

STATE TRAVELING

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Jim Sherman Photo.

Winter's snows and a good hunting dog aid in bringing the "wary and wise" late season hold out.

IT'S NEVER TOO LATE

Eugene D. Klomlan
Asst. Supt. of Biology

By this time of the year, with only about three weeks of the pheasant season left, many a hunter is no doubt convinced there isn't a pheasant rooster remaining to be found anywhere. And based on my own late season hunting experience of recent years, I can certainly muster up some sympathy for this viewpoint. However, the truth of the matter is that it would be far more accurate to say that less than two-thirds of the gaudy cocks have been shot by early December—in some parts of the state not much over one-half. The big problem to the hunter lies in finding that third to half of the roosters still in hiding.

And hide they can! A couple of the best examples of how well they can tuck those long tail feathers out of your sight can be cited from two areas where intensive year-round studies of the ringneck are carried on by the Commission's pheasant biologists. During the last week of the season a year ago, three experienced hunters with a good

dog spent a full day combing the cover on about a section of land in southern Adair County—an area that has been a prime "hot-spot" for pheasant hunting in recent years. Pre-season surveys had shown a high population, and early season hunting in that vicinity had been very good. But on that late date, only seven cocks could be found by this particular party. All three hunters were ready to swear that if any area of the state had been "shot out" this was the place. Yet special counts made in February and March, right after snowstorms bunched the birds, revealed over 20 roosters per section still present right around the area hunted. And more surprising still, on the spring crowing survey 59 cock calls were heard in two minutes at a spot in the road almost in the center of the hunted area! This would translate to about 25 cocks per section. I could hardly believe my ears—for I was one of the party of three hunters as well as the man making the crowing count!

The other example took place a year earlier on an area in far north

(Continued on page 94)

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CIRCULATION THIS ISSUE 54,743

COMMISSION MINUTES

November 2, 1965
Des Moines, Iowa

FISH AND GAME

Approval was given to exercise three options for fishing access on the Raccoon River in Greene County for 32 acres at a total cost of \$2,240.00; 11 acres for a cost of \$770.00; and 100 acres at a total cost of \$7,000.00.

A proposal to trade land with the Izaak Walton League at Dudgeon Lake in Benton County was deferred.

Approval was given for the construction of a service building at the Boone Research Station for the total cost of \$5,000.00.

LANDS AND WATERS

Approval was given for a contract to the Focht Construction Company of Red Oak for roadways and parking areas at Lake Anita in Cass County at a total cost of \$57,346.27. Schildberg Construction Company of Greenfield was awarded the contract for surfacing the roadways and parking areas at a cost of \$26,226.25.

Approval was given to exercise an option on 80 acres at a total cost of \$9,500.00 adjacent to Pikes Peak State Park in Allamakee County.

The Superintendent of Land Acquisition gave a report on the possible cost of options in the vicinity of Swan Lake in Carroll County.

The Superintendent of Waters proposed various guide lines for the inspection of inflatable crafts on artificial lakes which were approved.

Approval was given to exercise an option on 14 acres for \$15,000.00 adjacent to Beeds Lake.

The Commission voted to return a small tract of land, now under license from the Army Engineers, so that this tract could be transferred to Sabula for use in constructing a sewer plant.

The Staff was instructed to investigate the possibility of purchasing a small tract of land located in the Sheaffer Pen Com-

pany parking lot which was originally used as a fort in 1804.

Approval was given for the National Guard to hold maneuvers in the Tyson Bend area of the Missouri River.

The Commission met with George West, Attorney of Des Moines, concerning a construction permit for a lagoon at Black Hawk Lake.

The Commission instructed the Staff to formulate a set of stipulations and conditions to be met by persons requesting construction permits for lagoon construction.

COUNTY CONSERVATION ACTIVITIES

O'Brien County received approval for the acquisition of .86 acres of land by a renewable 10-year lease at a cost of \$1.00 per year for the development of a Highway Safety Rest Area and picnic area eight miles southeast of Primghar called Covey Church Park.

Union County received approval for the acquisition of 18 acres of land at a total cost of \$825.00 for the purpose of preserving an excellent stand of native hardwood timber and developing an outdoor recreational area to serve the traveling public on Highway 34 and 169.

Winneshiek County received approval for the acquisition of 29.00 acres under a sponsoring agreement with the Iowa State Highway Commission to enlarge the county sponsored Highway Safety Rest Area adjacent to U. S. Highway 52, which will provide additional scenic overlooks on the Upper Iowa River and other facilities.

Polk County received approval for the acquisition of 45.2 acres of land at a total cost of \$11,500.00 eight miles northeast of downtown Des Moines for the establishment of a county forest preserve.

Polk County received approval for the acquisition of 6.11 acres of land at a total cost of \$3,000.00 as an addition to the proposed county-owned Saylor Recreation Area four miles north of downtown Des Moines.

Cedar County received approval for a revision to the Massillon Park Development Plan which would include an additional shelter.

Winneshiek County received approval for a development plan for the 75 acre Highway 52 Safety Rest Area to include scenic overlooks, picnic areas, boat launching and fishing.

Adair County received approval for a development plan for Mormon Trail Park which will include the 30 acre artificial lake surrounded by recreational developments including picnicking, camping, hiking, nature study, trap shooting, archery, group camping, boat launching, fishing and swimming.

Approval was given for a management agreement for Black Hawk County Conservation Board

Conservation Forum

Dear Sir:

This is the 100th dollar I have spent with you for my tenth Deer License. I have missed getting my deer a few times, but have had my share and have enjoyed it very much. I will be 80 years young next Feb. 7, and if possible, I hope to get my license another time or two. So if I can walk, I will be sending you a check next year. I want to compliment your outfit for a job I think has been very well done.

Respectfully,

W. W. A.

Burlington, Iowa



Mustela frenata

Dear Sir:

The picture of this weasel was taken with a 35 mm. on my farm along the dredge (ditch). The weasel made his home in a cottonwood tree trunk. I coaxed the weasel up in front with a weed before taking this snap in February of 1965.

H. H.

Fenton, Iowa

Dear Sir:

Could you please advise me whether a license is required to raise pheasants and quail for sale to individuals or restaurants? I was thinking of raising some much as one would chickens for retail sale purposes.

Sincerely,

E. B.

Norwalk, Iowa

To raise or hold in captivity any game bird or game animal in Iowa a game breeder's license is required. A copy of the game breeder's laws may be obtained from the Superintendent of Law Enforcement, State Conservation Commission, East 7th and court.—Editor.

