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FRONT COVER: White-tailed deer feed undisturbed. Photo by David Menke.

David Menke is an outdoor recreation planner for the U.S. Fish and Wildlife Service. He received a B.A. degree from Drake University and a Masters degree in recreation and park administration from the University of Missouri. He has worked at DeSoto National Wildlife Refuge for five years.

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Deer Herd on the Upbeat

Lee Gladfelter is a wildlife research biologist located at Boone. He holds a B.S. degree in wildlife management from Kansas State and an M.S. degree from the University of Idaho. He has been with the commission since 1969.



By Lee Gladfelter

Finally, the cool fall days that we all were wishing for during the record-breaking summer heat have arrived. Leaves have turned their fiery red, orange, and yellow colors and are now dropping to the forest floor to provide nutrients for future generations.

November always seems to initiate thoughts of outdoor hunting adventures shared with family and friends. It's deer season again. Bowhunters have been in the field since early October and shotgun hunters are busy planning their tactics for that "humongous" buck that got away last year.

It all started in August when deer applications were filled out and sent in with checks, bucks-only certificates from last year, and lucky charms (anything that would provide an edge in the drawing for any-sex licenses was considered). Just getting everyone in the hunting party to check the right zone and season was a major undertaking. Some young hunters were affected by the new law that required persons born after January 1, 1967 to be at least 12 years old prior to the opening day of the hunting season and to submit a photocopy of their Hunter Safety Certificate with their application. This law was designed to improve safety in all hunting sports.

The plot thickens in November when hunters receive their licenses with the good news or bad news about the any-sex licenses. Only about 20% will receive an any-sex license with the remainder receiving a bucks-only license (good for a buck with at least one forked antler). Since regional deer management efforts are directed at proper harvest levels for does and fawns, any-sex licenses are limited and can only be used in the hunting zone where issued. Bucks-only hunters however, are allowed to hunt anywhere in the state. This, plus the unrestricted issue of bucks-only shotgun licenses provides increased hunting pressure on bucks. Since bucks are polygamous (have more than one mate), there is no need to maintain an even sex ratio and they can be harvested at a much greater rate than does. Protection of fawns through restricted any-sex license quotas insures that there is always a large crop of 1½-year-old antlered bucks available to hunters each fall. Also, the elusive nature of adult bucks guarantees that many will survive.

The bucks-only harvest management scheme has been instrumental in the growth of Iowa's deer herd and the

increase in hunter recreation provided by the resource. Issuing bucks-only licenses to the majority of hunters was initiated in 1973 on a statewide basis. Since that time, the deer herd has continued to grow in spite of an increase in total hunter numbers from 37,121 to 108,586 and increased annual harvest from 11,813 to 26,461 animals. Many factors are responsible for this success story including professional management of the herd, beneficial habitat manipulation, a progressive research program, active law enforcement, good landowner attitudes, support from hunters for restrictive regulations, and the excellent adaptability of this creature to man and his agricultural practices.

What's in store for hunters this fall? The 56-day bowhunting season, which began October 8, is now in full swing. November is the best month for bowhunting because deer are in the peak of rutting activity. Deer, especially bucks, are less wary during this time as they move about more freely and disregard their protective habits in lieu of satisfying their mating instincts. The 19,000 bowhunters should experience excellent success rates due to the good deer population and early crop harvest, which concentrates deer in limited forest cover where they are more vulnerable.

It should also be a banner year for shotgun hunters. A new record harvest is expected because of record high deer and hunter numbers. The only factor that may intervene would be a major winter storm during one of the opening weekends which reduces hunter access and participation. Shotgun seasons will be held on December 3-6 and December 10-16 with hunters allowed to hunt only one season and zone combination (statewide if a bucks-only license is obtained). Two shotgun seasons were initiated in 1976 to reduce pressure from increasing hunter numbers and to maintain quality and safety in the sport. Twice as many any-sex licenses were issued for the second season compared to the first in most hunting zones. This uneven distribution of any-sex licenses in combination with more days of hunting is designed to equalize application rates and harvest.

One change for 1983 is in hunting zones 1, 2, and 10 (Figure 1) where the entire any-sex license quota will be issued for the second season with all first season hunters required to hunt for antlered bucks. This restriction was necessary to entice more hunters into the second season and more evenly distribute hunting pressure and harvest.

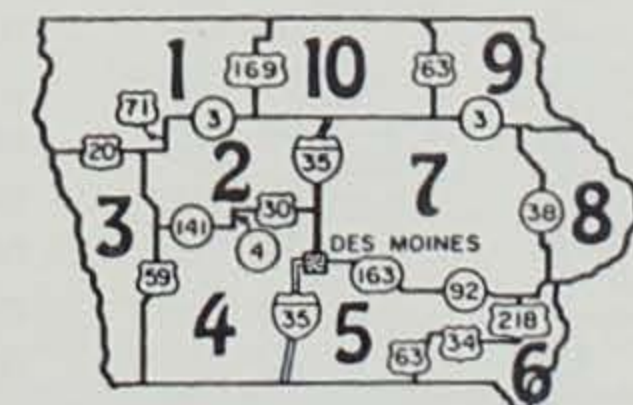
About 65-70% of the hunters in these zones applied for the first season in 1982 creating high hunter numbers per square mile of habitat which may have caused lower success rates. In addition, high application rates for first season in combination with low any-sex license quotas meant that for every any-sex license issued, 9-12 bucks-only licenses were issued. This regulation is not new to Iowa as it has been used in several different hunting zones since 1976.

Another reason a record harvest is forecast is that statewide any-sex license quotas were increased by 13% from 1982 levels (Table 1). This increase was necessary to slow down deer herd growth. Shotgun hunters will number about 91,800 this fall which is a new record, but only a slight increase over 1982. This means a larger proportion of hunters will receive any-sex licenses than last year.

Any-sex license quotas are developed by first calculating the number of does that should be harvested to meet management objectives in each of 10 hunting zones. These rates are determined from past harvest figures and changes in deer population trends obtained from various annual surveys. The allowable doe harvest is then expanded to a final any-sex license quota by predicting the number of unsuccessful hunters, percentage of hunters that harvest bucks (average determined from previous hunting seasons), and those who will not hunt. Selection of any-sex license

Table 1. Any-sex license quota for 1983 by zone and season.

Hunting zone	Any-sex quota	
	Season 1	Season 2
1	none	900
2	none	825
3	525	1,050
4	825	1,650
5	850	1,700
6	1,125	2,250
7	500	1,000
8	375	750
9	700	1,400
10	none	675
Totals	4,900	12,200



recipients is determined by a random computerized drawing from all entries in each zone and season combination with priority given to those returning certificates. Certificates are issued to hunters receiving bucks-only licenses the previous year. If the any-sex license quota for any zone and season combination cannot be filled with applications with certificates, they are filled by drawing from noncertificate holders. Certificates do not guarantee an any-sex license, but do give hunters a better chance at them (Table 2).

Now, let's take a look at results from the 1982 hunting season to use as a comparison for 1983 predictions. Estimates of number of deer harvested, success rate, hunter effort, sex ratio, and crippling rate are obtained from post-season report cards mailed to about 30% of the hunters. Also, age composition of the herd is calculated from a sample of deer teeth returned in special envelopes provided with any-sex licenses. To obtain this information, a small slice of each tooth is stained and placed under a microscope to count growth rings which relate to age. Average life expectancy of various sex and age groups is determined and annual trends in age ratios are monitored.

A record high harvest was reported in 1982 with about 26,500 deer bagged. This is the third straight year that record harvests have been reported. There were 74,322 paid shotgun, 18,824 archery, and 15,425 free landowner-tenant licenses issued in 1982. Shotgun hunters harvested an estimated 21,741 deer with 11,717 taken the first season and 10,024 taken the second. Higher any-sex license quotas, increased license issue, and a high deer population were responsible for the increased harvest.

Table 2. Chances of hunters receiving a 1982 any-sex shotgun license¹ with and without a 1981 bucks-only certificate.

Hunting zone	Season 1		Season 2	
	% receiving AS license with certificate	% receiving AS license without certificate	% receiving AS license with certificate	% receiving AS license without certificate
1	20	none	100	9
2	26	none	100	19
3	53	none	100	56
4	30	none	100	7
5	37	none	100	23
6	57	none	100	42
7	14	none	43	none
8	21	none	79	none
9	16	none	80	none
10	20	none	87	none

¹1983 statistics were not available at the time of writing.

These factors were able to overcome low first season hunter success rates caused by cold and wet weather conditions. Most deer were harvested on the opening weekend of each season because of higher hunter numbers on those days. Bowhunters also established a new record high harvest with an estimated 4,720 deer taken.

Hunter success rates in 1982 were comparable with previous years. Shotgun any-sex hunters averaged about 55% success for both seasons compared to 20% success for bucks-only hunters. Archers reported a 26% success rate. The highest shotgun success rates were reported in northern Iowa (hunting zones 1, 2, and 10) probably because of increased vulnerability of deer in limited timber habitat and a different hunting style in those open areas. However, the highest number of deer harvested was reported in southern Iowa (hunting zones 5, 6, and 4) where more timber habitat provides better deer densities.

Paid shotgun hunters averaged about 3 days in the field during the first season and 4 days during the second. Bowhunters averaged about 16 days of hunting. The 1982 deer season provided a total of 1/2 million days of big game hunting recreation for Iowa hunters.

In conclusion, the prospects for this fall are excellent as a new record high harvest is predicted. The 1983 season will be comparable to past years. As soon as you put down this magazine, why not take a ride through the countryside or a stroll through the timber to try and catch a glimpse of this beautiful creature called the white-tailed deer. With proper management and habitat protection, they should be around to thrill your children, grandchildren, and many future generations of Iowans.



Over 100 entries were recorded for the 1983 trophy deer rack program, making it another great year, with Iowa hunters entering racks of outstanding quality.

In order to enter a trophy rack, it must be legally taken with bow and arrow or shotgun-muzzleloader within Iowa boundaries. If the rack meets minimum scoring standards, the hunter will qualify for a certificate and a colorful shoulder patch in recognition of their feat. Deer taken in past seasons as well as the present are eligible for entry. To have the rack officially measured, simply contact the Iowa Conservation Commission, Information and Education Section, Wallace State Office Building, Des Moines, Iowa 50319. The commission will then forward a name of an official scorer to be contacted. Because antlers will dry out and shrink, they cannot be officially measured for at least 60 days from the time taken.

All Time Top Ten Record Racks are listed on page 13.

