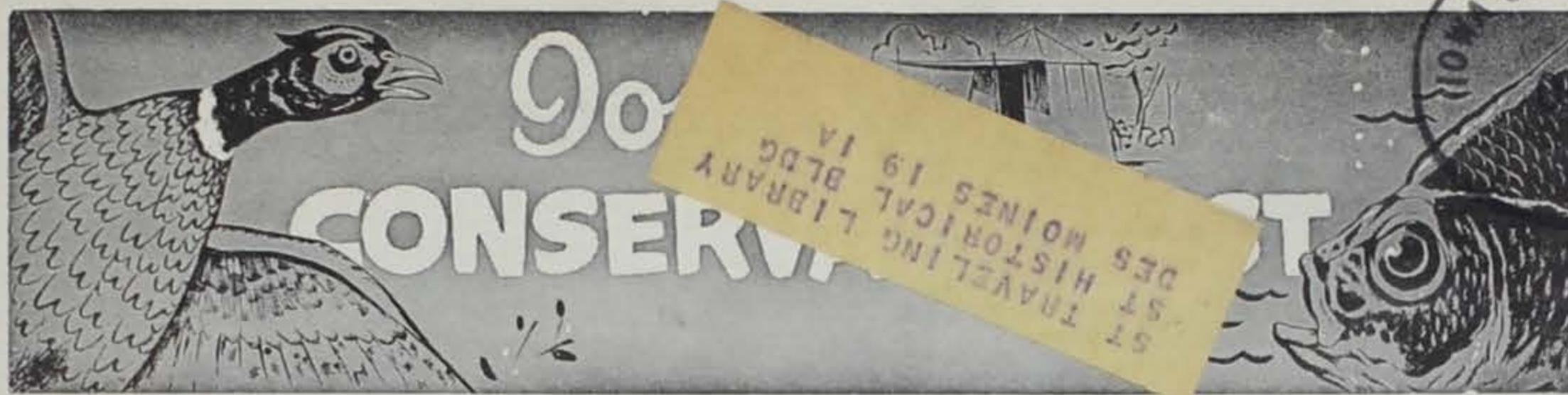


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Volume 23

October, 1964

No. 10



Despite the longer season in 1963, Iowa's ringneck population this fall is the second highest in 20 years.

Jim Sherman Photo.

THE HARDY RINGNECK

Eugene D. Klonglan

Assistant Superintendent of Biology

Record Harvest

The ringnecked pheasant—Iowa's No. 1 game species—has proved an ideal provide the state's hunters with more sport than was dreamed of many years ago. Nearly three decades of intensive study by life scientists points to one outstanding fact—we have been **greatly overharvesting our ringneck roosters!** After giving due consideration to the many pheasant life history facts uncovered by these studies, the Conservation Commission in recent years has gradually been liberalizing pheasant hunting regulations. Other states that have also been investigating just what makes a pheasant "tick" have also been coming to the same conclusion, and many of them are also becoming liberal. During the 6-year span from 1957 to 1962 a change from 108 shooting hours in 24 days to 262 hours in 35 days took place, together with an increase in possession limit of 3 to 6 cock birds. **Yet during this period there was very little change in the number or percent of pheasant roosters harvested!** As a result of these findings, last year's hunting season regulations were the most liberal Iowa has had—a 90-day season, 8½ hours of hunting allowed per day, and an increase in possession limit to 9 roosters. This meant 459 shooting hours were available to sportsmen—nearly double that of the previous year and more than 4 times the number of hours in 1957.

How did the ringneck fare under this increased bombardment? Very well indeed! He was able to spare a record harvest of 1,935,000 birds—nearly 400,000 more than the previous high year of 1958—and still have more roosters left over than needed for the spring's breeding population. We know from the various studies that we can have as high as 10 hens, probably more, per cock with no bad effect on the hatch. (Remember, Mr. Ringneck's only important biological function is to insure that the eggs the hen lays are fertile. He does not help incubate the eggs or care for the young chicks after they hatch, which many other kinds of birds do.) Surveys made last winter after the hunting season showed there were only about 3½ hens per cock in the state. A few local areas, such as that centering around Adair County in southwestern Iowa, had more than 3½ hens per cock. Some areas, such as northwestern Iowa, had fewer than 3½ hens per cock—indicating this area in particular could stand more hunting pressure. In no area was there any evidence that the pheasant cocks had been overshot.