Dear Sir:

Can a person that does not have a deer license, and is not carrying a gun, accompany another person that has his deer license?

Yours Truly

A. D.

Harlan, Iowa

It would depend on the unlicensed person's intent—if he is walking alongside or immediately behind the licensed hunter and only observing the hunt in progress, he would not be required to have a license. In other words, he cannot be of ANY aid in the hunt in ANY way; he can only observe the hunt. This is based on section 109.1 of the Iowa code.—Editor

of Supervisors for care and maintenance of the Husman Rifles Access in Black Hawk County.

GENERAL

Travel was approved to the Midwest Wildlife Conference and Wood Duck Symposium at Lansing, Michigan; the U. S. Forest Service Region 9 Annual State Foresters Meeting at Milwaukee; the Bureau of Outdoor Recreation Meeting at Ann Arbor, Michigan; a Travel Authority for Researching Material Concerning Missouri River Land Disputes as requested by the State Attorney General for Jerry Jauron.

The Staff was directed to negotiate with the city of Guttenberg concerning a proposed development of the Bussey Lake area in that city.

A report was given by the Superintendent of Waters concerning the water level at Tuttle Lake in Emmet County and the Commission requested that a commit-

tee be set up to meet with Minnesota Officials to discuss problems concerning this water level.

An offer by Halane Farms to purchase land in the Keokuk Lake area adjacent to Muscatine was referred to the Attorney General's Office for advice as to the possibility of sale of this land.

The Superintendent of Public Relations was directed to set up guide lines for the replacement of films used by field personnel.

The Director was instructed to negotiate concerning the hiring of Larry Hart to aid in settlement of land titles on the Missouri River.

The Commission discussed the purchase of uniforms for field personnel.

Informational items included a progress report by the Planning Section, while the Fisheries Section gave a report on the construction of fishing jettys on artificial lakes.

TREE ORDERS BEING ACCEPTED

John Stokes
State Forester

Orders for trees and shrubs to be planted this spring will be accepted beginning January 1, 1966, by the State Conservation Commission. The hardwood and conifer seedlings plus wildlife shrub plants will be shipped or can be picked up from the Forest Nursery at Ames, Iowa, sometime between the latter part of March and early May.

The conifer seedlings, including the various species of pines, are usually the most popular with Iowa landowners. A table, included in this issue, shows the seedlings available, cost and ordering procedure. Landowners in a county can pick up their trees in one lot to insure fresh trees to plant. If landowners do not wish to pick the trees up at the nursery, they will be shipped to the purchaser collect. Shipment will be made by the available commercial carrier assuring the quickest possible delivery of the nursery stocks to the purchaser.

By studying existing plantations, foresters have indications of which pine trees will do the best in certain soil types and conditions. The Conservation Commission has 10 District Foresters located at Adel, Chariton, Marshalltown, Anamosa, Fairfield, Muscatine, Le Mars, Charles City, Red Oak and Elkader who assist landowners in choosing species to plant and other timber management problems. The foresters also assist landowners in signing up under the County ASC Program. The tree planting practice, A-7, under this program assists landowners by paying part of the cost involved in clearing for tree planting, land preparation, the actual planting and fencing where needed. Additional information may be obtained from your County ASC Office, District Forester, or other Commission Employees.

Trees for sale from the State Forest Nursery are to be used for forest land and game area plantings. The trees cannot be used for ornamental, shade or other landscape purposes and may be used for windbreaks only when the area planted will be at least 200 feet in width and 300 feet in length. A new practice under the ASC program, G-4, allows the landowners to plant game shrubs to provide low cover plants in existing windbreaks. The shrubs used under this Federal



A common sight each spring at the State Forest Nursery.

Jim Sherman Photo.

Cost-Sharing practice, however, must be purchased from a commercial nursery. Trees grown by the State and shipped from the State Forest Nursery cannot be used.

Planting trees as recommended by Commission Foresters means a return to production of idle submarginal farm land, isolated areas and hillside that erode easily and other lands where trees provide the most desirable type of vegetative cover. The trees will provide many benefits including erosion control, financial return, wildlife cover and aesthetic values which bring the greatest satisfaction to many landowners.

Observation and Awareness Spell Knowledge

Jack Higgins

If there is one most important fact revealed in the process of solving each problem in conservation, it's the sad fact that if more citizens had been educated to be aware of their environment in the first place, the problem would either never have been created, or at the most would have been minimal in scope. And when one realizes that a basic education in conservation consists mainly in the development of an ever-present awareness of the world around us, the presence of these problems becomes even more frustrating.

Unlike the expensive equipment necessary for the teaching of some of the other sciences, industrial arts, business, or even homemaking, conservation education needs little more than space outdoors. Some problems can be observed just outside the school house doors. And thanks to teachers and students who have gone out of the classroom and onto school yards, many schools have ceased being "eyesores" and become spots of local pride—and with no extra cost for landscape architects, blacktop crews or what have you.

What is even more valuable, students have had the scabs of blight removed from their eyes. They have learned that the basic cause of "uglification" of America is the calm acceptance of what is daily viewed, yet not truly seen by the viewer. Furthermore, they have learned that such destruction of our legacy of beauty and natural resources doesn't have to be accepted; that through their awakening, a whole community can and will be re-vitalized and pushed into action.

Many school conservation programs that started in school yards grow and extend themselves throughout the school district. This is a logical and hoped for extension of any school conservation program. It may come about through the acquisition of land for a school forest, an outdoor classroom, or merely permission to study and observe nature on a near-by farm.

These kinds of areas lend themselves to the interest of students of all ages. The art of seeing, when implanted in the heart and mind of a kindergartener during the first study of an outdoor laboratory, will grow and expand as he progresses through the grades, junior and senior high school and on into his adult years—if the chance to do so is given to him.