1983 Record Racks

BOW AND ARROW TYPICAL

(Minimum qualifying score — 135 points)

Name	Address	Year	County Taken	Total Score
Ambrose Beck	Gooselake	1963	Jackson	171½
George Horst	Green Island	1982	Jackson	170½
David L. Urich	Mystic	1982	Appanoose	167½
Marvin Mauch	Castana	1982	Monona	163½
Jay Bayce	Burlington	1982	Des Moines	159½
Otis R. Frazier	Dunlap	1982	Crawford	158½
Gary Mitchell	Sioux City	1982	Monona	158½
Jack Morgan	Hamburg	1982	Fremont	157½
Mike England	Diagonal	1982		157½
Dan Roberts	Cherokee	1982	Cherokee	156½
Roger Gipple	Columbus Junction	1982	Louisa	156½
Floyd D. Mizer	Le Claire	1982	Scott	156½
John Vollmer	Bettendorf	1982	Monroe	155½
Brad Entsminger	Blue Grass	1980	Des Moines	155½
Brad Rick	Vinton	1982	Benton	153½
Chet Goldsberry	Cedar Rapids	1982	Delaware	152½
Tony Pitzen	Hamburg	1982	Fremont	150½
Andy Decker	Corydon	1982	Wayne	148½
Earl Taylor	Boone	1982	Boone	148½
James Baker	Red Oak	1966	Ida	147½
Carl Severson	Dubuque	1982	Jackson	147½
Steve Hunerdosse	Nevada	1982	Guthrie	147½
Mike Needham	Kellogg	1982	Jasper	146½
Ed Foster	Riverton	1982	Fremont	146
Jim Trumblee	Strawberry Point	1982	Delaware	145½
Stephen W. Kent	Des Moines			145½
Kenneth Clayton	Dubuque	1982	Clayton	144½
Dale Anderson	Lewis	1982	Cass	141½
Wade A. Gasper	Oskaloosa		Van Buren	141½
Steven F. Donnelly, Jr.	Knoxville	1982	Marion	141
Rock Wagoner	Shenandoah	1982	Page	140½
Dave R. Bessine	Burlington	1982	Des Moines	140½
Ron Manrose	Shenandoah	1982	Fremont	140½
Reggie Schuler	Griswold	1982	Cass	139½
Lyle Askelson	Decorah	1982	Winneshiek	139½
Dennis R. Morgan	Middletown	1978	Des Moines	138½
Dave Scherff	Fort Dodge	1981		137½
Jason Rupe	Des Moines	1982	Ringgold	137½
Tom Herold	Waterloo	1982	Hardin	137½
Michael Rolling	Ames	1982	Boone	136½
Greg Schulte	Bellevue	1982	Jackson	136½
John Thompson	Cedar Rapids	1982	Des Moines	136½
Jay McWherter	Springville	1982	Allamakee	136½
Harry Bries	Guttenberg	1982	Dubuque	135½
Jim Johnston	De Witt	1982		135½

SHOTGUN NON TYPICAL

(Minimum qualifying score — 170 points)

Name	Address	Year	County Taken	Total Score
Todd Hawley	Panora	1982	Guthrie	224½
Duane Papke	Iowa City	1981	Johnson	201½
Charles Cullen	Dubuque	1982	Lee	191½
Tom Klever	Audubon	1982	Guthrie	189½
Larry Hadrava	Cedar Rapids	1982	Linn	187½
Lenny Theulen	Atlantic	1973	Cass	185
Jeff Eischeid	Lenox	1981	Taylor	180½
Fred Brewer	Lacona	1982	Wayne	180
Ken Barta	Swisher	1982	Johnson	175½
Glen Skow	Hornick	1982	Monona	174

BOW AND ARROW NON TYPICAL

(Minimum qualifying score — 155 points)

Name	Address	Year	County Taken	Total Score
James Monat	Waterloo	1981	Clayton	189½
Roger DeMoss	Knoxville	1982	Marion	179½
James Baker	Red Oak	1982	Montgomery	174½

SHOTGUN TYPICAL

(Minimum qualifying score — 150 points)

Name	Address	Year	County Taken	Total Score
Taylor Wilson	Exira	1982	Audubon	185½
Howard Tull	Diagonal	1982	Ringgold	181½
James Hoskins	Lockridge	1982	Jefferson	180½
Tim Felt	Mt. Pleasant	1982	Van Buren	177½
Dalton Hoover	Guthrie Center	1970	Guthrie	176½
Curt A. Lind	Pilot Mound	1982	Boone	174½
Chris Evans	Kent	1982	Taylor	172½
Richard D. Price	Red Oak	1973	Taylor	171
Mary Berry	Clarinda	1982	Page	169½
Dean A. Dravis	Burlington	1981	Des Moines	168½
Don Woods	Red Oak	1969	Montgomery	168½
Kenneth Kong	Alton	1982	Sioux	167½
Dean Devereaux	Council Bluffs	1982	Cass	167½
Gary Ortner	Charter Oak	1976	Monona	165½
Marty Carritt	Little Sioux	1982	Harrison	165½
Steve Sauvain	Woodbine	1981	Crawford	164½
Tim Manning	Lansing	1982	Allamakee	162½
Bob Syndergaard	Sutherland	1982	Clay	162
Earl McBride	Orange City	1982	Webster	160½
Craig A. Hayes	Burlington	1980	Des Moines	160½
Harvey Seilers	Zwingle	1977	Jackson	160
Ronnie Robinson	Hamburg	1977	Fremont	159½
Mark Haskin	Denver	1982	Fayette	159½
Jim Harris	Creston	1982	Union	159½
Don Rodman	Sioux City	1981	Monona	159
Bill La Bahn	Hinton	1972	Plymouth	157½
David Denning	Hillsboro	1981	Henry	157½
Jack Luke	Center Point	1982	Linn	155½
Randy Van Kalsbeek	Hospers	1982	Sioux	155½
Loren Miller	Postville	1982	Allamakee	154½
Sam Davis	Glenwood	1982	Mills	153½
John A. Robb	Burlington	1982	Lee	153½
Richard W. Moore	Danville	1981	Lee	153½
Dwight Dop	Indianola	1982	Warren	152½
Larry L. England	Diagonal	1977	Ringgold	152½
Todd Simmons	Spragueville	1982	Jackson	152½
Dan Gilbert	Marengo	1981	Lee	152½
Tom Christian	Sioux Rapids	1981	Buena Vista	152½
Gordon Farrington	Mechanicsville	1982	Cedar	152
Tim Swaney	Hampton	1982	Hamilton	152
Bernard Buboltz	Lewis	1981	Cass	151½
Mervin Keeton	Elliott	1981	Montgomery	151½
Bill Van Maanen	Rock Valley	1977	Sioux	151½
Kenneth E. Flanagan	Kellogg	1982	Van Buren	151½
Bill Aumer	Milford	1976	Dickinson	151
Jeff Dean	Glenwood	1982	Mills	151
Danny Fischer	Des Moines	1982	Clarke	150½
Fred Leisinger	Mapleton	1981	Monona	150½
Jeff Cowell	McGregor	1982	Allamakee	150½
Michael J. Dolan	Cedar Rapids	1982	Clayton	150½
Lenny Theulen	Atlantic	1972	Cass	150½
Rick Clasen	La Motte	1982	Jackson	150½
Rick Trine	Pleasantville	1981	Marion	150½



Woodlands For Profit

Most modern-day farmers grew up raising corn and beans, and while technology is changing, they know the basics of the trade. The same is true for a cattle operation or a hog operation.

But what happens when it comes to growing trees? Trees have been a neglected crop in Iowa at best, taking a backseat to other crops. They've been literally pushed out of Iowa, and more times than not trees have been destroyed for other crops. Often, they've been grubbed out, and the land is sold as pasture. In other cases, the land has been converted to crops. Dozing trees out for cropland, or just dozing part of them out and pasturing the timberland, have been long-standing practices in Iowa. But managing trees as a *crop* can be better than either of those options.

A recent economic study by Iowa State University compared the options open to farmers who own woodlands. It analyzed a 60-year-old, oak-hickory stand on 15 acres of hilly Warren County soils. A cash-flow analysis showed positive returns with each of the options considered, including producing sawlogs and firewood, clearing and growing Christmas trees, converting to rowcrops and clearing for pasture. The quickest return came from selling fuelwood, in a three-year return for limited expenses. Next was conversion to rowcrops, at 5 to 8 years, depending on crop rotation. The sawlog return was similar to that of rowcrops, at 8 years. Converting to pasture had the slowest payback at 15 years.

In a benefit to cost comparison over 40 years, sawlogs came out on top at 3.4 to 1, conversion to corn and beans was 1.4 to 1, and conversion to pasture showed 1.1 to 1. Now, this was only one case study, but it points out the possibilities in managing woodlands. It also points out that the most common practice, converting to pasture, can be least profitable.

One northeast Iowa farmer who believes in leaving the trees in woodlands and keeping cattle out is Gerald Meyer of Garnavillo. Among the woodland the retired farmer has, is a 57-acre tract of

timber that hasn't been grazed for 40 years. He's been an official certified tree farmer for about 30 years. In fact, his farm became Iowa's first to be recognized as a certified tree farm, in 1955.

He began managing the trees for profit and in 30 years has had three selective harvests for lumber and veneer logs. He recently marked more trees to sell, and is confident he made the right choice in growing trees rather than another crop.

"You don't have a high turnover with this crop, so you don't get paid every year," Meyer said. "But you don't have much work, either."

"I still thin the poor trees out myself to save on my heating bill in the winter," he said, "And I check on the trees for signs of disease and insects. I've planted some trees, but mostly I just let nature do the reseeding."

"I couldn't have made a living from the trees alone, but with the low taxes I pay on that land, it makes good income. You can figure on \$150 for a good oak tree, and some veneer walnut trees have brought as much as \$1,500."

"Lots of people look for mushrooms in here in the spring," Meyer said, "And I let those who ask hunt in the fall."

"You don't see soil erosion on these hills like you do when they're cleared for crops."

Erwin Ruff, another northeast Iowa farmer, has a different way of making a profit on some of his timberland.



"Some farmers sell the cow and some sell the milk," Ruff said. "Well, some sell trees and some sell the syrup. I sell the syrup from about 150 sugar maple trees we have in a three- to four-acre area. The best trees can yield a gallon of finished syrup — and that sells for about \$20," he said. "I don't get rich from the business, but it brings in some money, and I like the work in February and March."

"At up to \$20 per year, the tree is worth quite a bit."

Gerald Meyer and Erwin Ruff live in a part of Iowa with the heaviest woodland, the northeast. But there are scattered patches of timber all across the state.

In Crawford County in western Iowa, Sandra Clowson is managing 15 acres of woods. While she farms a little over 300 acres, including 130 acres of rotation cropland, she has always had a special interest in the trees. "I began to think I should learn more about the tree business back in 1976, when my mother sold some walnut trees," Clowson said. "The bids ranged quite a bit."

"This farm is the first in the county to be in the tree farm system. I agreed to manage at least five acres of land for trees as a crop, and to fence livestock out," she said. "As a part of the



program a forester inspected the timber to see if it would qualify, then gave me recommendations on management."

"I also get a regular forestry magazine at no charge."

"The forester periodically tells me which trees ought to be cut, which ones aren't growing correctly and which ones are undesirable," she said. "I use those for fuelwood."

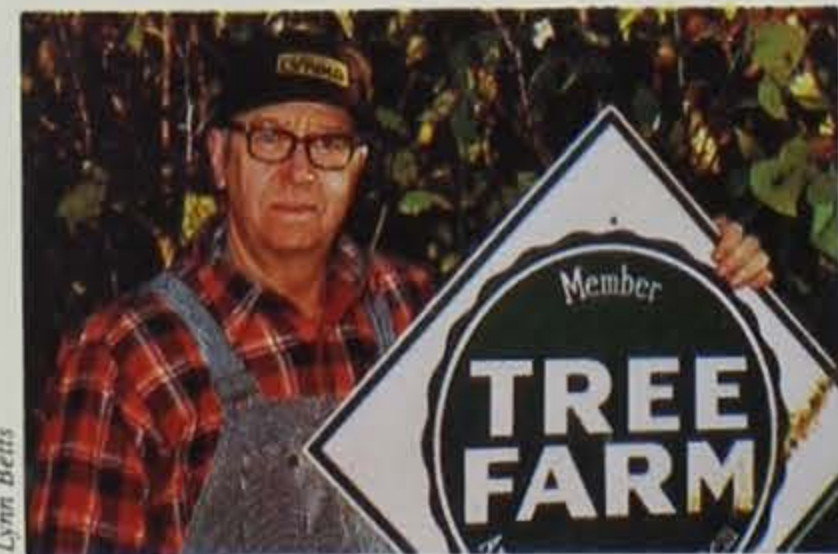
The Iowa Conservation Commission has 12 district foresters stationed across the state. Foresters advise landowners about ways to manage woodlands for profit. That includes instruction on everything from how to plant a tree and how to eliminate its competition, to improving the stand so that the best trees can grow properly. It also involves explaining how to market the product.