This ratio of 3½ hens per cock did give us evidence that the longer season of 1963 actually did result in a greater harvest of roosters than usual. In previous years this ratio was about 3 to one; some years even

(Continued on page 78)

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CIRCULATION THIS ISSUE 52,000

COMMISSION MINUTES

September 1, 1964

FISH AND GAME

The Chief of Fish and Game gave a report on a proposal for construction of a low-head dam by Iowa Electric Light and Power Company at Cedar Rapids on the Cedar River.

The Commission authorized the Attorney General's Office to proceed with any legal action necessary to arrange for settlement of damages by the Gunder Cheese Factory in connection with the trout kill December 24, 1963, at Big Springs Trout Hatchery.

Approval was given to exercise an option for the purchase of 42 acres of land at a cost of \$75 per acre on an access area for the Raccoon River in Greene County.

The Commission approved the second stage of construction for Elk Creek in Worth County and a contract was awarded to the Combs Construction Company of Mason City for \$94,501.

Approval was given to the establishment of inviolate waterfowl refuges from September 15, until the end of the waterfowl season for various lake and marsh areas.

Approval was given for an administrative order concerning wanton waste of migratory waterfowl and other federal regulations.

LANDS AND WATERS

The Commission asked for further information concerning a request by the city of Storm Lake for the expansion of a golf course at the state park adjacent to Storm Lake.

The Commission approved access through Rock Creek State Park for a period of 1 year to Lake View Heights to allow time for acquisition of a private right-of-way to this area.

Approval was given to speed limits of 15 to 35 m.p.h. in all state parks to be set according to the degree of congestion as determined by the director.

Approval was given to exercise an option from Lekwa for 13½ acres at a cost of \$275 per acre

for a fishing access area at Clear Lake.

Approval was given for the transfer of maintenance and management of Eagle Lake Park in Hancock County from the Lands and Waters Division to the Fish and Game Division.

A request by the city of Ames for voluntary annexation of the State Forest Nursery was refused.

The Commission requested the Superintendent of Parks to review the regulations on camping in various areas under his jurisdiction where camping is not now allowed.

COUNTY CONSERVATION ACTIVITIES

Fayette County received approval for the acquisition of 40 acres of land at a cost of \$3,500 located in the southwestern part of the county for the purpose of developing a multiple use outdoor recreational area to be called Downing Park.

Pottawattamie County received approval for the acquisition of 2.18 acres of land as a gift on the Plumer River Access Area to be used for wildlife cover.

Carroll County received approval for a development plan for Willow Creek Park to be developed as a highway safety rest area.

Delaware County received approval for a development plan for the Red Schoolhouse Historical Area for its preservation as a monument.

Floyd County received approval for a development plan for Gates Bridge Park primarily for picnicking and river access.

Floyd County received approval for a development plan for the Marble Rock Landing Area for use primarily as a river access area.

Monona County received approval for a development plan for the Decatur Bend Access Area to be used for boating, fishing, and picnicking.

Pottawattamie County received approval for a development plan for the Botna Bend Park located on the West Nishnabotna River in the northeastern part of the county for a multiple use outdoor recreational area, and will include a trap shooting range.

Washington County received approval for a development plan for the Sockum Ridge Park for a multiple use outdoor recreational area and an outdoor classroom.

GENERAL

The Commission voted to extend an invitation to the International Association of Game and Fish Commissioners to hold one of their annual meetings in Des Moines.

Travel was approved for U. S. Forest Service Region 9 Meeting at Chillicothe, Ohio; The Association of Conservation Engineers at Louisville, Kentucky; Public Personnel Association Conference at Los Angeles, California; A Hear-

DON'T LET THIS HAPPEN TO YOU

J. R. Sherman, Superintendent of Public Relations

The Cruunch of breaking bone, bending metal and shattering glass ended the brief glimpse of a large buck deer flying through the air toward my car early one evening last week. Such a sound is hard to forget.

Could this accident have been prevented? What could I have done to prevent it? Afterwards I thought of the terrible catastrophe which could have happened: the deer could have gone under a wheel and turned the car over, following traffic could have compounded the accident in a terrible manner, the head of the deer could have smashed the windshield in front of us. Luckily the only real damage was my pocketbook.

At the sportsmen's meeting where our arrival was tardy, several people consoled me with the remark "there's nothing you can do about a deer jumping into your car." My next conclusion was that the Conservation Commission's policy of controlling deer population is certainly a wise one.