This spirit of discovery will gradually become translated into an awareness of the social implications involved in conserving natural resources and beauty. Yet, such transformation can be achieved when the child not only discovers a conservation problem but decides to devote time and effort to the solution he devises. This simple explanation of the learning process serves to make one thing clear: discovery and solution cannot be made in a classroom, from a book, or from a

(Continued on page 95)

TREES AND SHRUBS AVAILABLE FOR FARM PLANTING STATE CONSERVATION COMMISSION

East Seventh and Court Avenue, Des Moines, Iowa 50309

SPECIES	AGE CLASS	PRICE FOR:			
		250	500	750	1,000
Austrian Pine	2-0	\$5.50	\$11.00	\$16.50	\$22.00
European Larch	2-0	5.50	11.00	16.50	22.00
Jack Pine	2-0	5.50	11.00	16.50	22.00
Ponderosa Pine	2-0	5.50	11.00	16.50	22.00
(Western half of Iowa only)					
Red Cedar	2-0	5.50	11.00	16.50	22.00
Red Pine	3-0	5.50	11.00	16.50	22.00
Virginia Pine	2-0	5.50	11.00	16.50	22.00
(Southern two tiers of counties only)					
White Pine	3-0	5.50	11.00	16.50	22.00
Multiflora Rose	1-0	5.00	10.00	15.00	20.00
Dogwood	1-0	4.00	8.00	12.00	16.00
Wild Grape	1-0	4.00	8.00	12.00	16.00
Honeysuckle	1-0	4.00	8.00	12.00	16.00
Ninebark	1-0	4.00	8.00	12.00	16.00
Green Ash	1-0	4.00	8.00	12.00	16.00
Walnut	1-0	4.50	9.00	13.50	18.00

(Seedlings only)

SPECIAL WILDLIFE PACKET 4.50

The wildlife packet contains 250 plants including 50 evergreens, 50 honeysuckle, 25 Russian olive, 25 wild grape, 25 multiflora rose and 75 other plants beneficial to wildlife. Illustrative suggestions for odd areas and farm pond plantings will be furnished with each packet.

SPECIAL NOTICE

- (1) The nursery reserves the right to substitute species of a suitable type if a shortage occurs.
- (2) **PAYMENT FOR NURSERY STOCK MUST ACCOMPANY ORDER.**
- (3) Nursery stock must be ordered in multiples of 250 and each order must total at least 500 plants. The wildlife packet may be ordered singly.
- (4) All trees and shrubs will be sent to the purchaser COLLECT, unless the purchaser specifies the order is to be picked up. Shipments will be made by the available commercial carrier assuring the quickest possible delivery of nursery stock to the purchaser.

TREES PER ACRE AT DIFFERENT SPACING

5' x 5'—1,742	5' x 6'—1,452
6' x 6'—1,210	6' x 7'—1,037
7' x 7'— 889	8' x 8'— 681



Are we killing more than bugs?

PROFITS AND PESTICIDES

Ernest Swift

National Wildlife Federation

The dangers attendant to pioneering and fighting Indians are now long past, but civilization has a propensity to create new and complex hazards which, if not so spectacular, are far more insidious and deadly. The battle over the use of insecticides, rodenticides and herbicides is really just in its infancy. And more power to SILENT SPRING!

At first the issue was principally over the decline of bird life where poison sprays had been used, and the poison makers and their henchmen asked with fine sarcasm: "Which is the more important, our great civilized complex and its people, or a few dicky birds?" This question is supposed to be unanswerable, and to create an aura around wildlife lovers synonymous to the lunatic fringe.

But now and then there have been documented cases of people

dying from the same poisons that killed birds, hogs and cattle. Furthermore, without strict controls, it is not beyond the realm of possibility for an environment to become saturated with poisons that it could mean the slow destruction of all life.

We now read of professors from the same universities testifying on opposite sides of the question before legislative committees. One group testified that DDT has been found in most of the common fishes, in gulls, eagles, osprey, whales and even in the antarctic penguin. Fish off the west shore of Lake Michigan have proved inedible because of the saturation of DDT, or so the testimony went. Crops have been shown to absorb DDT.

Then there were professors testifying on behalf of the chemical and agricultural interests, and who insist—so far as I could make out from their statements—on almost unrestricted use of poisons until further studies have been made. More study and research can be likened to a pole with a street

light atop; it can be used for illumination, or simply something one of the oldest of dodges in the handling of public issues. A study can go on into infinity without conclusion or any action being taken. People who demand action are forced to fight straw men until the study is concluded, and it is seldom concluded.

In the hearings I have in mind, any restrictive laws pertaining to the use of poisons in agriculture were attacked because other states would be less restrictive, and that would all add up to unfair competition. What an argument!

They also scare us with the bug-a-boo that there won't be enough food to go around. If at some future time they can manage to poison enough people, there will be plenty of food to go around; and, as of now, surpluses continue to increase because of price supports.

It would seem that they "protesteth too loud." The almighty appeal to the pocketbook, regardless of consequences, is the most cold-blooded, cynical and cut-throat argument that can be advanced. I sometimes wonder if some of these public pedagogues are under retainer grants from the makers of chemical poisons! When such a vast array of lethal poisons are being placed on the market with gilt-edged sales talks, the burden of proof should be strictly with the manufacturers. Such products should not be foisted onto a gullible public unless first tested by scientists who have some faint regard for humanity and living things in general.

I have no formal background in the science of poisons, and before anyone else says it, I can but assume that I am classified as an ignorant meddler. But I can read, even some of the \$10 words, and what I read has been from two opposing camps headed by Ph.D.'s.

I do, however, have a very personal and prejudiced interest in one poison—2-4-D. I purchased some fertilizer late last spring

which was supposedly nontoxic. I was in powder form, like flour, and in spreading it on a windy day inhaled some of it and got it on my hands and clothes.

Some thirty minutes later began to develop pains in my chest. The following day these pains were almost unbearable. I ended up in the hospital with what was diagnosed as pneumonia, plus the fact that the mucus around the lung cavity had dried up. By this time the formula on the container had been broken down and my nontoxic fertilizer contained 2-4-D. Later on I was informed that the nerves around the chest cavity had evidently been affected as the pain continued to be extremely severe.

And so for well over three months I have been taking medication and shots, and at times suffered the pains of the damned—and lived from day to day like an old model T wheezing along on two cylinders.

Oh, yes, the container of this product, put out by a nationally-known company, said in fine print like an insurance policy, not to get the contents on the hands or on the clothes, and not to let it seep into water where cattle could get at it. I have been informed that it will kill cattle if it gets into their drinking water.

No, I'm no Ph.D., but I wish that some of them who advocate unrestricted use of poisons until more studies have been made had inhaled that weed killer instead of me. It would be interesting to find out how the scientific mind and the bodily agony of the poison would have come to a compromise.