Foresters mark or show the owner which trees should be cut for firewood, and they help inspect for insect and disease problems. They keep up with the best ways to prune trees and know ways to eliminate undesirable species.

Foresters also work with the Soil Conservation Service to recommend trees best suited to soil types. They know most timber buyers, and assist in getting competitive bids.

Managing woodlands for profit in Iowa begins with the important fact that livestock and trees don't mix. In a nutshell, cows make poor foresters and woodlands make poor pastures.

The grazed timber is compacted and encourages runoff, but the ungrazed timber absorbs up to 3 inches of rain.



Since 90 percent of a tree's roots are just below the surface, cattle tramping can kill or at least slow down the growth of a tree. Cattle also trample or eat the small maple, oak and hickory seedlings that would be the next crop of trees.

Cattle get more exercise than nutrition from timbers. Woodland pastures average 275 pounds of dry forage a year, with 8 percent protein content. That compares with a well-managed pasture at 4- to 6-thousand pounds of forage at 14 percent protein. The protein content of that grazed timber is only one-thirtieth that of a good pasture.

Iowa's foresters have several other rules of thumb and guides to think about in managing woodlands.

- *The most valuable trees should be given the best chance to grow.*
- *Idle land in and around a woodland should be planted to trees.*
- *Like any other crop, trees should be harvested when they're ready. Overmature trees are less resistant to insects and disease, and lose value as time goes on.*
- *Certain trees grow best on some soils, so a check of soil type or soil survey is a good idea before planting.*
- *Some crowding of young trees is desirable, so that the lower branches are shaded out, resulting in straighter, knot-free lumber later.*
- *Thinning, or timber stand improvement, is also needed. Trees are probably too crowded if the crown of the average tree is one-third or less the height of the entire tree.*
- *Valuable, well-shaped trees should be pruned of lower branches when the trees are 3 to 4 inches in diameter.*
- *When trees are harvested, there should be a plan for new trees.*

Because Iowa's forested land has dwindled from almost 7 million acres in 1850 to less than 1½ million acres today, government agencies are offering several inducements to landowners to manage woodlands. For one, the state forest nursery at Ames provides inexpensive trees for planting. Secondly, both the Forestry Incentives Program and Agriculture Conservation Program offer cost-sharing help for woodland developments. Third, current Iowa law exempts land classified as forest reservation from property taxes. And, fourth, income from woodlands can be treated as capital gains rather than ordinary income.

Details on all programs and the various aspects of growing trees can be obtained from district foresters. Additional information is available from Extension and Soil Conservation Offices. These groups hold seminars on woodland management at selected locations, drawing on the expertise of experienced foresters, other woodland owners and buyers.

Managing trees for profit is different from growing corn, but the principles are the same. For those interested in getting started, foresters and others are waiting to help. And there is no better day than today.



Lynn Betts



Lynn Betts



Lynn Betts

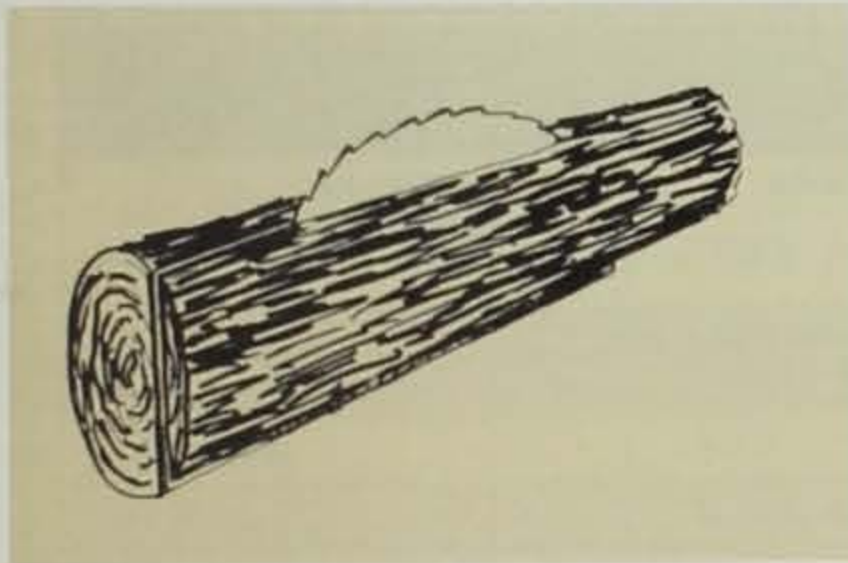
Iowa has had a 50 percent increase in the number of tree farms over the past 18 months. Over 200 landowners have recognized the value of woodland crop and have accounted for nearly 20,000 acres of tree farms in the state.

IOWA CONSERVATION COMMISSION

1984

APPLICATION FOR SEEDLINGS

Reforestation provides continual forest products.



Habitat improvement means more wildlife.



Erosion control improves water quality.



Proper planting improves survival.



Our State Forest Nursery grows tree and shrub seedlings for conservation uses on Iowa lands. We offer these seedlings as a service to encourage you to plant for reforestation, wildlife habitat and erosion control. In keeping with these objectives, you must sign the statement on the application when you order, agreeing to use these plants for the purposes mentioned above. You must also order at least 500 plants, unless you are completing the previous year's planting or are ordering the Wildlife Packet (which may be purchased by itself).

Early orders have preference. The sooner you send your application, the better our chances of being able to serve you. You can find out what species are currently available by calling 515/294-9642 for a recorded message.

To place an order, you must complete the attached application and send it to us. Following the instructions at the head of each section should make the application easy to complete. Please make sure each section has been filled in; if the application is incomplete, we may have to return it to you. You can make a copy of what you order on the other side of this sheet for your records.

DON'T SEND MONEY when you mail your application. If we have the plants you want when we receive your application, we'll deduct them from our inventory and send you a bill for the correct amount. This bill is our acknowledgement of your order. **YOU MUST PAY THIS BILL WITHIN 15 DAYS**; otherwise we'll cancel your order and make the plants you requested available for other orders. The Nursery reserves the right to make substitutions if sufficient stock is not available.

We begin preparing orders as early in the spring as possible. Unfavorable weather (rain, snow, etc.) can cause delays. The Nursery gets each order ready as quickly as possible, but we can't guarantee availability by any specific date. You can get information about our shipping schedule in the spring by calling 515/294-9642 for a recorded message.

For pickup orders, do not come to the Nursery for your order until you receive a postcard saying it's ready. Then bring the postcard with you when you come.

PLEASE REMEMBER that ordering your plants is only the first step in establishing your plantation. Your seedlings must be properly planted. Protection from weeds which can overtake them as well as from livestock which can trample or eat them is also necessary for a successful planting. Without this care, your plants will probably not survive.

If you have any questions, you can write the Nursery at 2404 South Duff Avenue, Ames, Iowa 50010, or call 515/294-4622, from 8:00 to 4:30, Monday through Friday. We would be happy to send you more information about planting and weed control or to talk to you about these important steps in growing your seedlings.

Weed control improves growth.



Grazing within plantations results in failures.



1. Check pickup or ship box.
For ship orders, fill in delivery address.
 (Please print)

- I will pick up my order at the nursery when notified.
 I want my order shipped by UPS to the address below:

 (NAME)

 (ADDRESS)

 (CITY) (ZIP) (PHONE)

1984 APPLICATION FORM



2. Fill in the "Number Wanted" column.
 (Do not order less than 500, in units of 100)

Species	Height	Cost/ Hundred	Number Wanted	Office Use Only
White Pine	5-12"	6.90		
Scotch Pine	5-12"	6.90		
Red Pine	6-14"	6.90		
Ponderosa Pine	5-12"	6.90		
Jack Pine	6-14"	6.90		
Red Cedar	6-12"	6.90		
Norway Spruce	6-14"	6.90		
Black Walnut	10-18"	6.90		
Black Walnut (top pruned)	8"	6.90		
Green Ash	8-18"	6.40		
White Ash	8-18"	6.40		
Shagbark Hickory	4-12"	6.40		
Shellbark Hickory	6-12"	6.40		
Silver Maple	8-18"	6.40		
Red Oak	8-18"	6.40		
Bur Oak	8-18"	6.40		
White Oak	8-18"	6.40		
Mixed Oak	8-18"	6.40		
Russian Olive	8-16"	6.40		
Autumn Olive	8-16"	6.40		
Tatarian Honeysuckle	6-12"	6.40		
Amur Honeysuckle	8-16"	6.40		
Ninebark	8-16"	6.40		
Redosier Dogwood	8-18"	6.40		
Gray Dogwood	6-12"	6.40		
Wildlife Packet (containing 200 plants beneficial to wildlife, chosen by the Nursery)		15.40/ Packet		

3. Fill in the legal description.

These trees are to be planted in _____ Quarter,
 Section _____, Township _____ N,
 Range _____, in _____ County,
 Iowa.

4. Answer each question.

A. I RECEIVED ASSISTANCE IN PLANNING THIS ORDER FROM: 1. No one, 2. Soil Conservation Service, 3. ASCS, 4. County Extension Service, 5. District Forester, 6. Conservation Officer, 7. Wildlife Biologist, 8. County Conservation Board.

B. MAIN PURPOSE OF PLANTING: 1. general forestry, 2. wildlife habitat, 3. erosion control, 4. other.

C. METHOD OF PLANTING: 1. machine, 2. hand.

D. THE PLANTING LOCATION IS: 1. farm, 2. city, 3. acreage, 4. government land 5. other.

E. HAVE YOU PURCHASED PLANTS FROM THE NURSERY BEFORE? 1. No, 2. Yes.

If yes, is this order for 3. Replacement or 4. Expansion of previous planting?

5. Sign the agreement.
Fill in your mailing address.

I agree to plant and use the nursery stock requested upon the described property for establishing or improving existing forests, erosion control, game or water conservation, with these restrictions: I agree NOT to resell or give these plants away with roots attached to any person, firm, corporation or agency nor to plant any of them for new windbreak, shade, or ornamental purposes. I agree to protect all plantings from fire and domestic livestock grazing. I agree to forfeit for destruction any trees planted or used in violation of the above restrictions.

If you are a tax-exempt government agency, please check here.

 (LANDOWNER NAME — PLEASE PRINT)

 (MAIL ADDRESS)

 (CITY) (STATE) (ZIP)

 (PHONE NUMBER)

 (LANDOWNER OR AGENT SIGNATURE)

AGREEMENT MUST BE SIGNED.

**FORESTRY SECTION
IOWA CONSERVATION COMMISSION**

The Forestry Section of the Conservation Commission assists the people of Iowa to enhance the woodland resources by following this broad objective: To foster environmental protection and strive to insure, for present and future generations, the greatest economic and social benefits from trees, forest land, and related resources. The Forestry Section works toward these objectives through forest management, tree planting, forest protection, timber processing improvement and demonstration of woodland values. These services are available to all landowners, public and private.

