I hadn't thought of anything but breaking up the fight, and neglected to take the names of several people with cameras. I overheard one middle-aged man remark that the fight was much better than TV wrestling."

"This wasn't the last fight. Several nights later the two bucks had another battle, and when I found them the next morning they were both injured. The younger buck had a nine-inch tine broken from an antler, and the old buck was bleeding between the legs. It was necessary to kill both deer, and on dressing them I found out that the old buck had a hole just ahead of the pelvic opening which went up into the body cavity; probably an antler wound. The young buck dressed out at 108 pounds and the old buck at 87 pounds."

Frank Tucker, Conservation Officer in charge of Audubon, Cass, and Adams Counties was frequently called in to assist in trapping and harvest operations at points of high deer concentrations. Frank recalls his first Iowa deer near Avoca. Frank says there were about 50 animals in the Irvin area and perhaps half that number in the Avoca area in 1934. This number has fluctuated considerably in Frank's time, reaching a high of perhaps 125 deer on the two areas.

Walt Trusell, Conservation Officer in charge of Woodbury County, advises: "The first deer appeared in Woodbury County in 1937. The



The average weight of 53 bucks, collected in 1952, was 173 pounds.

Jim Sherman Photo.

WEIGHTS OF IOWA WHITETAILS

Like other Iowa crops, our white-tails grow big. A rough idea of their general size can be found in the reports of conservation officers who confiscate and weigh many of the deer killed in the field.

In 1952, officers reported 244 deer killed by cars, dogs, poachers, and other causes. Of the white-tails weighed, 53 were bucks, and 46 were does. The average weight of the bucks was 173 pounds. Three of them weighed 300 pounds each, and one of those animals had been rough dressed! Three other bucks tipped the scales at 275 pounds and 12 of the bucks weighed over 200 pounds. Only four bucks went under 100 pounds, and these may have been young animals.

The average weight of the does was 119 pounds. Three of them were over 200 pounds, and a total of 30 does were heavier than 100 pounds. The lighter animals definitely included several fawns.

There are reports from northern deer states of bucks weighing 400 pounds and over. While Iowa may not have any such patriarchs, our herd contains many large bucks, and the herd as a whole is well-fleshed and healthy.—J. M.

When antlers are shed, they are soon eaten by mice and other rodents.—J.M.

Inbreeding does not produce runt deer. Aside from genetic factors, runts are produced by inferior food or lack of food.—J.M.

There are authentic records of doe deer bearing antlers.—J.M.

All animals having antlers are polygamous.—J.M.

Commission first stocked deer here in about 1940 in Stone Park. I observed an albino deer in Plymouth County. The first deer killed by auto here was in 1939. One of my largest herds resides on Flower's Island, in the Missouri River. During the memorable flood of 1952, the deer were driven off the island, but none perished to my knowledge."

Jack Stevens, Conservation Officer at Clear Lake, recalls he assisted Mac Coon deliver deer to State Park sanctuaries as early as 1934. He, together with Floyd Morley, confirms the report that in 1935 one doe deer was known to inhabit the Pilot Knob State Park in Hancock County. Later one or two deer were sent into the area, and a herd of from 200 to 250 now reside in that vicinity.

Floyd Morley, Conservation Officer in charge of Winnebago and Worth Counties, wrote us that he delivered two deer to Estherville in the early 1940's and at that time few, if any, deer were known in that territory. During the time Floyd was assigned to the Ledges State Park, he hauled 39 deer from the congested area to points of low population throughout the state.

When Conservation Officer Gene Newell was talking to a veterinary friend this winter, the doctor mentioned a deer in a herd of cattle he had treated on the Ralph Hulst farm near Hospers.

Gene drove out to the Hulst farm and upon checking the herd with binoculars, found a small deer feeding peacefully among the cattle.

When Hulst was interviewed about his mixed livestock, he told Gene that every day the deer followed the cattle to the feed lot. Then, after the gate was closed, the deer would jump the fence and feed with the cows.

One day when the deer jumped the fence to leave, the cattle followed. (Continued on page 104)



Conservation Officer Walt Trusell observed an albino deer in Plymouth County in 1942. It was later seen several times by other observers.



Occasionally triplet fawns are born. They are left during the daytime by their mothers and lie silent and stretched out, safe for the most part, except from roaming dogs and wildlife kidnappers.

Whitetail Calendar . . .

(Continued from page 97)

To survive the winter, the whitetails need browse, two pounds per day for each 100 pounds of body weight.

Iowa winters are hard, but the herd is luckier than its northern cousins. The snow is seldom deep in Iowa, and the deer can roam and browse with little cost of energy. If the snow is more than 20 inches deep, valuable strength is used in traveling, and there is little energy left in reserve. Unlike bears and other animals, the whitetail carries little fat into the winter. When exertion uses the fat about the internal organs and in the bone marrow, the deer faces starvation.

Then there is another danger. In the west it is the cougar, and sometimes the coyote. In the north it is the timber wolf, and perhaps the lynx. In Iowa the herd is threatened with the greatest wild predator . . . the common dog. There are dogs everywhere, and alone or in packs they hunt with great patience and endurance. What winter fails to do, the dogs may finish.

But there will be survivors of starvation, disease, and dogs. One day the buds begin swelling, and the snow leaves the south slopes. With spring, the good days are beginning, and the herd makes up for winter, feeding heavily and regaining its lost strength and weight.