A bird's feet are so constructed that the foot is forcibly closed when the leg is bent. Hence birds maintain a steady grip on limbs or perches even when asleep.

The jack rabbit is colored a brownish-tan in summer, turning gray in winter.



Should we permit the killing of sport fish?

Jack Kirstein Photo.

HABITAT RESTORATION

John Madson and Ed Kozicky

The most basic of modern game management methods—and the one that comes nearest to being a "cure-all" for dwindling wildlife—is game habitat restoration.

Game habitat is the complex of soil, water and plants, commonly called "cover", in which game birds and mammals exist. It is the "life range" that must include escape cover, winter cover, food and water, cover to rear young, and even cover to play. A lack of one or more of these cover requirements must be corrected if the habitat is to support game in harvestable numbers.

The condition of the soil and its plant covering determines the wildlife yield of any area. Although this concept has been extolled many times in the past quarter-century, it is not widely appreciated. To the average hunter, the bulldozing of a brushy fence-row will always lack the spectacular drama of a Cooper's hawk striking a covey of quail. However, the loss to the hawk is temporary; the loss to the bulldozer is permanent.

Generally, the increased habitat requirements of modern man have worked to decrease the available game habitat and the quantity of most American game species. Man has profoundly changed the types and distribution of game food and cover and has generally destroyed, created or shifted the tenable habitats of game species.

The classic example of this is the Missouri prairie chicken. Originally, much of northern Missouri was prime habitat for this grouse, but as the land was plowed and put to grain, the prairie habitat—and the prairie chicken—swiftly vanished. The birds disappeared first from the most fertile soils and then, with advancing land use, from many second-rate soils. Today's remnant prairie chicken population is found in the poorest parts of the original range and none of these grouse remains on the best Missouri soils, where they have been dispossessed by man.

Game habitat is dynamic. Cover conditions constantly change, and these changes influence the quantity and distribution of game. The most important of these changes is plant succession, as demonstrated by the evolution of a grassy field into brushland. Game management attempts to direct plant succession in the right direction at the right time and place. Planting, fencing and fire protection advance the plant succession; cow, axe, plow and fire reverse it.

The most important single tenet of game management is that if there is any breeding stock at all, the only thing that we can do to raise a game crop is to create a favorable habitat. Population pressure guarantees a rapid spread of game species to all accessible range—if that range fills the species' needs. For example, on Protection Island in Washington where eight pheasants—six hens and two cocks—were liberated in the spring of 1937, an inventory in the fall of 1941 revealed more than 1,500 pheasants.

There are several great deterrents to widespread habitat restoration on private lands:

1. Cost of initiation and maintenance of habitat.
2. Lack of immediate results.
3. Limited knowledge of habitat requirements of many game species.

The high cost of effective game habitat improvement usually discourages extensive private projects. Quail habitat projects on large southern plantations may result in fall population densities of one bird per acre, but the cost may be as much as \$50 per quail, and has been known to exceed \$1,500 for each quail harvested. This high initial price is only part of the expense, for plant succession inevitably takes place and maintenance is required to sustain a habitat type.

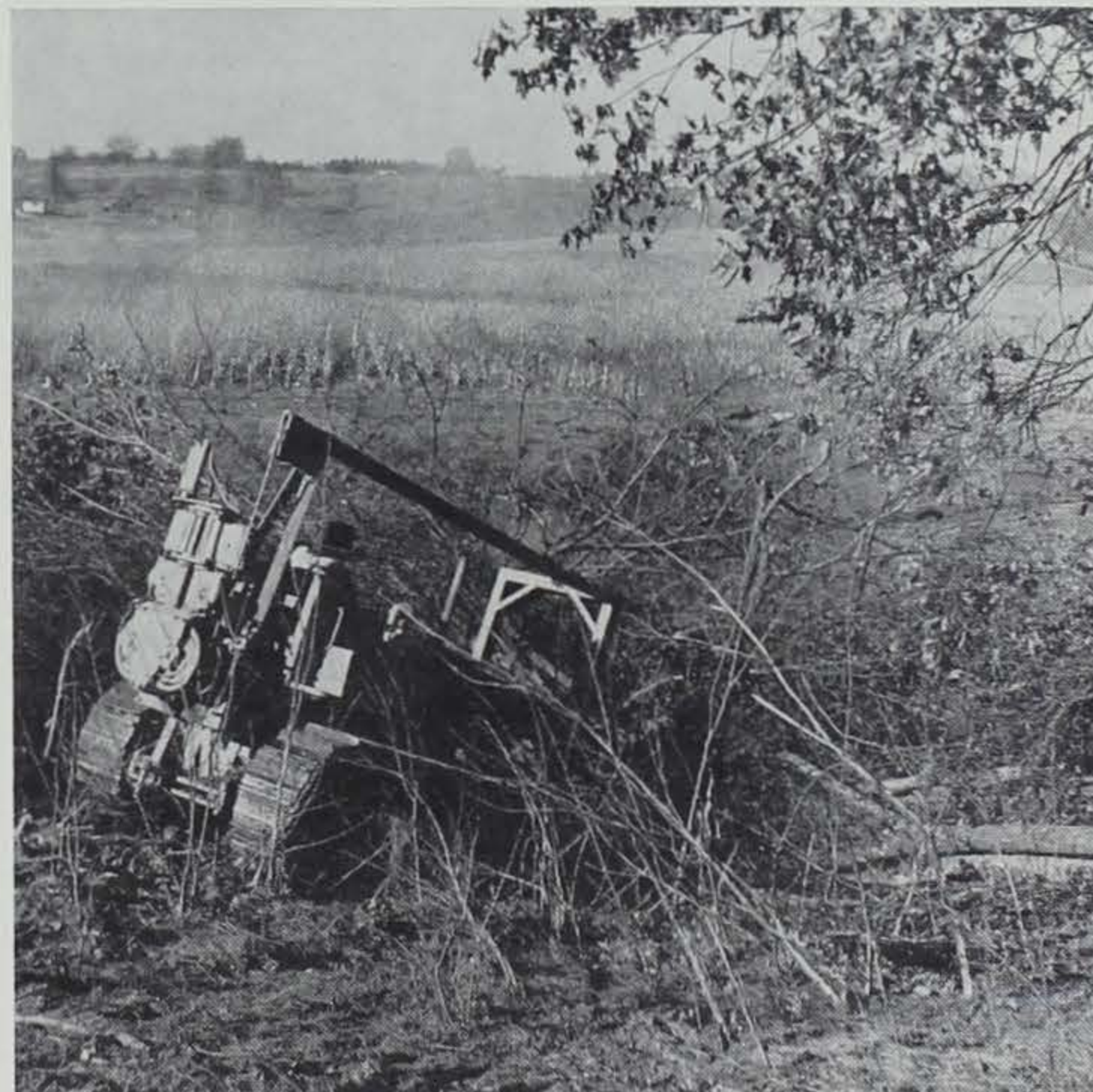
Habitat restoration programs may require five years or more to produce marked increases in local game supplies. In addition to this, game production may be curtailed by adverse weather conditions during spring and summer. And so, since it is an American trait to want immediate results, such short-run game management techniques as stocking and predator control are the most warmly embraced by the average sportsman.