After returning to the office, I of course, heard a lot of good natured kidding about my misfortune. This kidding also led to several tales of near misses and deer accidents which my cohorts had witnessed. It is obvious that a careful driver can minimize the chance of hitting a deer on the highway.

When in deer territory such as river valleys, the hilly areas, northeast Iowa, near forest areas of deer crossings, DRIVE SLOW and be alert, especially at night.

If you see a deer, SLOW DOWN IMMEDIATELY. A deer will start and stop and change his direction of travel with incredible suddenness and often does.

Watch for SHINING EYES in the darkness along the highway and slow down immediately before you are unfortunate enough to find a deer in your lap.

A flare or signal light might save your life from traffic after a collision.

Most deer-auto accidents occur at night.

Reported deer kills in Iowa by autos in 1963 approximated 900 killed with about \$70,000 damage to automobiles. Estimates for 1964 are that approximately 1,000 deer-auto accidents will be reported. Many such accidents aren't reported. November is the peak month for such accidents due to the rutting activity of the deer and have a greater number of these collisions each year.

Deer do constitute one more highway menace. The number of traffic accidents can be reduced through alert driving and awareness of the problem.

It can happen to you—it happened to me.

—Reprinted by request from the Iowa Conservationist November, 1964

LONG RANGE PLANNING PROGRAM

Ron Schara

Editor's Note: This is part two of a series of articles on the long range planning program for the State Conservation Commission. It is intended that this and future articles might describe in detail the various phases of the plan.

Iowa's forest heritage has been dwindling at a frightening rate. For example, during the past 100 years, almost two-thirds of Iowa's original seven million acres of forest land has disappeared. Only two and one-half million forest acres are standing today.

The problem begins when more people with more time want to use the remaining timber for recreation, solitude and industry.

Accordingly, Iowa's future timber picture is not bright. Predictions for every acre of land planted to timber, three and one-half acres of timber will be cleared for agriculture or crop use.

Increased Demand

Meanwhile by 1975, the demand for wood products in Iowa (Continued on page 75)

ANNING—

(Continued from page 74)

increase as much as 30 per cent over the 1952 consumption. An even stronger demand is expected from outdoor recreationists. This demand increases as more leisure time and real income become available. Notwithstanding that in the future people will need and want larger areas to "get away from it" this alone could be the most important reason for having sufficient forest land. Steps must be taken in Iowa to insure and guarantee that forest land shall continue to grace Iowa's landscape. To take these necessary steps, several problems must be overcome. One problem, if it can be called a problem, is due to Iowa's great soil fertility. Due to its high value, this land becomes increasingly difficult to obtain. Presently, thousands of acres of valuable timber land are still available. Acquisition of land along rivers and streams and in hilly wooded areas may still be acquired at a reasonable price. However, logging practices are changing rapidly and these areas can not be cleared at leisure. Thousands of acres of brush and timber are being cleared by aerial sprays and heavy moving equipment. Time is the essence and immediate steps must be taken to acquire these lands.

Several programs have already been instituted to insure needed forest lands. Pine plantations have been established in almost all of Iowa's state-owned timber areas. The use of prison labor in state forests has provided needed manpower to accelerate development of recreational facilities and wildlife habitat improvements.

Research Underway

Most important, research is underway to answer the many questions on hardwood reproduction, growth rates and developing efficient woodland uses.

Iowa's program is designed to provide three forest needs. One, to provide multiple-use areas for mass recreation. Second, to provide semi-wilderness areas for hunting, trapping and other forms of undeveloped recreation. Third, to keep certain wilderness areas for nature study, hunting and simply to know they exist. These are minor plans and steps which only pertain to timber already reserved for future generations. The next step is large scale acquisition of present forest lands and restoration of former hardwood lands.

Legend has it that a family of Shawnee and Fox Indians crossed the Mississippi River in search of a better land. When they landed on the west shore, their chief led them up to the river bank and in a shady forest, he set his bow in the ground and exclaimed: "This is the place. Iowa—beautiful Land." Indeed it is and it must remain,

BOW HUNTER'S UNTAPPED RESOURCE

Max Schnepf

An old story to a lot of Iowa bow hunters is no deer. In fact, it's probably darn old to the 2,325 archers who didn't "score" last fall.