For planting information and other assistance concerning the management, harvesting, marketing

and utilization of your woodlands, contact the District Forester serving the county in which your land is located (see map on back of application). This is a free service, and we urge you to contact them before you plan any special or extensive plantings.

Similar management advice for wildlife is available from Wildlife Management Biologists (also listed on the back of the application). Planting assistance may also be available from your County Conservation Board. A list of pamphlets about various aspects of forestry is available from Forestry Extension, Iowa State University, Ames, Iowa 50011. Write them for a copy.

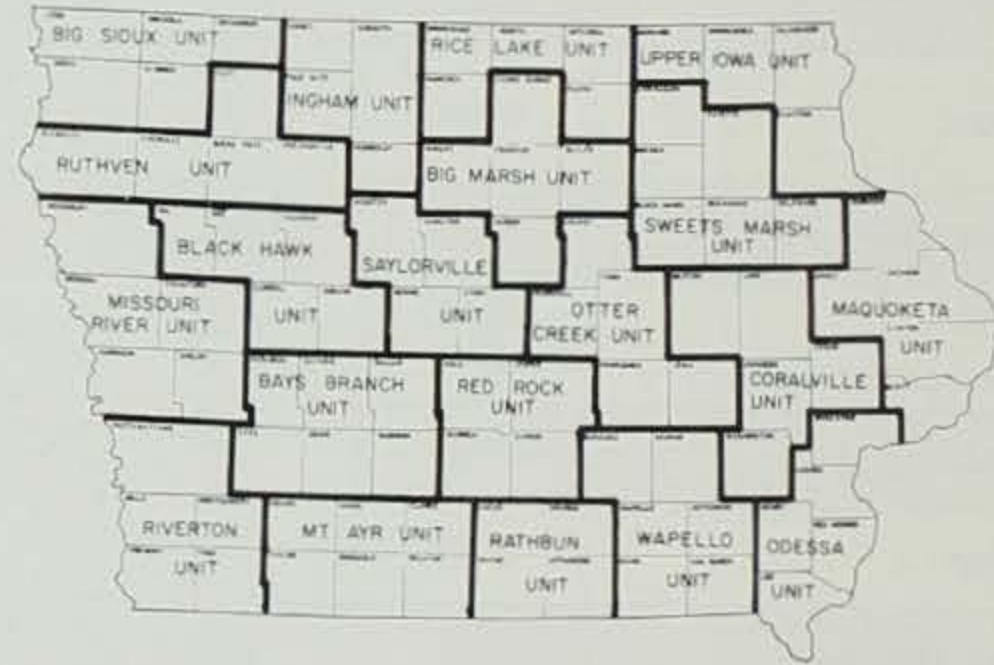
DISTRICT FORESTER ADDRESSES



- | | | |
|-----------------|------------------------------------|----------------|
| 1. ELKADER | Box 662, 52043, | (319) 245-1891 |
| 2. CHARLES CITY | Box 4, 50616, | (515) 228-6611 |
| 3. MARSHALLTOWN | Box 681, 50158, | (515) 752-3352 |
| 4. ANAMOSA | Box 46, 52205, | (319) 462-2768 |
| 5. WAPELLO | Box 62, 52653, | (319) 523-8319 |
| 6. FAIRFIELD | Box 568, 52556, | (515) 472-2370 |
| 7. CHARITON | Stephens State Forest, RR 3, 50049 | (515) 774-4918 |
| 8. ADEL | Box 175, 50003, | (515) 993-4133 |
| 9. RED OAK | Box 152, 51566, | (712) 623-4252 |
| 10. LE MARS | Box 65, 51031, | (712) 546-5161 |
| 11. CRESTON | Box 2, 50801, | (515) 782-6761 |
| 12. HUMBOLDT | 102-8th St., S., 50548, | (515) 332-2761 |
| | State Forest Nursery | (515) 294-4622 |

WILDLIFE MANAGEMENT BIOLOGIST ADDRESSES

- | | |
|---------------------------------|---|
| 1. Bays Branch Wildlife Unit | (515) 993-3911 |
| 2. Big Marsh Wildlife Unit | 801 Court, Courthouse, Adel, 50003 |
| 3. Big Sioux Wildlife Unit | ASCS Office Bldg., 115 - 2nd Ave. N.W., Hampton, 50441 |
| 4. Black Hawk Wildlife Unit | SCS Office Bldg., Rock Rapids, 51246 |
| 5. Coralville Wildlife Unit | Box 815, Lake View, 51450 |
| 6. Ingham Wildlife Unit | (319) 354-1074 |
| 7. Maquoketa Wildlife Unit | ASCS Office Bldg., 517 Southgate Ave., Iowa City, 52240 |
| 8. Missouri River Wildlife Unit | (712) 362-7222 |
| 9. Mt. Ayr Wildlife Unit | SCS Office Bldg., 2109 Murray Rd., Estherville, 51334 |
| 10. Odessa Wildlife Unit | (319) 652-2456 |
| 11. Otter Creek Wildlife Unit | Pershing Rd. E., Maquoketa, 52060 |
| 12. Rathbun Wildlife Unit | (712) 423-2426 |
| 13. Red Rock Wildlife Unit | SCS Office, Lindley Bldg., Onawa, 51040 |
| 14. Rice Lake Wildlife Unit | (515) 464-2220 |
| 15. Riverton Wildlife Unit | SCS Office Bldg., RR 3, Mt. Ayr, 50854 |
| | (319) 523-8319 |
| | ASCS Office Bldg., 220 N. 2nd St., Wapello, 52653 |
| | (515) 484-3752 |
| | USDA Office Bldg., 203 W. High St., Toledo, 52342 |
| | (515) 774-4918 |
| | RR 2, Box 310, Chariton, 50049 |
| | (515) 961-2587 |
| | Box 423, Indianola, 50125 |
| | (515) 324-1819 |
| | SCS Office Bldg., 706 1st Ave. N., Northwood, 50459 |
| | (712) 624-9063 |
| | SCS Office Bldg., Malvern, 51551 |



- | | |
|-------------------------------|--|
| 16. Ruthven Wildlife Unit | (712) 262-9326 |
| 17. Saylorville Wildlife Unit | SCS Office Bldg., 306 - 11th St., S.W. Plaza, Spencer, 51301 |
| 18. Sweet Marsh Wildlife Unit | (515) 432-4320 |
| 19. Upper Iowa Wildlife Unit | ASCS Office Bldg., 718 8th St., Boone, 50036 |
| 20. Wapello Wildlife Unit | (319) 425-4214 |
| | 816 Washington Ave., Fayette, 52142 |
| | (319) 382-4895 |
| | ASCS Office Bldg., 911 S. Mill St., Decorah, 52101 |
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'Possum Pilgrimage

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and Randy

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ALL GIFT ORDERS MUST BE PREPAID. Mail this form with your remittance in the envelope.

Please make checks payable to **IOWA CONSERVATION COMMISSION**

Upon request, gift cards will be sent.

TOP TEN RACKS

Shotgun Typical

Name	Address	Year	County Taken	Total Score
Wayne A. Bills	Des Moines	1974	Hamilton	199%
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Franklin Taylor	Blencoe	1976	Monona	185%
*Taylor Wilson	Exira	1982	Audubon	185%
Marvin Tippery	Council Bluffs	1971	Harrison	185%
Cecil Sitzman	LeMars	1957	Plymouth	184%
Wayne Swartz	Bedford	1967	Taylor	183%

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David Mandersheid	Welton	1977	Jackson	253%
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LeRoy Everhart	Sumner	1969	Van Buren	224%
*Todd Hawley	Panora	1982	Guthrie	224%
Donald Crossley	Hardy	1971	Humboldt	221%
Mike Pies	Ackley	1977	Hardin	221%
George Foster	Creston	1968	Union	220%
John Meyers	Council Bluffs	1969	Pottawattamie	218%

Bow and Arrow Typical

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Lloyd Goad	Knoxville	1962	Monroe	197%
Robert Miller	Wyoming	1977	Jones	194%
Richard Swim	Des Moines	1981	Warren	190%
Gary Wilson	Cherokee	1974	Cherokee	175%
Gordon Hayes	Knoxville	1973	Marion	175%
Don McCullough	Conesville	1980	Muscatine	174%
Jack Douglas	Creston	1974	Union	173%
Ardie Lockridge	Amana	1965	Iowa	172%
*Ambrose Beck	Goose Lake	1963	Jackson	171%
Dan Block	Thompson	1981	Mitchell	170%

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Blaine Salzkorn	Sutherland	1970	Clay	218%
Phillip M. Collier	Burlington	1978	Des Moines	203%
Bill Erwin	Sioux City	1966	Woodbury	202%
Dorrance Arnold	Oelwein	1977	Clayton	200%
Dennis Ballard	Iowa City	1971	Johnson	197%
Marsha Fairbanks	Martelle	1974	Jones	197%
Tim Digman	Dubuque	1981	Lee	190%
*Jim Monat	Waterloo	1981	Clayton	189%
Lyle Miller	Vinton	1977	Benton	188%

*new top ten entries

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IOWA CONSERVATI**

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For planting information and other assistance concerning the management, harvesting, marketing