But although habitat improvement is the most important single game management principle, we have much to learn of game physiology and



Jim Sherman Photos.

The condition of the soil and its plant covering determines the wild-life yield of any area.



Sadly, thousands of acres of cover are being bulldozed each year.

the social tolerances of wildlife. The more we know of the life history and habitat requirements of a game animal, the more efficiently we can manage this species. Much basic research on game and habitat requirements is still needed.

Game habitat restoration can never succeed on a broad scale if it conflicts with agricultural interests. If, however, habitat restoration is conducted concurrently with farm improvement programs, it can be an effective and economical way of increasing farm game supplies. A multiflora rose hedge, for example, is both wildlife cover and wind-break; such a living fence is a cheap way of confining cattle and providing wildlife a travel lane between a source of food and escape cover.

In short, the future supplies of farm game depend on the economical development of acceptable game management practices that are compatible with modern agriculture.—*Principles of Game Management, Part Five.*

The courtship display of the Ruddy Duck is a striking performance on the part of the male and he probably outdoes all other ducks in this respect.

The male coyote is a devoted husband. He brings his mate food when she is pregnant and works hard to feed and bring up their young.

IT'S NEVER TOO LATE—

(Continued from page 89)

central Iowa. This was the first "long" season in which hunting was allowed through the Christmas-New Year's holiday period. An early snow and cold spell with accompanying wind had put the birds into heavy cover about December 20. One particular section of the area on which year round pheasant population checks are made had four good farm windbreaks, two sloughs (since drained!), and a couple of heavily weeded fencerows (since cleared!). A party of three hunters and dog had no trouble bagging their limit of nine cocks. Over 100 birds were flushed and nearly a third were roosters. Yet on the last day of the season—just a week and a half later—a party of four with a good dog was able to flush only two cocks and five hens in exactly the same area. Obviously the birds didn't all just disappear within 10 days. However, the snow did—and that last day was sunny and mild (as was that day in southwest Iowa a year later). The birds simply scattered over the fields—even the plowed ones—and just refused to foolishly commit suicide on the last day of the season. Again, I was a party to both hunts and so can attest to the frustrations that so frequently occur in hunting—and in fact help make hunting the sport it is.

Most hunters have a pretty good idea of where and how to hunt early in the season. Since over three-fourths of the opening day pheasant population are young birds who have no inkling as to what is in store for them, bagging a bird then is relatively much easier. But as the season progresses, the crafty cocks get tougher and tougher to outsmart. It takes more "hunting" to find and flush these educated survivors of the early season warfare. They become unpredictable and adept at out-foxing even the most experienced hunters and dogs. This very ability, which activates the "law of diminishing returns" (meaning that hunting stops at the point where the hunter feels further effort is not worthwhile) is the best insurance policy our pheasants have. Never in the history of Iowa pheasant hunting have too many roosters been shot. In fact, quite a few more could have been harvested in most areas of the state and still have left plenty of roosters to serve as brood stock.

The Iowa hunter is lucky on two counts—that pheasants are polygamous (that is, one rooster will take care of many hens during the breeding season) and that the cocks are so easy to distinguish from the hens. This enables us to crop the surplus roosters to a relatively low level, and thus furnishes far more hunting opportunity than would otherwise be the case. Of such things are long seasons made.

A cardinal point to remember here is that this remains true regardless of whether we have a real good pheasant year or a mediocre one. As long as pheasant nests continue to turn out young cocks and hens in equal ratio, there will always be surplus males available for harvest. Some years there will be fewer than others—such as in northern Iowa this fall as an aftermath of the losses to the severe blizzards of last March. Protecting these roosters will, however, do absolutely nothing toward rebuilding such a population to former levels—the hen is the key to this!

In fact, preserving the roosters may even work in the opposite direction, particularly in areas with limited winter cover (another "key" to pheasant numbers) such as true of most of northern Iowa. Cocks compete with hens for available food and shelter in winter. In many northern Iowa areas (like the study area mentioned earlier), farm windbreaks are about all that is left to protect the birds from severe blizzards. If a particular windbreak and nearby fields with food (more of which are being plowed under in the fall with each passing year) can support only 30 pheasants, then the more cocks there are the fewer hens can be carried through the winter—and the hens are the ones that lay the eggs and raise the next year's crop of birds. So don't feel guilty about shooting those late season roosters, even in areas where the population is down from last year.

This brings us back to the question of how to go about hunting these "wary and wise" late season hold-outs. For one to try to predict just where the birds will be on some certain future occasion would be sheer folly. Normally, the habits of pheasants will vary according to the time of day, the weather on the particular day—or even the couple days previous, the extent of the crop harvest, and the amount of hunting pressure that has already been exerted on the area in question. The latter factor, especially, will have a considerable effect on the behavior of the birds. Where pressure has been heavy, the remaining cocks may just "throw away the rule book" and do things about the opposite of what you might expect.

However, following a few general suggestions should help increase one's chances of success. If the weather is mild and sunny, the birds will be well scattered and some real "leg work" will be in order if you are going to bag your birds. In fact, you should expect to do more walking in late season hunting than earlier. Not only are there fewer cocks left, but more of them are going to slip away sight unseen regardless of how you hunt them. And anyone figuring on driving around the country roads looking for an easy bird to bag late in the season



Summer or winter, edge cover teems with signs of life. Jim Sherman Photo.

will likely have slim pickings—especially in mild weather. Those roosters soon learn what is liable to happen to any of them foolish enough to stick his neck out in plain sight from the road!