A new wrinkle to this story has its key in the state's cornfields. Hundreds of bow hunters don't realize the potential that unpicked cornfields hold for hunting white-tails. Their hunting itinerary is limited to stalking or hunting on stand in timber or edge cover during the early morning and late afternoon hours when deer are on the move. The truth is some of the finest hunting can be had anytime during the day by stalking deer in cornfields, especially during midday when they are bedded down.

The only catch is the weather. On a still, sunny day, you may as well forget it. You just can't walk in a dry cornfield without making excessive noise. But, with a stiff autumn breeze or a little moisture to compensate for the lack of air movement, most of the noise you make moving through corn is covered up.

Deer depend on their senses for survival. They bed down in corn rows with their back to the wind, facing downwind. This enables them to detect danger upwind by smell and downwind by sight. Fortunately, they're not always as alert as they should be.

Unless you're a veteran stalker, it's going to be a trial and error process until you learn. Look for fields near river bottoms and adjacent to timber. Cornfields that are relatively clean are easier to see in. If weed growth is much over a foot high in corn rows, you'll walk right past deer unless you almost step on them or they're standing up. Ideally you should be able to see clearly down each row for 75 or 100 feet.

Be Deliberate

While stalking, your movements must be slow and deliberate. Walk a cornfield across the rows making a definite attempt to keep from hitting or stepping on cornstalks. Soft cotton clothing and sneakers are great noise reducing aids. If the breeze stops blowing momentarily, stop. Wait till the corn leaves start rustling again. The slightest unusual sound will alert deer of danger. Many times there will be deer in a cornfield, but you'll never see them because they were alerted.

Moving from row to row, peer into each succeeding row before stepping into it. Look both ways. Don't give it the "once over lightly" treatment. Look for details. In a weedy field a deer's ears might be the only sign of the animal's presence, and they blend

into the cover almost perfectly. When you're sure there's nothing in the row, step into it; and continue this procedure as you angle across the field. It's also wise to watch ahead. You might spot a deer over three or four rows in line with your path.

As you step from row to row, keep your weight on the back foot until you've found solid footing with your front foot. Retain your balance at all times in case you have to freeze in position.

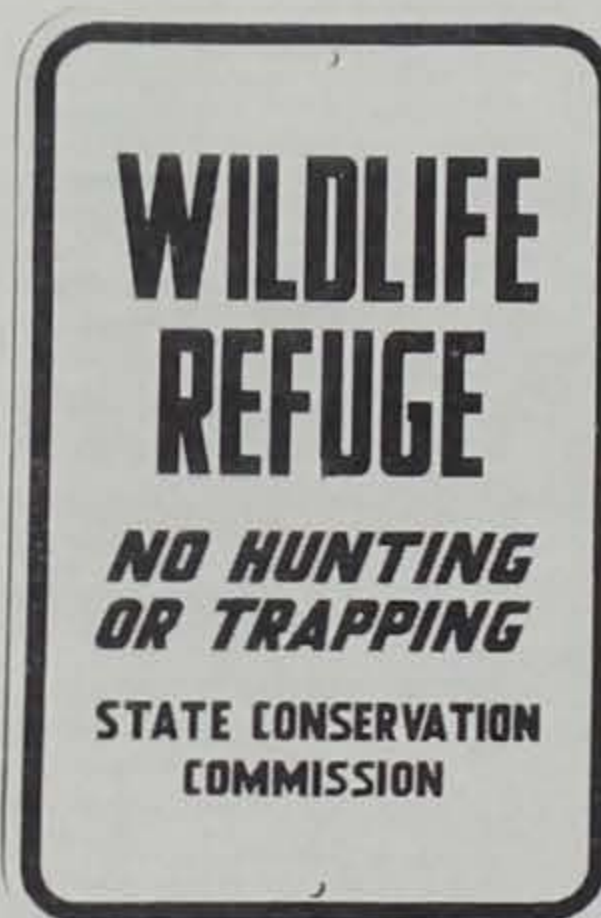
If you peer into a row and spot a deer, freeze immediately. Try and determine the animal's position as closely as possible in relation to yourself. If the deer is downwind and close enough for a decent shot, slowly step into the row, draw and shoot.

The gusting wind may or may not carry your scent to the animal. If the deer gets a whiff of you it may look over its shoulder to investigate. If this happens, it's up

to you to remain still and wait for the opportunity to shoot. If the deer is close and upwind, the only thing you can do is slowly step into the row and try to get a shot.