DISTRICT FOREST



WILDLIFE MANAGEMENT B

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801 Court, Courthouse, Adel, 50003
- 2. Big Marsh Wildlife Unit (515) 456-3730
ASCS Office Bldg., 115 - 2nd Ave. N.W., Hampton, 50441
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SCS Office Bldg., Rock Rapids, 51246
- 4. Black Hawk Wildlife Unit (712) 657-2639
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SCS Office Bldg., 2109 Murray Rd., Estherville, 51334
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- 12. Rathbun Wildlife Unit (515) 774-4918
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- 13. Red Rock Wildlife Unit (515) 961-2587
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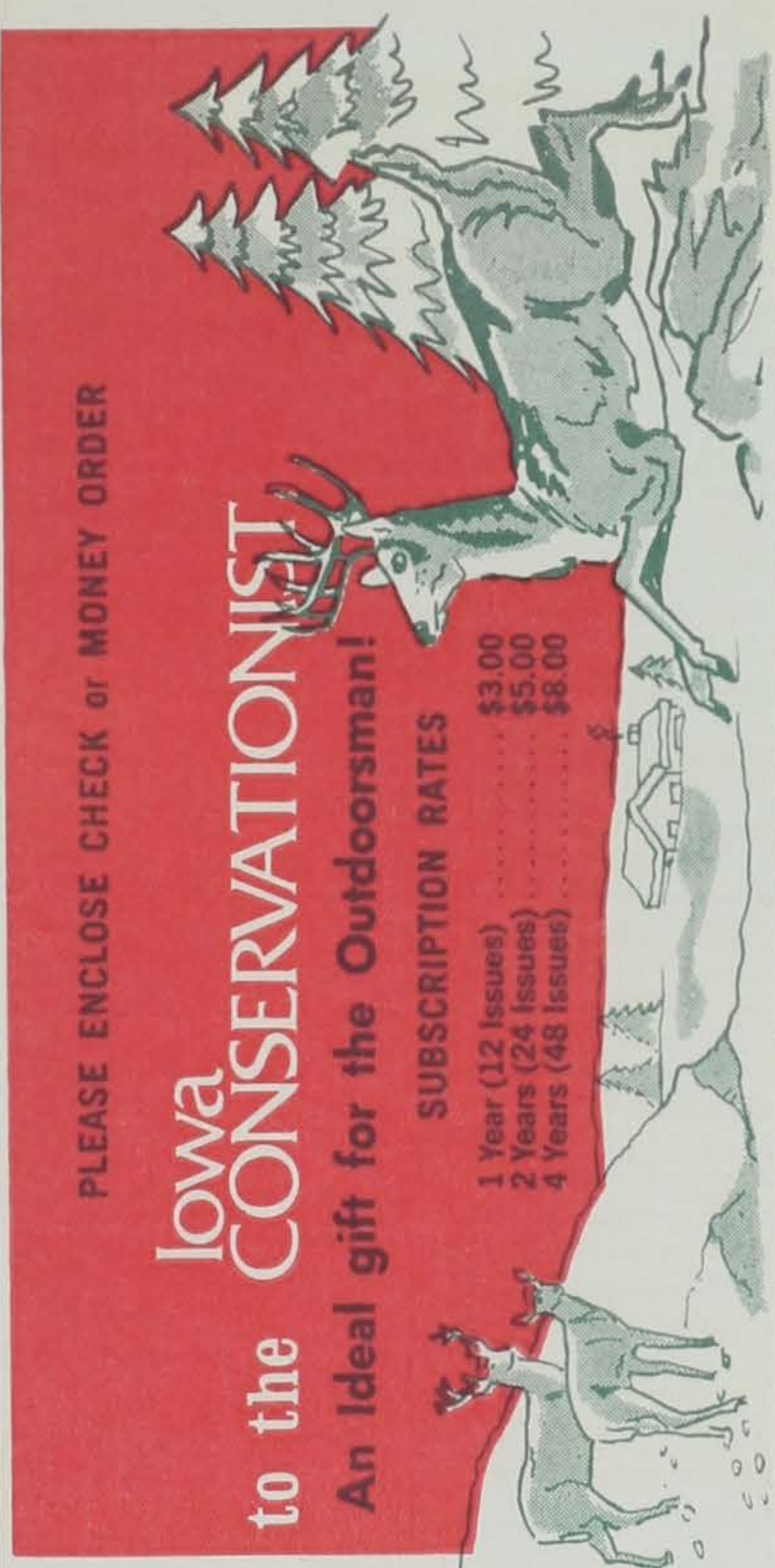
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and Randy

'Possum
 Pilgrimage

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LeRoy Everhart	Sumner	1969	Van Buren	224%
*Todd Hawley	Panora	1982	Guthrie	224%
Donald Crossley	Hardy	1971	Humboldt	221%
Mike Pies	Ackley	1977	Hardin	221%
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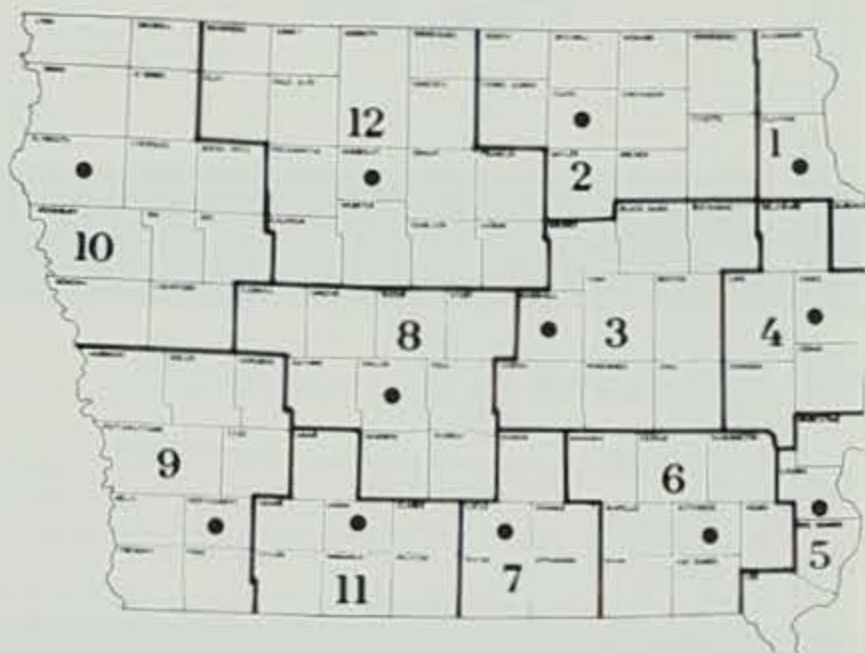
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DISTRICT



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CONSERVATION UPDATE



CONSERVATION LAW ENFORCEMENT TAKE TOP HONORS



Championship pistol team from left; Dan LeClair, Dick Johnson and Randy McPherrren. Not pictured Jim Judas.

The Iowa Conservation Commission's law enforcement section took top honors recently at the 1983 National Police Revolver Championship held at Camp Dodge, north of Des Moines. A four-man team consisting of officers Dick Johnson of Missouri Valley, Jim Judas of Rockwell City, Dan LeClair of Indianola and Randy McPherrren of Milo, scored

highest in the sharp shooter class.

Approximately 900 of the nation's top marksmen representing federal, state and municipal law enforcement agencies from around the United States competed. The annual event gives law enforcement personnel the opportunity to exhibit their handgun skills in individual and team competition, in four experience classes.

Competitors are timed on a standard police practical course using revolvers. They shoot targets from a standing, kneeling and prone position at 7, 25, and 50 yards, double action.

The conservation commission team scored as follows — Dick Johnson, 573 out of a possible 600; Jim Judas, 546; Dan LeClair, 577 and Randy McPherrren 568, for a total score of 2,264.

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Name	Address	Year	County Taken	Total Score
Jerry Monson	Clear Lake	1977	Cerro Gordo	220½
Blaine Salzkorn	Sutherland	1970	Clay	218½
Phillip M. Collier	Burlington	1978	Des Moines	203½
Bill Erwin	Sioux City	1966	Woodbury	202½
Dorrance Arnold	Oelwein	1977	Clayton	200½
Dennis Ballard	Iowa City	1971	Johnson	197½
Marsha Fairbanks	Martelle	1974	Jones	197½
Tim Digman	Dubuque	1981	Lee	190½
*Jim Monat	Waterloo	1981	Clayton	189½
Lyle Miller	Vinton	1977	Benton	188½

*new top ten entries



SNOWMOBILE SAFETY COURSE REQUIRED

Anyone born after July 1, 1965 must take and pass the Iowa Conservation Commission's snowmobile certification course before he or she can legally operate a snowmobile on public land or ice.

The minimum age for the course is 12 years. Courses will be conducted at various locations around the state beginning this month. The course consists of five two-hour sessions. For information on a snowmobile course located near you, contact your local conservation officer or call the conservation commission's main office in Des Moines (515/281-6824).

The instruction covers proper snowmobile maintenance, safety tips, legal responsibilities, operation ethics and actual outdoor snowmobile performance and evaluation. Slides and films are used to illustrate the importance of snowmobile safety.

Graduates will receive a snowmobile safety certificate, which must be carried when operating a snowmobile on public lands or ice. The graduate also receives a shoulder patch and helmet decal. The course will be conducted by a certified instructor.

Acid Rain To Get Attention

Congress is expected to give serious attention to acid rain problems this fall. Several bills will be under consideration.

There are three acid rain bills pending in the Senate. S. 145 by Senator George Mitchell (ME) would require that annual sulfur dioxide emissions in 31 eastern states be reduced by 10 million tons within a decade. Senator Robert Stafford (VT) has introduced S. 769 which would require a 12 million-ton reduction over 15 years. Yet another measure, S. 768, is the clean air bill passed by the Senate Environment and Public Works Committee. It would reduce sulfur emissions by 8 million tons over 12 years.

H.R. 3400 is the House acid rain bill. It was introduced by Congressman Henry Waxman (CA) and mandates a 10 million-ton reduction in sulfur dioxide emissions. However, it also would allow future emissions to creep back up by 2 or 3 million tons. Consequently the long-term control would amount to only 7 or 8 million tons annually.

The National Academy of Sciences recommends that acid deposition be cut by 50 percent. This means that sulfur dioxide pollution should be reduced by at least 12 million tons in the eastern U.S. None of the current bills would do that.

DONATIONS

T. W. Morse Council Bluffs	\$5 to nongame
Cheri and Jean Forman Des Moines	\$2 to wildlife
Paul Dantriment	\$1 to nongame
Horseback Riders from Neb.	\$3 to Wakonsie Park
Robert Waddell Leighton	\$5 to wildlife
Robert Hilbert Clinton	\$5 to nongame
Mike Little Marion	\$5 to wildlife
Tim Wiley Houston, TX.	\$5 to wildlife
J.M. McWilliams Modale	\$12 to wildlife
Spirit Lake Protective Association	two picnic tables two permanent grills valued at \$597.97
Melvin and Elizabeth Pellett, Atlantic	20 acre tract of land in Cass County

STUDY EXAMINES CHILDREN AND WILDLIFE

A Connecticut study of school-aged children and their attitudes, knowledge and behaviors toward wildlife has shed some light on the need for more education in these areas.

The study, funded by grants from the U. S. Fish and Wildlife Service and the G. R. Dodge Foundation, is part of a series of studies on American attitudes toward wildlife. Four age groups were focused upon for this study: second, fifth, eighth and eleventh grades.

Because of the difficulty in testing this young age group and getting uniform answers, the results of the study were viewed as "tentative." However, from the conclusions that could be drawn, there seemed to be a definite lack of knowledge about wildlife among these youngsters. Many viewed such things as predation and nutrient recycling in negative terms.

Testing these children's attitudes revealed most took a humanistic approach, view-

ing animals as lovable pets. Next in line was a naturalistic view — an interest and affection for wildlife and the outdoors — followed by a negativistic view, avoiding and even fearing animals.

The most significant finding was a change in the perception of animals at various age levels. Grades 2-5 took a strong emotional, humanistic view of wildlife. Grades 6-8 showed an increase in intellectual knowledge of wildlife. Grades 8-11 showed an increase in moral, ethical and ecological concern for animals and the environment.

The report concluded there is a need for more education on the requirements and characteristics of wildlife as well as the ecological processes. Wildlife management agencies will have to devote far more attention and resources to the needs of children and their environmental education, the report stated.

The future of wildlife depends on the commitment and concern of these future adults.

FALL SHOOTING SAFETY

With the arrival of the fall hunting seasons, thousands of Iowa sportsmen will be taking to the field. To many hunters, getting ready for the first hunt means cleaning a shotgun or rifle, putting a new coat of waterproofing on a pair of boots, finding that favorite hunting coat and buying a license.

There is another step, however, that every shooter should take before the first hunt — reviewing the basic rules of shooting safety.

While hunting is one of the safest sports, maintaining that enviable record requires that shooters practice the following ten basic rules of firearms safety:

- Do not rely on your gun's safety. Treat every gun as if it were loaded and ready to fire.
- Never cross a fence, climb a tree or jump a ditch with a loaded gun.
- Never load or carry a loaded gun until you are ready to use it.
- Watch your muzzle so other hunters do not have to.
- Keep guns and ammunition separate and in locked storage.
- Do not shoot unless absolutely sure of your target and what is beyond it.
- Know the range of your gun. Remember, even a 22-rimfire can travel over one mile.
- Always wear eye and ear protection when shooting.
- Always be sure the barrel is clear of obstructions. Only carry ammunition of the proper size for the gun you are using.
- Always carry handguns with the hammer down on an empty chamber.