Pheasants usually move out to feed in the morning, so picked cornfields that offer both food and cover offer a logical place to start. On mild days the birds often will remain in such fields all day. And if the field should be a little on the weedy side, a smart old cock may even roost out there all night rather than chancing a return to thicker patches of roosting cover where some late afternoon or early forenoon hunter might sneak in on him. So be sure to check thoroughly parts of the fields with grassy cover, and especially waterways or drowned-out areas that may have grown up to weeds.

Late in the year it often pays to look over some places you would never dream of wasting time on at the beginning of the season. Stubble fields or hayfields that at first glance appear incapable of hiding a pheasant may well harbor a couple crafty roosters within their bounds, particularly if close to cornfields. Even heavily grazed pastures that may have a few clumps of ungrazed weeds or hillocks of bluegrass in wetter portions can conceal a rooster who "wants to get away from it all."

Birds that are hard pressed enough will even take to the plowed fields. Surprisingly enough there is sometimes a little food that doesn't get turned under and there are plenty of furrows, depressions, and clods that a bird can hide behind until the first snows cover it all. It is amazing how well a crouched ringneck blends in with such "cover." However, it will be a hardy hunter indeed who is willing to undertake the torture of tramping over the uneven surface of a plowed field, par-

(Continued on page 96)



On cold, blustery days, pheasants bunch-up in heavy cover. Jim Sherman Photo.

IS NEVER TOO LATE—

(Continued from page 94)

ularly if the ground froze during the night and is then thawing licker than grease" in the sun.

Blustery, cold days are common late in the season. Pheasants don't like to be out on such days, especially if it is real windy, and they will usually seek heavier cover for protection. Larger weed patches, drainage ditches, sloughs, and road ditches are favorites at such times—again particularly if near unplowed cornfields. Birds tend to bunch up in this kind of cover under such conditions, so be prepared when that first bird takes the air—more may soon follow.

If there is snow on the ground, the odds tend to swing back a little towards the hunter—though he will still likely be holding the "short end of the stick." If the hunter can find the pheasants' tracks, he at least has a better chance of figuring out just what the birds are up to that day. If there are a lot of tracks in the heavier cover but no birds, better check those areas where the birds are likely to be feeding.

Check a couple cornfields first and don't find any "sign," better head for the heavier cover. Another advantage of snow cover is that it is a big aid in recovering downed birds that "took off like a grayhound"—particularly if you do not happen to have a dog. Also, you can sometimes spot birds out in the fields when there is snow on the ground. Binoculars are a big help here. However, remember that any bird you can see can also see you. He is not likely to just stand there and wait for you to walk up to him at point-blank range. It will be up to the hunter to out-guess him.

An indication of how well some hunters are able to out-guess these late season roosters was gained from a special survey made after the first "long" season in 1963. On a postcard survey of hunters taken after the close of the season, one of the questions asked for details on pheasant hunting done during the 12-day holiday period (Saturday before Christmas through New Year's Day—which was the last day of the season). The hunters' answers certainly showed that this added opportunity to hunt was both appreciated and utilized. Almost half of the over 275,000 people who hunted pheasants that year did so during this 12-day period. About 18 percent of the total season kill (or 40,000 out of 1,935,000 roosters) was taken during this interval. To tag these birds, the 135,000 hunters reporting they took part in this all-end of the season hunting made nearly 320,000 trips a field—or 21 percent of all trips made during the entire season. These trips totaled some 1,180,000 hours of hunting—again about one-fifth of the season's total. Further data indicated it took over half an hour longer to bag each bird at the end of the season, but the fact that roosters were harder to come by at this late date will surprise nobody, I am sure.

Obviously a significant amount of outdoor recreation has been afforded by the longer pheasant seasons of the last three years. And a key point to remember is that this has been done with no harm at all to the pheasant population. Even with about 75 percent of the cocks being harvested, we still have a good safety margin to work on—in fact, it is doubtful whether we can reach the oft-stated maximum figure of 90 percent with hunting and cover conditions as we have them here in Iowa.

Since it is apparent that late season hunters have taken considerable advantage of the added opportunity during the first two long seasons of 1963 and 1964, and were well rewarded for their efforts, let us hope they will be fortunate enough to enjoy this type of hunting again this year.



Outdoor experiences can be carried back to the classroom.

OBSERVATIONS AND AWARENESS—

(Continued from page 94)

teacher. These artificial learning devices only serve to direct the student in his efforts.

In an age when our eyes and minds are directed toward outer space, it sometimes becomes more difficult to "prove" the need for teaching our kids to look to the earth for solution of problems. Yet never in the brief history of man has the need for looking down to mother earth been more important. Fortunately, never has the time been more ripe for action in Iowa than at this time. A hard core of teachers dedicated to action in the field of conservation education has been trained. They know the needs; they know the methods of finding solutions; they're ready to move. All that is needed now is a broad ground swell of support from interested Iowans.

Support will come from such varied organizations as local PTA's, Sportsmen's Clubs, Junior Chambers of Commerce, Garden Clubs, Soil Districts, etc. Interested action from these people helps to inform school boards and school administrators of the need for conservation education. Since many of our school leaders are already ardent conservationists, they need but little stimulus from school patrons. This is especially true in cases where there has been concern over whether or not the public might consider outdoor laboratories as unnecessary frills.

Both rural and urban school districts are pioneering in outdoor laboratory development. It may be significant that the most ambitious outdoor laboratory project to date has been developed in rural Iowa. Twin Ponds Outdoor Classroom in Chickasaw County is being used by three different districts. The first steps toward outdoor classroom experiences have been taken in some metropolitan areas. For instance, Mason City has set up a nature study area in one of its parks, and Fort Dodge and Des Moines have established Children's Forests.

Twin Ponds remains the most outstanding project, as its use has been integrated into the curriculum of the various schools participating. Continuing workshop sessions help the teachers learn how the area can be integrated into their subject areas. This also helps remove fear and doubt from the minds of teachers who might otherwise ignore this valuable teaching resource.