In May or June, the does start wandering off alone. Heavy with young, they search for the secret places where the fawns will be born. If the doe is quite young, she will bear a single fawn, but if she is two or more years old, twins are the rule with triplets born occasionally. They are famous, these babies, for few wild things are more appealing. Completely helpless at birth, they weigh about four pounds. They are reddish-gold with many small, white spots, and since they are unable to stand they are hidden in a thicket, field, or windfall.

Although the fawns are left alone through much of the day, they are not defenseless. They have the gift of absolute stillness, and are said

to have no scent. They are seldom heard, but some observers say that twin fawns, secure in their thicket, may bleat quietly to each other. But when they are silent and lie stretched out, heads between their front feet, they are nothing more than small, sun-dappled mounds on the forest floor.

The doe leaves her young during the day, but always returns at night to nurse them. That is, if they are still there. It is too bad, but the season for fawns and other wild babies is also the picnic season. Some of the does will return to find the thicket nursery deserted, and their fawns "rescued" by weekend naturalists. There are some orphaned fawns, it is true, but with a mother deer's scent, sight, and hearing, there are no lost ones.

Through the long, lazy days of midsummer the herd moves but little. Feeding mainly in the early morning and evening hours along watercourses, they spend most of the day in some higher place, resting and avoiding insects. They may wander aimlessly, browsing, and grazing on tender buds, twigs, and leaves. The luckier deer may find some mushrooms. If there is such a thing as a deer's vacation, this is it, and as the summer wears on, the herd grows heavy and sleek.



Deer fight antler to antler, their powerful legs driving them forward. Sometimes the antlers become locked and both fighters die of starvation.

Back in the late winter, in February and March, the antlers of the bucks began to appear. Those of the yearlings were unformed spikes, hence "spike bucks." The older stags had more ambitious racks, although antler size is not determined by age alone, but also by health and food supply. By August or September the antlers are nearly grown, but are still covered with "velvet." This membrane is very tender, and if injured it will bleed freely, the injury leaving a permanent scar on the final antler. These soft, young antlers must be sensitive, for the bucks protect them and stay in retirement.

In late summer and early fall, the velvet begins to separate from the antlers. It itches or irritates the animal, for the buck spends much time dueling with trees and assorted snags, rubbing the shredded velvet from his rack. The tips of the antlers are the last to be formed and rubbed clean, and the tines emerge polished, hard, and sharp as needles. Fully armed now, the buck is heavy and strong, and he waits for combat.

The wait is ended with the first cool, frosty nights, usually in October. The buck's neck is swollen to almost twice its normal size, and he is dangerous to man and beast. If he is a giant of his clan, he may weigh over 400 pounds, although the average is 200 pounds or less.

Filled with nervous energy and great urgency, he begins traveling. He has little food now, and is concerned only with a mate. But where there are does there are other stags, and when two bucks meet, there is war. In such a fight, it's weight that counts. Unlike mountain sheep the bucks do not crash head-on. They fight antler to antler. With their powerful hind legs driving them forward and their eyes rolling with strain, they may tear up half an acre of sod in the battle. Sometimes the antlers become locked, and both bucks lost in starvation.

The winning buck claims his mate, but only for a short time. She is soon discarded as the buck seeks new conquests, traveling

widely and fighting all comers. Whitetail bucks have been observed to mate with as many as 15 does. Such polygamy enables whitetails to make rapid comebacks after severe declines in the buck population.

With the close of the breeding season the bucks return to their feeding with ravenous appetites. They are thin and scarred, but the does are in excellent condition and the fawns, now weaned, are small editions of their mothers. Since most of the leaves have fallen, the herd now moves to the hilltops, where the acorns are falling in the oak groves.

The annual cycle has almost ended, and the old winter struggle is beginning. There is always winter, and some of the herd must perish. But there is always spring, too, and soon there will be fawns again.

Wardens Tales . . .

(Continued from page 103)

lowed, and not being as agile as whitetails, they simply plowed through the fence. It took Hulst about an hour to round up the herd, and the deer watched from the road. As soon as Hulst left, the deer jumped back over the fence, joined the cattle, and all was well again.

As far as Gene knows, this is the only herd of cattle in Iowa with a deer as a mascot.

Ecil Benson, Conservation Officer in charge of Lee and Van Buren Counties, does not recall seeing any deer in Wapello, Davis, Van Buren, Jefferson or Lee County until about 1945, but since that time they are not uncommon along the major waterways. Some 20 years ago several deer were released in Monroe County by the Fish and Game Department, but no appreciable numbers were observed prior to 1944 or 1945.

Dan Nichols, Conservation Officer in charge of Louisa and Muscatine Counties, saw his first Iowa deer in Marion County in 1940. Later Dan was transferred to his present territory and observed his first deer in about 1941. Currently Dan received numerous reports of deer, and on several occasions he has been called to the scene of deer-car crashes. While not abundant, deer are common to southeast Iowa.

Charles Adamson, Conservation Officer in charge of Scott County, advises that when he started work in 1934 in Jasper and Marion Counties, deer were virtually unheard of. Assigned to Polk and Dallas Counties in 1936, Charlie informed us there were very few on the river bottoms. Deer increased considerably in 1938 and 1939, and have increased ever since. Charlie was transferred to Davenport in 1942, and although there are not too many deer in that area, he advised us they are definitely on the increase.