A "DIM VIEW" OF IT

By Jerry Hoilien

It was late on a dark evening and one of the men talking across the campfire had a Missouri accent. He asked the campers if the park gate was always locked at night. He said he and his partner were going fishing, but as they got their gear from the car the campers heard a lot of clanging and jingling noises that didn't sound like fishing poles.

Conservation Officer Steve Pierce had been alerted earlier about some illegal trapping going on in the area and had located several traps around a pond. He was staked-out watching for the return of the trappers.

It's a long night when you sit by yourself waiting. You sometimes imagine lights at a distance getting brighter and brighter, or you catch a flash out of the corner of your eye and snap around only to find it was a headlight of a distant vehicle turning a corner. Sounds are magnified in the still of the night til a scratching cricket sounds like a switching freight train. Funny how many different sounds there are at night and your mind does strange things with all of them when you are so intent and listening. As time goes by you

become tired and relax until a different sound brings you back to your job and you listen hard for awhile. This is repeated all night long until finally a glow in the eastern sky chases the dark shadows away. As the sun comes up you begin to stir, there's a stiffness in your bones from sitting too long in the same position. You move to get the circulation going again.

Now the sun climbs higher and you get the feeling no one's coming this time but still you wait. Conservation officers have to have a lot of patience and perservance... little like a bulldog I had once. He'd just grab-hold and hang-on!

The investigation went on and on for days. Evidence was gathered on two subjects, including statements and sightings of their vehicles on certain dates and times. Finally, search warrants were obtained. Other officers were brought in, briefed and dispatched.

A knock on the door told the individuals who we were and why we were there. Gathering the evidence was a big job and meant labeling, listing, receipting and reporting back to the court. In this case storage of the evidence was not easy. Working with

Steve were officers from the police and sheriffs office. Total seizures were 42 raccoon, 37 muskrats, two fox, three opossum and several packages of venison, along with a large freezer and 31 traps. Statements were taken.

And then to court. There were conferences with the county attorney's office; charges were filed, liquidated damages were filed, evidence receipts were checked and more and more paper work completed until finally the court time arrived.

How did the court look at this? One individual had 40 counts of possession of raccoon out-of-season, 32 counts of muskrat out-of-season, three counts of opossum out-of-season, two counts of fox and one count of deer out-of-season. The other had 15 counts of muskrat, two counts of raccoon and one count of deer, all out-of-season.

The judge took a dim view of taking game and fur out-of-season resulting in fines, liquidated damages and costs totaling \$18,667.50. This served notice to these and other would-be *RAPERS* of our wildlife that the courts, the people and the wardens of Iowa take a darn "dim view of it."





By Richard Patterson

Artwork by Pat Crawford

Rich Patterson is the director of the Indian Creek Nature Center in Cedar Rapids. He holds a B.S. degree in fishery management from the University of Idaho.

Pat Crawford is a free lance artist and naturalist. She is a graduate of Mount Mercy College in Cedar Rapids and has done volunteer work for the Indian Creek Nature Center for six years.

Fall passed at a snail's pace. Finally, pheasant season opened, but there was still over a month of waiting until Iowa's second deer season would begin.

By early December my hunting partner and I had our shotguns sighted in. Tent, sleeping bags, long johns, and other gear was readied.

Bagging a deer had eluded us the three previous seasons and we were determined to make this a textbook hunt. We reread dozens of deer hunting articles and even spent a day scouting the area of Schimek State Forest that we planned to hunt.

Before opening day arrived we even started bragging that we would have our bucks back in camp the first morning and would spend the rest of our three day hunt lounging around camp or squirrel hunting.

No nonhunter can begin to understand the excitement and anticipation of opening day. In the predawn darkness the smell of coffee and gunslick, the feel of hunting clothes and the sight of the familiar battered old 12-gauge raise the blood pressure with the excitement of the coming season.

Of Kinglets and

Although we expected a textbook hunt, mother nature had other ideas. Iowa's second 1982 season opened with a zero-degree wind howling down out of the Arctic. The inch of wet snow that had fallen a few days earlier was frozen into a scaly crust. As we stumbled to our stands, branches were rattling in the gale and the crust was so noisy underfoot that we might as well have announced our arrival to the deer with bull horns.

With the exception of a pair of tiny kinglets that pecked at my boots, no wildlife was stirring that morning. Even the squirrels and jays were holed up.

Had we followed the textbooks we would have rounded up a few other hunters and organized a drive to move and ambush the tightly bedded white-tails. In other years we had seen small armies of men clamoring through the woods. Often they advertised their presence with loud talking.

Although drivers often filled their tags in places where we went deerless, we rejected the idea of organizing a drive. There is far more to a successful hunt than a hundred pounds of meat and we were after more than venison.

I once had a deer driver walk within six feet of me without ever noticing my orange jacket. Someone so oblivious to his environment will overlook tiny kinglets somehow making a living in a harsh world, the shaking of shingle oak leaves in the breeze and the distant hooting of a horned owl. These are experiences savored by still-hunters, quietly matching wits and senses with deer on a one-to-one basis.

After two days of hard hunting, conversation was gloomy over the

campfire on the last evening of our hunt. Neither of us had clearly sighted a deer and the weather showed no signs of improvement. After debating strategy, I decided to spend the next morning hunting the thickest cover in the Area "A" grove of white pines planted by the Conservation Commission around 20 years ago. I reasoned that any deer in its right mind would feel safe from both hunters and wind in that dense cover.

Just at sunrise, I crept up to the two-acre island of pines surrounded by hardwoods. No matter how carefully I placed each foot, the result was a loud CRUUUNCH!

It took at least 45 minutes to circle the grove. No deer tracks were coming out. None were going in! If there were deer around they hadn't moved in at least three days.

I took a right angle and ducked into the palanx of evergreens. No nonhunter can understand the total concentration required for still hunting. All senses are put on red alert. Emotions are on a knife edge as the eyes search every cranny of the woods, ears are radar seeking tiny sounds, and even the nose tries to catch a whiff of a deer's pungency.

Suddenly, I knew my hunch was right! There were deer around. I had not seen them. They had not been heard or smelled, but they were nearby! Some sixth sense warned me of their presence.

My snail's pace slowed. The shotgun was ready. Nerves were as tense as cables. Finally I reached the edge of the pines and could see out into the oaks.

There were the tracks I had made an hour before... and there was something else! A pair of deer prints paralled my

d Venison

own tracks. In a few spots the deer had actually stepped in my footprints.

Instantly my emotions relaxed. Radar was switched off as muscles and nerves went weak. If anyone had been watching the pines at that moment, they would have seen an Iowa deer hunter sitting in the snow, laughing at himself.

I had been fooled by the oldest trick in deerdom! They had followed behind me unafraid and had finally moved off through the oaks to safety.

For the fourth year in a row we drove home with neither venison nor antlers. We were tired, hungry and cold, but our hunt had been a huge success. Memories of oaks and kinglets, campfires and those deer tracks will linger for a lifetime.

Although we had not bagged a deer, we had met them in their environment as equals. We matched wits and senses, and this year the deer had taught me a lesson that I'll never forget.

And now comes the hard part — waiting a whole year until deer season opens again.



ANCIENT INDIAN KNIVES



Wendell Simonson

By Wendell Simonson

Wendell Simonson is a conservation officer for Johnson County. He has been with the commission since 1946.

When I answered the phone early one morning, the man on the other end got right to the point.

"If possible, I would like to have a road-killed deer to do some research work. It doesn't have to be real fresh — a few hours old would still be O.K."

"What kind of research work do you have in mind," I asked, "especially on a deer that might be several hours old?"

The gentleman laughed and explained that he was with the anthropology department at the University of Iowa at Iowa City. He wished to skin and cut up a deer using only the flint knives the Indians had used in the past. He wished to study what problems they had and how effective these implements were.

Now he had me interested. I explained that I had picked up a small doe along I-80 during the early morning hours — it apparently had been dead a couple of hours, in warm weather, and was unfit for human consumption. I made arrangements to meet him at the deer burial pit on the Hawkeye wildlife management area in about one hour.

So that was how I met Toby Morrow of Iowa City. He showed me several of the actual old stone knives and some

new replicas that he had made. Several were large, arrowhead-shaped and made of flint. Others were roughly the shape of a knife blade. On one he had fashioned a wooden handle to make it easier to use. He also demonstrated for me how he chipped the edge of the flint knives to "sharpen" them.

The deer skin came off quite smoothly; as smooth and as fast as with a hunting knife! He then began to cut off sections of the venison into cooking size. While the pieces didn't exactly look like the cellophane wrapped meat in the butcher shop, they certainly looked good. I could almost envision a hungry Indian family cooking some over a fire and making some into "jerky" for later use. While he was working on the deer I took a number of photographs and tape recorded a program for my weekly outdoor radio show. When he had completed his research, we rolled the deer carcass into the burial pit and covered it.

A few days later Toby called to check if I might have a few pieces of deer antler that he could use. He stopped at my residence and I gave him a couple of antlers from car-deer accidents. He demonstrated to me how the Indians had used them to chip pieces of flint into arrowheads and other tools. He then presented me with a beautiful flint knife that he had made. The flint was light tan, with dark brown markings and is truly a valued gift.

Wildlife's Response to a Changing

By Richard Bishop and Roger Sparks



Richard Bishop is the wildlife research supervisor for the Commission. He holds a B.S. degree from Iowa State and an M.S. degree from the University of Arizona. He has been with the commission for 18 years.

Roger Sparks is editor of the Iowa Conservationist. He has been with the commission for 14 years and holds a B.S. degree in journalism from Drake University.

Native Iowans managed an existence from a land of vast prairie and wetlands with timbered river valleys. Approximately 75 percent of the land that is now called Iowa was in tall-grass prairies, with approximately three million acres in wetlands and seven million acres in timberland. These Americans

depended on fish and wildlife for food and clothing. Large herds of buffalo once roamed the prairies along with elk and white-tailed deer; turkeys and squirrels were abundant along the timbered stream courses. Prairie chickens along with hordes of waterfowl provided additional sources of food. This was the Iowa landscape for thousands of years.

But this was not to last. One hundred and fifty years ago when white immigrants started to settle the land, changes began to take place. The plow turned the prairie sod and people discovered the richness that laid below the tall grasses. Once the horizon became dotted with many small farms, the wilderness that had developed over eons of time was tamed.

Settlement brought with it profound changes in wildlife. Buffalo and elk were pushed from the prairies. But small farms created a stable food supply for prairie chickens and bobwhite quail. Prairie chickens actually increased around these small farms carved out of the prairie. Wolves that were once dominant predators were gradually eliminated because of their tendency to prey upon domestic livestock. This change allowed species such as red fox and coyote to become the dominant predators. Deer and turkeys were hunted extensively for food, and year-round hunting along with the destruction of forestland caused by clearing for homes and cropfields signaled their demise. Beaver, sought for their rich fur, were



M. Dunlap, Courtesy of Living History Farms

changing habitat. Over the thousands of years of development, the prairie provided prairie chickens with needed components for their existence — large expanses of nesting cover and a food supply of seeds. However, even in these early days, prairie chicken numbers dramatically changed. Years of favorable weather conditions allowed high survival of young and populations built to high levels. Then, harsh winters with limited food caused large die-offs or population crashes.