Since the vast majority of our children are clearly destined to be city dwellers, conservation education needs to be given to them now. As rural and small town children move away from a close relationship with nature they cease to be awed and observant. They tend to be-

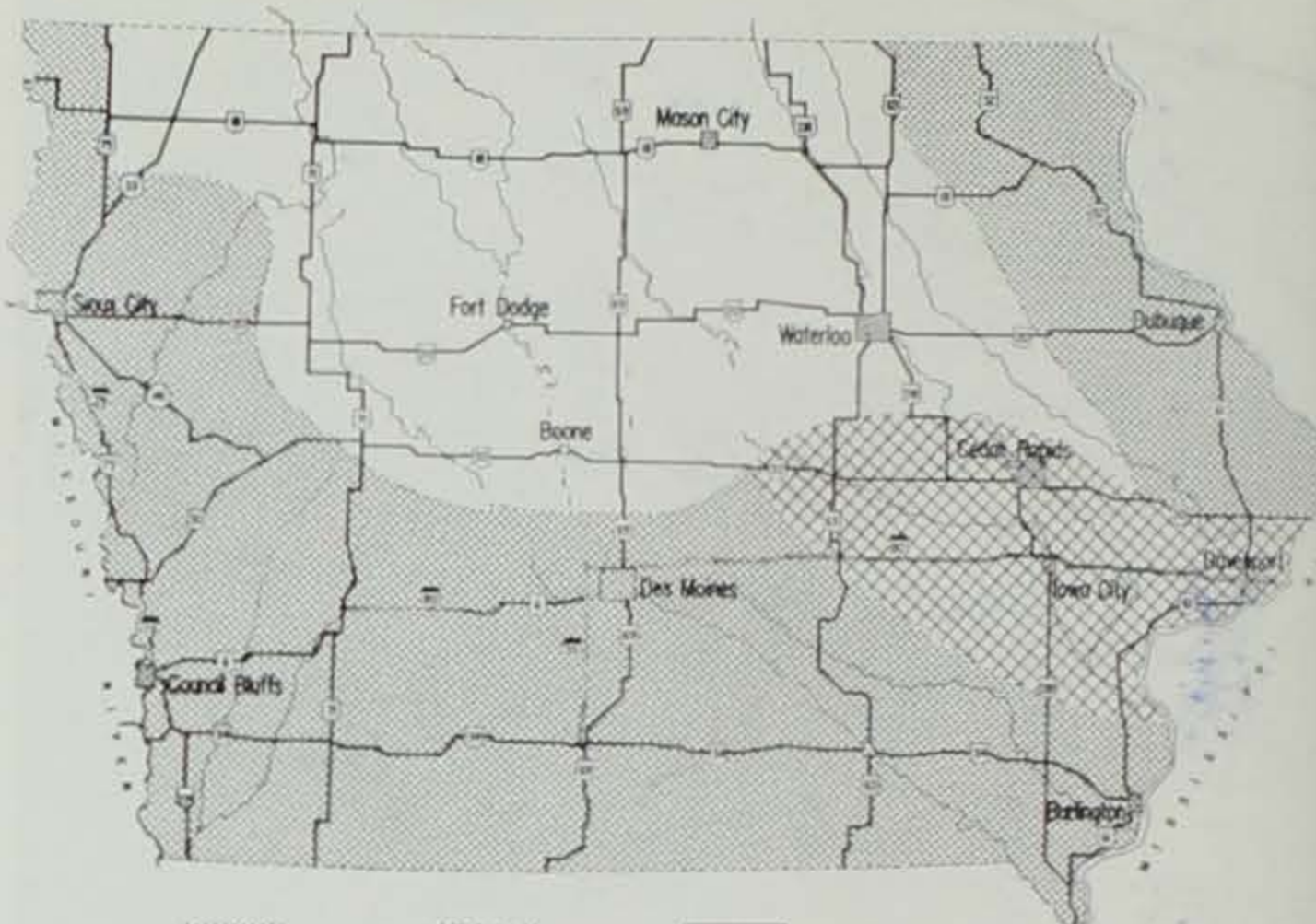
(Continued on page 96)

YOUR CONSERVATION OFFICERS

Here is a current listing of Iowa's Conservation Officers with their territories, addresses and phone numbers. These men are now equipped with two-way radio and in emergencies can be contacted through your local Sheriff's Office.