If the distance is too far for a good shot in either direction, get your bearings in relation to the deer; backtrack a few rows; and move upwind or downwind in the direction of the animal. Keep track of how many rows you've moved laterally from the deer. When you feel you're close enough for a good shot, move back across the rows. Slowly step into the row and make your shot.

It will take time to master this technique; but it's a different approach to bow hunting; and one that a lot of hunters aren't aware of. With a little effort you can add several hours of hunting each day to your schedule. This increased time in the field is going to increase your chances of bagging one of Iowa's 36,700 whitetails this fall.

**WILDLIFE REFUGE AREA— GAME MANAGEMENT AREA**

Iowa hunters can determine at a glance whether hunting is permitted on state-owned game management or refuge areas.

A white sign (on the right above) designates a game management area. Hunting is permitted on these areas unless they are also posted with the yellow refuge signs.

The yellow sign (on the left above) designates a wildlife refuge area. Any area marked with this sign is a no hunting, no trapping area. Certain areas may be wholly or partially designated as refuge areas.

For a period each fall, certain state-owned waterfowl refuges are posted as no trespassing (inviolate) areas. These areas will be posted with the yellow wildlife refuge signs and also with no trespassing signs.

Waterfowl refuges considered inviolate from September 15, to the close of waterfowl season on November 26, 1964, include all or part of each of the following areas: Sweet Marsh, Bremer County; Big Marsh, Butler County; Forney's Lake, Fremont County; Bays Branch, Guthrie County; Plum Creek Basin, Fremont County; Snyder Bend, Woodbury County; Storm Lake Islands, Buena Vista County; South Twin Lake, Calhoun County; Round Lake, Clay County; Allen Green Refuge, Des Moines County; Ingham Area, Emmet County; River-ton Area, Fremont County; Dunbar Slough, Green County; McCord Pond, Guthrie County; California Bend, Harrison County; Hawkeye Wildlife Area, Johnson County; Muskrat Slough, Jones County; Colyn Area, Lucas County; Five Island Lake, Palo Alto County; Rice Lake Area, Winnebago County; and Black Hawk Lake, Sac County.

Five artificial lakes are also included on the inviolate refuge list only during waterfowl season. They are: Green Valley, Ahquabi, Wapello, Darling and Prairie Rose.

MULTIPLE USE OF THE FAMILY FOREST

Bruce Plum, District Forester

Of the 2,500,000 acres of Iowa forest land about 98 percent is in family owned woodlots. There are approximately 35,000 woodlots in Iowa with an average size of 71 acres each.

Multiple use as it applies to Iowa timber includes four major uses. These are: wildlife management, recreation, watershed protection and scientific harvesting of surplus trees. Multiple use does not imply a forest can be profitably used or abused on the whim of the owner. Unrestricted abuses would ultimately destroy our forest resource heritage.

WILDLIFE

Each of these family owned woodlands can provide habitat for certain species of game, birds and other wildlife. Deer, squirrels, raccoon, mink, badger, beaver, opossum and grey fox depend upon the forest for food and shelter. During inclement weather quail and pheasant seek the edges of timber for shelter. Forests properly cared for have an abundance of game not found in the misused forest.

WATERSHED VALUE

These small forests can provide excellent watershed protection by holding back water resulting from snow melt and heavy rains. This prevents erosion on steep slopes and prevents or lessens the damages of floods. In a forest which is properly managed there is sufficient overstory to catch and slow the driving rain. This well managed woodland will have sufficient organic matter on the forest floor to soak up these gently falling

drops of water. The highly porous soil will in turn soak up the water where it will be made available for plant use or replenish underground sources of water. This layer of organic matter is made up of fallen leaves and twigs and is known as litter. Just below the litter is a layer of humus which is decomposed organic matter. Below the humus the mineral soil has developed a system of pores, and channels have developed from decaying root systems. Altogether this is one gigantic sponge nature has developed to carry away excess water without causing damage to the surface of the land. A forest can be a trump card in flood control.

RECREATION

The scenic value of forests is well known. The economic advantages of forests attracting tourists is being considered in parts of Iowa. The relaxation afforded by a quiet walk in the woods, the joy of hunting, camping or picnicking in the woods has prompted many a businessman or professional man to acquire forest property of his own.