Early settlers turned small acreages of prairie into corn which provided a much-needed winter food source for both man and wildlife. With more than ample nesting cover and a dependable food supply, prairie chicken numbers greatly increased — probably to their all-time high. As more prairie was turned to corn, the prairie chicken was simply unable to cope with the powerful force of the agricultural revolution. The delicate balance of habitat tilted from adequate food and plenty of nesting cover to extensive acreages of food and limited native prairie for nesting. Once this happened, an agonizing decline of chicken numbers occurred until the sight of a prairie chicken became rare. The hunting season for prairie chickens was closed in 1916 and never reopened. A few birds held on until the early 1950's. The commission is presently involved with a prairie chicken reintroduction program that someday may allow us to see prairie chickens again in Iowa.

The bobwhite quail is a species that has shown adaptability. Their numbers were probably not great in the early days; but like the prairie chicken, they thrived with the advent of small farms that provided a winter food source. Quail numbers have fluctuated over the years with highs and lows caused by variations in weather, food supplies, and protective winter cover. Man has greatly reduced the range of the bobwhite in Iowa due to extensive removal of good winter cover; but in southern portions of the state, high quail populations presently exist when spring nesting conditions are good and winter weather is not overly harsh.

Iowans became very upset with the loss of their native game bird, the prairie chicken. They began to search for a game bird to take its place that would thrive in an agricultural environment. In the early 1900's, the ring-necked pheasant and gray partridge (better known as the Hungarian partridge) were stocked in northern Iowa.

The ring-neck found Iowa's mixed corn, alfalfa, and small grains much to his liking. The pheasant did not require the expanse of nesting habitat as did the prairie chicken. Pheasants found a home and by the late 1930's, they increased in numbers in the northern Iowa cornbelt. At one point, some farmers even considered them to be a pest. The pheasant was a highly-successful replacement for the prairie chicken. The sport of pheasant hunting expanded to almost holiday status for opening day. Schools were let out, businesses closed, and people went pheasant hunting. It was not uncommon to have 300 pheasants per section in prime habitat of northern Iowa just prior to season opening.

During this period of high pheasant numbers, a fragile balance of habitat existed. Cornfields were interspersed with oat and alfalfa fields, and numerous sloughs and uncultivated patches provided a great diversity. Looking at an area in Winnebago County where wildlife researchers have studied pheasants since the 1930's, we see a pronounced relationship between pheasant numbers and percentage of land in rowcrops. This can best be demonstrated graphically in the figures included. Diversity was the key to pheasant abundance. Note the interspersion of winter windbreaks or farm groves, cattail sloughs, corn, oats, alfalfa fields and fence rows in 1941 when pheasant populations were very high. As row crops captured larger percentages of land, fence rows disappeared, sloughs were drained, and oat and alfalfa acreages decreased, as did the number of pheasants. In contrast to the 1940's, look at the same land today (as of 1976). Even the durable, adaptable pheasant is hard-pressed to exist in a cold, harsh land with almost no nesting or winter cover.

Gray partridge, on the other hand, did not prosper as well in the years just following their stocking, but they survived in limited numbers in north-central and northwest Iowa. The "Hun" has an interesting quirk to his story because as diversity of agriculture decreased and the pheasant population declined in the 1960's, the partridge increased. It has continued to expand its range to the present day where huntable populations exist as far south as central Iowa. The Hun is still expanding its range eastward and southward. The Hun is able to withstand the rigors of hard winters, and does not require protective cover from blizzards as do

also pushed to the brink of extinction.

People and an emerging giant agricultural system greatly changed the Iowa the first settlers had known. By 1900, the conquest brought forth by the pioneer spirit was in its final stage. Most of the prairie land had vanished, and many wetlands were drained. Waterfowl and shorebird numbers that were once uncountable were significantly reduced. In fact, the giant Canada goose that once nested throughout the marsh country of northern Iowa and provided early settlers with food and down for bedding, was totally gone from the wild. Wild turkeys had vanished. Deer and beaver were almost extinct.

The prairie chicken is a prime example of a wildlife species' response to

pheasants. They have adapted to this changed scene and are doing quite well. What the future holds for the gray partridge is still speculative, but I wouldn't bet against him.

The Age Of Wildlife Management

The early 1900's signaled an end to the market hunting days and opened a new era for wildlife. Not only were wildlife populations changing, but people's attitudes were changing also. They wanted to restore wildlife and develop programs to manage for their well-being. Thus, fish and game departments were established as were seasons and bag limits to protect dwindling wildlife resources. In 1874, the first efforts were directed at law enforcement to curb illegal taking of fish and wildlife. Additional programs came along later which were aimed at managing these resources through professional biologists. Trained scientists put their all into the work of protecting and enhancing wildlife populations while allowing for reasonable recreational harvest by the public.

The Iowa Conservation Commission as we know it today was officially established in 1935. That agency designed a plan of action to preserve and enhance wildlife and the first on their list of priorities was to save a portion of Iowa's rapidly disappearing wetlands. A major wetland acquisition program was initiated in the late 1930's, and has continued to be active until present. Waterfowl were reeling from dust-bowl days and heavy gunning, but commission endeavors instilled a confidence among Iowans in the future of waterfowling.

We have lost 95 percent of our marshes to drainage, but the conservation commission has protected about 55,000 acres of natural wetlands. Refuges as well as managed hunting areas were designed to benefit waterfowl and other wetland species. The wood duck and giant Canada goose are two examples of success through management.

Wood ducks were once near extinction; however, waterfowl managers became alarmed about the serious status of the wood duck and put forth a special management effort. They closed hunting seasons and developed nesting box programs to provide nesting cavities for breeding wood ducks. At the same time, they strived to protect bottomland hardwoods. These efforts, along with strong law enforcement, allowed the wood duck to return in abundance. The woody now ranks as the second most

common species in the duck harvest in the Mississippi Flyway. This is a good example of how sincere management efforts can restore a species as long as vital habitat is available.

Wild giant Canada geese became extinct in Iowa during the early 1900's. In 1962, a researcher from the Illinois Natural History Survey named Harold Hanson identified some of these large birds wintering at Rochester, Minnesota. Additional research showed these birds to be nesting in southern Manitoba, Canada. Upon further study, it was found that descendants of these giant geese were present in captive flocks owned by a couple of Iowa farm families. These early aviculturists unknowingly protected and propagated this species and aided in the recovery efforts. Birds were purchased from these farmers and reestablished back into the wild in Emmet County in 1964. This program has grown during recent years until present breeding populations are estimated at above 5,000 birds. This was only accomplished by diligent management with the support of farmers and sportsmen. Even with the destruction of most of our wetlands, we have managed to bring back an important component of our heritage for people to observe and pursue for recreational benefits.

Other successes that have been achieved in the face of a changing scene are deer, wild turkey and beaver. Deer and beaver were once thought to have vanished from Iowa. Through proper management and protection they have not only made a comeback, but are in some cases so numerous as to cause real

damage to agricultural crops. Beaver, for example, are now inhabiting all major streams and have moved into most small feeder streams and creeks. Serious damage is caused each year by beavers cutting down desirable trees or damming up streams and creeks which flood cropfields.

Early programs to reestablish good deer numbers were thought to be "pipedreams" and some people did not believe they would ever again see hunting seasons for deer. In 1953, Iowa opened its first limited season and today, we have the highest deer population since the turn of the century. The 1982 deer season set a record harvest with just over 26,000 animals being taken by sportsmen. While year-round hunting and habitat destruction caused the deer population to decline to almost zero, sound management programs and adaptiveness on the part of the deer have returned them to a valuable part of Iowa's wildlife.

Probably the biggest success story is that of the eastern wild turkey. The last documented account of a wild turkey being shot in Iowa was in Lucas County in 1907. Uncontrolled hunting and timber clearing were the major factors which lead to their elimination. Most people "knew" they would never see wild turkeys again in Iowa.

Wildlife biologists in the late 1950's and early 1960's believed that large blocks of unbroken timber in the nature of 10,000 acres were required for turkeys to thrive. These areas are nonexistent in Iowa. Only about 1.5 million acres of forest remain in fragmented parcels representing about one-third of



the forest land that existed prior to settlement.

Turkeys wild-trapped in Missouri were stocked in southeast Iowa in 1966. This was the beginning of a very successful reintroduction program. Other stockings of wild-trapped birds from Missouri followed this 1966 stocking. Turkeys showed us that large blocks of timber were not required as long as ample protection was allowed. They adapted quite well to Iowa's blotched pattern of timber, pasture, and cropland. They did so well, in fact, that the first hunting season was initiated in 1974. Since that first season of 450 permits and about 113 birds being harvested, we have seen turkey populations expand to where 7,695 Iowa hunters harvested 1,729 turkeys in the spring of 1983. This shows how good scientific management and adaptiveness on the part of the wild turkey came together to make one of our most spectacular modern success stories in wildlife management.

These examples of wildlife species that made tremendous comebacks are only possible because quality habitat was available to allow an animal with adaptive capabilities the opportunity to respond. Landowners who have protected their woodlands played a major part in this successful restoration effort. In all of these cases, overharvest caused by unregulated hunting and trapping played a hand in their original demise. Without the dedicated efforts of good conservation officers, these wildlife species would not have made these population advances and Iowans would not have the viewing and hunting recreations they presently enjoy.

Today, Iowa continues to change. While it is true that altering habitat may simply benefit one species at the expense of another, the continuing loss of diversity in the Iowa landscape casts a grim shadow on the future of wildlife as we know it.

There is a bright ray of hope on an otherwise ominous horizon. The same soil that fed native Americans, fueled the pioneer spirit and created an incomparable capacity for agricultural production has nurtured a growing ethic for conservation. This concern among Iowans is reflected in positive, practical programs such as the "slough bill," the Natural Areas Inventory and the "chickadee checkoff" which will have a lasting effect on Iowa's wildlife. These programs may reflect the dawning of a new era of concern for our wildlife heritage. Certainly, much is needed.

Our declining timber resource and the species that depend on it need immediate attention. Land acquisition is costly, but may be necessary to protect critical habitat parcels. On a broader scale, however, direct payment incentives and tax benefits to provide landowners who wisely manage their woodlands (the forest preservation category of the slough bill is a good example) are more practical than taking all timberland out of private hands.

While most of the remaining major wetlands in Iowa are already in public ownership, many smaller marshes, backwaters and oxbows are not. Many water-oriented species depend on these wetlands, and these areas should either be acquired or protected through financial incentives. In a few cases, wetland areas might even be developed or restored through voluntary funding (such as the "chickadee checkoff" on state tax forms) or from increased license fee revenue.

Perhaps the most significant contribution to upland wildlife in this state would result from a long-range farm program aimed at protecting marginal land. Based on soil conservation and wise land use, a stable agricultural program should be implemented which would provide financial incentives to landowners to keep land that should not be farmed out of production. While this land would no longer contribute to serious overproduction problems facing farmers, it would produce a bountiful "crop" of wildlife now and in the future.

If wildlife is to survive, the diverse Iowa landscape must not be completely altered. Destruction of habitat is no longer the fear of an eccentric few. There now exists a great desire among many Iowans to hear birds sing in the backyard, to witness the spectacle of migrating geese and to know the thrill of seeing deer grazing in the evening near the timber's edge.



Ron Johnson

FIELD TRIAL at Red Rock

By Charles R. Baumhover

Charles Baumhover is originally from Dubuque. He currently lives in Des Moines and is an agent with Bankers Life Insurance Company.

On October 1st and 2nd, 1983 the Iowa Brittany Club held their fall field trial at the Red Rock game management area some six miles south of Prairie City. It was a hot weekend with temperatures running in the 80's. It was hard on the dogs, horses and handlers.