Name, Territory, Address, Zip Code	Area Code	Telephone
KAKAC, KENNETH, Superintendent 602 Lawrence Drive, Ankeny	515	964-4577
DAVIS, BEN, Supervisor (Dist. No. 1) 509 W. 10th Street, Spencer	712	262-1789
SMITH, CURTIS, Supervisor (Dist. No. 2) 609 E. Fifth, Cresco	319	547-2688
LEMKE, LOUIS, Supervisor (Dist. No. 3) DeSoto	515	834-2109
EMERSON, REX, Supervisor (Dist. No. 4) 1115 N. Fourth Ave., Washington	319	653-2563
OLOFSON, CHARLES, Hunter Safety Officer 517 E. Second, Ankeny	515	964-3961
ANDERSON, MAURICE—Clinton 523 Second Ave., Clinton (52732)	319	242-6956
ANGELL, GLENN—Bremer and Chickasaw 303 N. Locust, New Hampton	515	394-2037
ASHBY, MICHAEL—Dickinson Box, 233, Spirit Lake	712	336-3643
ASHBY, WESLEY—Fayette Fayette (52142)	319	425-4001
BALDWIN, JIM—Clay and O'Brien 121 W. Tenth, Spencer (51301)	712	262-3001
BASLER, BILL—Kossuth Box 187, Algona (50511)	515	295-7046
BASLER, DICK—Woodbury Box 154, Lawton (51032)	712	872-6633
BECKER, JIM—Buchanan, Delaware 512 Fourth, Independence (50644)	319	334-2197
BEEBE, BILL—Louisa Route 1, Wapello (52653)	319	523-2804
BEECHER, WESLEY—Jackson 300 High Street, Bellevue (52031)	319	872-3391
BRUUN, JENS—Dubuque 941 Maquoketa Drive, Dubuque (52002)	319	588-0474
CARTER, HAROLD—Clarke and Decatur 830 S. Park, Osceola (50213)	515	342-3221
CMELIK, RAY—Crawford and Monona 406 S. Eighth, Mapleton (51034)	712	411
DOWNING, BERL—Jefferson and Washington 306 E. Briggs, Fairfield (52556)	515	472-5248
DRAVES, RONALD—Davis and Van Buren Box 76, Bloomfield (52537)		
EDWARDS, LEO—Hancock and Wright 714 First Ave. SE., Clarion (50525)	515	532-3353
ENTNER, DALE—Lee 1627 Avenue "G", Fort Madison (52627)	319	372-3513
FORD, LARRY—Keokuk and Mahaska 514 Jackson, Box 341, Sigourney (52591)	515	622-3546
GREGORY, JIM—Butler and Franklin Box 236, Geneva (50633)	515	211
HANDELAND, ORLAN—Linn Central City (52214)	319	438-6319
HARRIS, GLENN—Warren and Marion 602 S. 3rd, Indianola (50125)	515	247-3360
HARVEY, WALT—Grundy and Marshall 6 N. Second, Marshalltown (50158)	515	753-8886
HEIN, CHRISTIE—Mills and Montgomery 7 Elm St., Box 329, Glenwood (51534)	712	527-4188
HEINKEL, GALEN—Des Moines and Henry Danville (52623)	319	392-3065
HOILLEN, JERRY—Allamakee 26 Third Ave., NE, Waukon (52172)	319	568-4102
HOLMES, VERL—Palo Alto 103 Call St., Emmetsburg (50536)	712	852-4969
HORTON, JOHN—Clayton Box 181, Garnaville (52049)	319	2231
HOTH, JOHN—Howard and Winneshiek Box 106, Decorah (52101)	319	382-2717
HUFF, LLOYD—Polk 2604 37th St., Des Moines (50310)	515	277-9233
JENNINGS, ERMIN—Benton and Tama 1116 East Third, Vinton (52349)	319	472-4494
JOHNSON, RICHARD—Harrison and Shelby 213 W. Huron, Missouri Valley (51555)	712	2-3578
KING, DUANE—Pottawattamie Rt. 3, Council Bluffs (51502)	712	328-2786
LEIGH, RALPH—Poweshiek and Iowa Box 127, Marengo (52301)		2-6811
LEMKE, LESTER—Adams and Taylor Rt. 2, Bedford (50833)	712	523-2278
MACHEAK, WILFRID—Worth and Winnebago Forest City (50436)	515	582-3553
MEGGERS, JACK—Cerro Gordo Box 75, Ventura (50482)	515	829-3323
MINECK, BOB—Cedar and Jones 211 13th St., Box 29, Tipton (52772)	319	886-6725
MOATS, BOB—Emmet Box 115, Estherville (51334)	712	362-2962
NELSON, DENNIS—Dallas and Madison Van Meter (50261)		5-3501
NEWEL, GENE—Plymouth and Sioux 176 S. Main, Sioux Center (51250)	712	722-3961
NICHOLS, DAN—Muscatine 819 Cedar, Box 202, Muscatine (52716)	319	262-3919
ODEN, ROBERT—Wapello 808 E. Woodland, Ottumwa (52501)	515	684-7693
PRIEBE, DONALD—Black Hawk 607 Keystone, Waterloo (52501)	319	234-1855
RAY, MARLOWE—Adair and Guthrie 509 N. 12th St., Guthrie Center (50115)	515	747-3002
ROEMIG, ALAN—Mitchell and Floyd 1020 Maple, Osage (50461)		732-3307
ROKENBRODT, FLOYD—Humboldt and Pocahontas 403 Sixth Ave. N., Humboldt (50548)	515	332-1236
RUNYAN, MIKE—Jasper RR 2, Kellogg (50135)	515	598-8402
SHIPLEY, JIM—Fremont and Page 301 Fremont, Rt. 2, Shenandoah (51601)	712	246-2370
SIMONSON, WENDELL—Johnson Oxford (52322)	319	628-4443
SPEER, MYRON—Scott 2629 Cedar, Davenport (52804)	319	391-4060
STARR, FRANK—Buena Vista and Cherokee 802 W. Sixth, Box 402, Storm Lake (50588)	712	732-5463

FACTS FOR THE DEER HUNTER



EXCELLENT GOOD FAIR

Keith Larson

Game Biologist

Ray Bruntmeier Map

Planning a deer hunt is an important event. I'm sure that many hours of discussion are required for a party of hunters to agree on where to hunt. The pros and cons of various areas of the state or local timbers are weighed before a consensus is achieved. Since there is a choice of only a few days to hunt in Iowa, where to hunt so that everybody in the party gets some action or at least "sees" some deer becomes even more important.

If you haven't yet decided where to hunt, here are some facts for you to ponder.

1. Eighty-eight percent of the Iowa deer herd calls the long zone their home.
2. The high populations of the long zone have a higher percentage of trophy bucks.
3. Long zone hunters "see" more deer.
4. The four day long zone season offers increased opportunity for success because there is time to learn the terrain and the habits of the deer.
5. Long zone hunters have a higher success ratio.
6. Iowa deer are corn fed no matter where you find them. Very few places in Iowa are more than a mile from a cornfield.
7. Weather conditions are frequently better on any given day in southern Iowa than in northern Iowa.

The Commission has adopted a zoning management plan to give greater opportunity to hunters where the deer can stand the pressure. Hunting is excellent in the long zone and the population is high (see map). It is hoped that more hunters avail themselves of this greater opportunity.

OBSERVATIONS AND AWARENESS—

(Continued from page 95)

come carbon copies of city cousins who never were acquainted with anything more inspiring than asphalt and concrete!

When today's youth become tomorrow's leaders of government, business and labor, they will have to have the tools, skills and knowledge that go into making right choices. Decisions involving our natural resources are becoming so complex that correct answers can only be supplied by those who have learned through long years of personal observation and study. Certainly this is an area of learning that can't be neglected until college days with the vague hope that "intensive study" can rectify a previous neglect. Where but in special outdoor classroom programs can this observation and knowledge be supplied?

TELLIER, FRANK—Lyon and Osceola Box 139, Doon (51235)	515	2821
TELLIER, GEORGE—Calhoun and Webster Box 410, Fort Dodge (50502)	515	573-2508
TILLEY, ARCHIE—Ringgold and Union 1101 Orchard Drive, Creston (50801)	515	782-5068
UHLLENHAKKE, MARK—Monroe and Appanoose 203 W. Francis, Centerville (52544)	515	856-6216
WAGAMAN, KENNETH—Audubon and Cass Box 226, Atlantic (50022)	712	243-1285
WALLACE, JIM—Ida and Sac Box 32, Lake View (51450)	712	2341
WILSON, DUANE—Hardin and Hamilton Alden (50006)	515	859-7246
WILSON, WARREN—Boone and Story 121 Cedar, Boone (50036)	515	432-5581
WILTAMUTH, JOHN—Lucas and Wayne 319 North 17th St., Chariton (50049)	515	774-5693
ZMOLEK, DELBERT—Carroll and Greene 405 N. West, Box 148, Jefferson (50129)	515	386-4234