Eighty-eight dogs had been entered in this American Kennel Club (AKC) licensed trial. As in all trials, entries were submitted in advance and a drawing was held to determine what order each dog would run. There were five scheduled events, each demanding a varying degree of performance depending on the dog's age and expertise. Each event covered a predetermined course. By rule, each dog was handled by either the owner or a hired professional.

At field trials, the handler is often on horseback, followed by two judges and a field trial marshal, also on horseback. The handler may go on foot which may prove exciting, especially when followed closely by several horses on a rainy, muddy day. Most entry fees run about \$20 per dog which is used to cover costs of trophies, ribbons and expenses for officials who often must travel some distance. The sponsoring club usually must subsidize the cost of the trial.

All dogs running in licensed field trials must be either AKC registered or eligible for registration. The objective of the trial is to maintain and improve good hunting characteristics in a dog. So, a minimum .32 caliber blank pistol must be fired over the dog's head while pointing a bird to prove the dog is not gun shy. (Incidentally, no dog is born gun shy. The pup should be introduced to the cap pistol from a respectable distance at about ten weeks. The pup will soon begin to show excitement at the sound of the gun if this is combined with the show of some feathers. The first real hunt is under controlled conditions, without having multiple shots fired from two or more guns when the first covey of quail flushes.)

The Brittany trial at Red Rock was open in the *gun dog stakes* to other breeds, however none were entered. Of

the eighty-eight dogs preregistered, eighty of them went on to compete.

In the *puppy class*, the judges agreed that they were looking for raw desire to hunt. The *derby class* combined desire along with a display of some intelligence in the selectivity of the hunting area. Both of these events covered a twenty-minute course.

The Brittany people were looking for a good personal hunting dog in the *gun stakes*. Both in *open gun dog* and *amateur stakes* they wanted a dog that was firm on point, had good range, knew how to check the cover and also was smart enough to keep in touch with the hunter through the course. In addition the dog must be steady to shot and wing meaning it must hold after the bird is flushed and the shot is fired, not breaking for a retrieve until given the command. The Brittany people had a sixteen minute back course with four minutes in the bird field where quail were planted to test the dog's ability to find and point. Only blank cartridges were fired on flush. The difference between *open gun dog* and *amateur* is that professionals may enter *open gun*, *amateur* is closed to professionals.

An *all age* dog should show an intense desire to hunt with a wide ranging pattern, intelligence in selection of area hunted and a logical development of a hunting pattern. This should be done with physical stamina that enables the dog to hunt without rest or break while exerting great speed to cover a large area when under judgment. While an *all age* dog should hunt for itself, it should still display good manners, be a firm pointer, steady to shot and wing and a good retriever.

Most people would not prefer this type of dog for a personal hunting dog but would use it primarily for breeding stock.

The ultimate honor of field trialing is to make your dog a champion. To do so requires a total of ten points from AKC licensed trials with a minimum of three first places. Only first place dogs receive points. *Puppy* and *derby class* winners earn two points for each stake. Other events earn from three to four points each, depending on the size of the field of competition.

It is easy to invest upwards of \$2,000 in making a dog a field champion. Chances of profit are slim. Yet, without field trials the hunting dog would most certainly fade into mediocrity.

The first place winners of the Red Rock event are as follows:

Open Gun Dog — with 24 entries, was won by Buster's Shining Pal owned by Don Nelson of Sioux City and handled by Jim Hoyer.

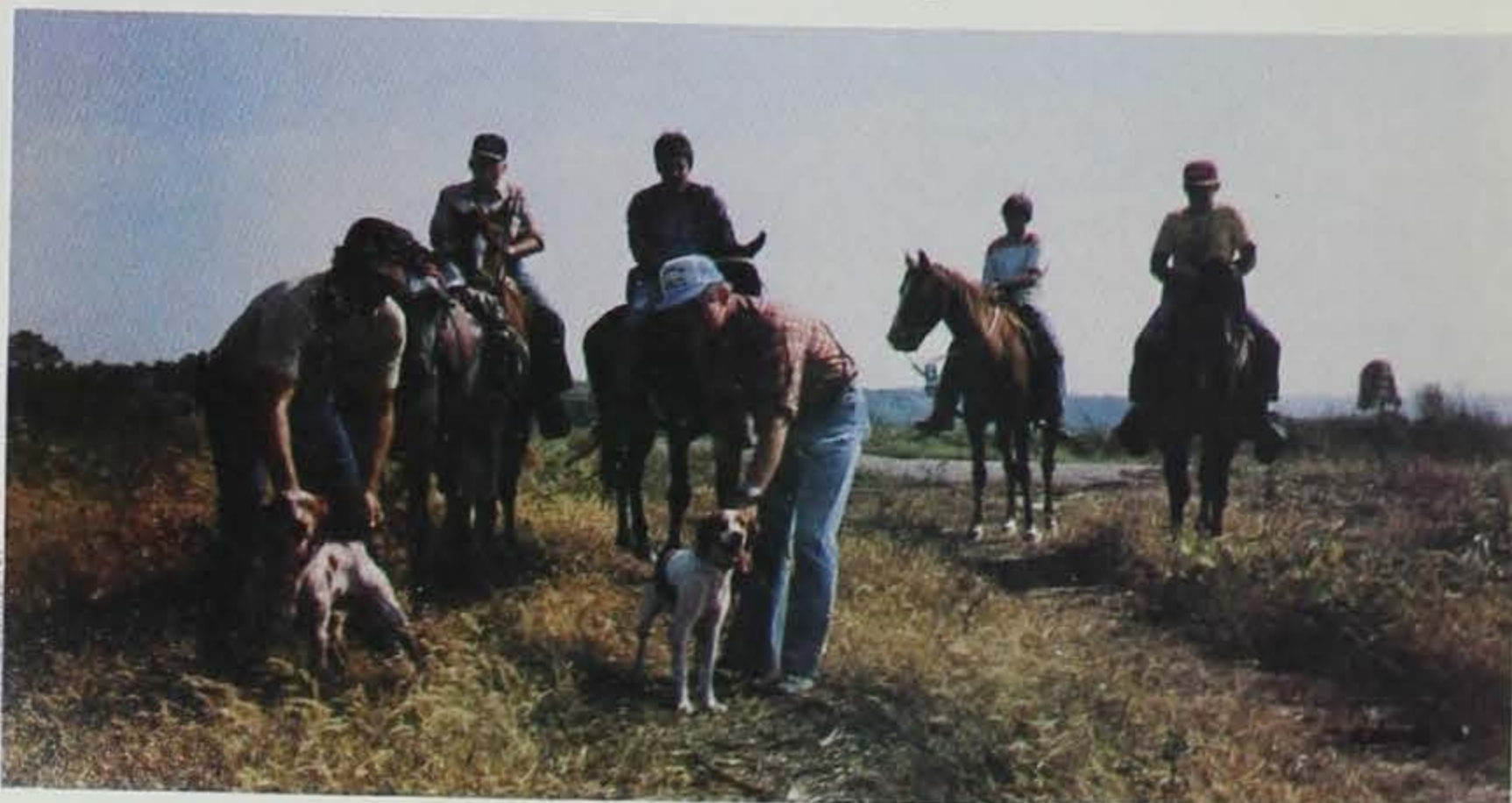
Amateur Gun Dog — with 17 entries, was won by Cutty Sark V owned and handled by Dean Haley of Liberty, Ill.

Open Puppy — with 11 entries, was won by Willies Bosco Float owned and handled by Lowell Williams of Kansas City, Mo.

Open All Age — with 24 entries, was won by First Place Jake owned by Ron Curtis of Omaha and handled by J. K. Fields.

Open Derby — with 12 entries, was won by Lightning Strikes Twice owned by Joan Warschfski of Belle Meade, N. J. and handled by Lloyd Budd.

May we all enjoy a good hunting season.



Charles R. Baumhover



Ken Formanek

WARDEN'S DIARY

The World of The Marsh

By Jerry Hoilien

Have you ever been way out in the marsh just as the gray steaks in the eastern sky begin to hint of the new day? Slowly the darkness changes to semi-light and as it does, the small waking sounds begin.

A green-winged teal squeaks a sharp little call, as a wood duck squeals

"woody-woody" back in the trees. A great horned owl booms out his "who-who-who-aaaa" and wakes up the rest of the marsh creatures. Suddenly you're surrounded by millions of croaks, whistles, creaks and hoots. As pink lines appear in the sky, wings whistle overhead and you can just

make out a flight of ducks buzzing past. The air is crisp and clear and it's great to feel and hear the marsh again.

What would we do without waterfowl? Their magnificent flight or the cupping of wings in answer to a sweet sounding call over a decoy spread. I've watched them for more years than I care to count now, and can still feel the hair raise on the back of my neck when I catch sight of them. I wish everyone could witness that special thrill - it's a wonderful, invigorating feeling.

Cold fingers or feet vanish immediately as your heart beats faster with the sight of incoming ducks. What is this thing I can't describe between man and waterfowl? That strange fulfilling kinship that wraps around you like a warm glow, fills your chest with a feeling like the sight of home. It's a feeling of belonging here. Knowing it, really knowing it, is to love it. Not to tolerate it just to take home a duck, but to become a part of it where survival is indeed a necessary ingredient of the wild. After all, that's why the Good Lord created the wild things... for us... to wisely use and enjoy.

I'm saddened when I think of all the millions who will never have this opportunity — this blessing — this special feeling for the marsh, the birds and their world.

Come to the marsh at any time of year to look and listen. You don't have to come as a hunter. Hunting's not for everyone, but for some it is a beginning.

I remember writing on the back of a gift for a dear friend, one of the finest men to walk out-of-doors, who was retiring after 30 years as a Wisconsin game warden.

*At first there are the
"BEGINNERS"
Who with time become...
"DUCK SHOOTERS"
Who with practice and effort
become...
"DUCK HUNTERS"
Who with time and patience
become...
"SPORTSMEN"
Who, but a few, with respect and
grace become...
"WATERFOWLERS"
Such as Bill Hiebing.*

Come to the marsh and learn. Open your eyes, ears and heart, and just maybe you'll catch it — I hope you do. If so... welcome to my world.



Dean Roosa



Ken Formanek



Dean Roosa

PLANT TALE OF THE MONTH THE PRAIRIE YEAR

By Dean M. Roosa and Mary Jean Huston

SPRING COMES TO THE PRAIRIE

Prairie fires fill the air with a scent vaguely familiar to all
The relentless wind cannot be stilled
Incessant birdsong accompany the earliest wildflowers
The prairie, with nine millinea of practice, is renewing itself.

SUMMER COMES TO THE PRAIRIE

The blazing star, the prairie clover, undaunted by the heat,
are in their glory
The heat, the unseen chiggers, the beauty, are nearly
unbearable
The sun, so bright, so hot, is relentless
To the prairie visitor, it seems the summer may never end.

AUTUMN ARRIVES

The sky is clear, blue and friendly
The gentians reflect the deepest hues of the sunset sky
The goldenrods reflect the bright hues of the sunrise
The birdsong has quieted and silence descends
Big bluestem holds sway
And the solitary prairie visitor finds solitude.

AUTUMN DISAPPEARS

The first snowflake stings the face of the last prairie visitor
With an equanimity forged by thousands of winters, the
prairie lies dormant
The prairie animals are sleeping
The bone-chilling cold preserves the solitude
All is well on the prairie.