Oftentimes a farmer will acquire a tract of timber which may be several miles from his farm. He is many times motivated by the joy many people receive from working in the woods rather than the monetary returns from owning timber.

For those who own no forest it is an inspiring sight to drive through the countryside gazing upon the wondrous beauty of the timber shrouded hills.

PRODUCTS

The production of timber products for a growing forest industry in Iowa is becoming ever increasingly important. Iowa timber since



Private forests can provide excellent multiple use areas.

pioneer days has provided posts, fuel, logs and lumber for the owner of the family forest. Today it provides raw material for commercial sawmills, pulp mills, veneer plants and subsequent secondary processors as well as providing lumber for home use. Iowa's forests are providing raw material for a \$43,000,000 industry which provides employment for a large number of Iowans.

Timber production under proper management is compatible with the other three uses of the forest. Because of the flexibility of growing and harvesting timber as a crop it is possible to "have your cake and eat it too." If only mature and surplus trees are harvested, this use need not interfere with the wildlife, recreation or watershed values of a forest. With the increasing demand for wood products the family forest is an investment which can pay dividends. An uncared for timber like

an uncared for cornfield produces many weeds and little profit. The care given the woods now will terminate the income that will be received from it as well as determine its usefulness for multiple uses in the future.

SEEDS OF DESTRUCTION

An abused timberland is a liability to the owner and the community. The major abuses of Iowa timberland include grazing by domestic animals, indiscriminate cutting of trees and burning. Of these grazing has provided the greatest destruction of our forests. Livestock has probably caused more damage to Iowa forests than fire, insects, disease and man combined.

GRAZING

Our central hardwood forests are incapable of providing adequate forage. In search of sparse forage livestock destroy the water holding capacity of the forest soil.

(Continued on page 79)

HOW DID IOWA HUNTERS DO LAST YEAR?

Eugene D. Klonglan

Assistant Superintendent of Biology

The seasonal urge to go hunting has struck. A resume of last year's season should serve to "whet the hunting appetite" even more.

Last year, for the first time, a

survey was made to determine what effort Iowa hunters put into hunting and what success they encountered. Two postcard questionnaires were sent to approximately one of every 50 of Iowa's 307,400 licensed resident hunters and 7,500 non-resident hunters. One questionnaire was sent at the end of the game bird seasons and another following the close of rabbit season. Nearly half of the post-

card questionnaires were returned. The results were projected to cover the total number of hunters.

The information obtained for each species is summarized in the accompanying table. The figures present a dramatic picture of the importance of hunting in Iowa.

About 315,000 hunters bagged almost 6½ million pieces of game. They made close to 4½ million trips into the field resulting in

14½ million hours of recreation.

The average hunter made approximately 14 trips totaling 14½ million hours for an average of 3½ hours per trip. He bagged over 20 pieces of game during the season or one and one-half pieces per trip. That was a rate of about "one successful shot" every two hours.

Let's hope the current hunting season is as successful as last year's.

RESULTS OF SURVEY OF IOWA HUNTERS—1963-64 SEASON

Species	Statewide Bag	Number of Hunters	% of all hunters	Total hours hunted	Total trips made	Avg. trips per season	Avg. hours per season	Avg. hours per trip	Avg. bag. per season	Avg. bagged per trip	Avg. bagged per hour	Avg. to be one
Pheasant	1,935,000	277,400	88%	5,795,400	1,547,900	5.6	20.9	3.7	7.0	1.3	0.33	3
Cottontail	2,066,472	169,994	55%	2,618,393	1,052,070	6.1	15.4	2.5	12.2	2.0	0.79	1
Squirrel	1,440,576	150,932	49%	2,199,589	770,258	5.1	14.6	2.9	9.5	1.9	0.65	1
Quail	327,977	47,028	15%	594,433	166,900	3.6	12.6	3.5	7.0	2.0	0.55	1
Raccoon	347,168	26,745	9%	732,756	247,483	9.2	27.3	3.0	12.9	1.4	0.47	1
Waterfowl*	160,880	31,717	12%	1,114,853	150,656	4.8	35.2	7.4	5.1	1.1	0.14	6
Foxes	121,124	54,135	18%	939,986	262,462	4.8	17.3	3.6	2.2	0.5	0.13	7
Jackrabbit	75,015	30,494	10%	213,458	92,397	3.0	7.0	2.3	2.5	0.8	0.35	2
Hungarian Partridge	8,000											
Deer†												
Gun	6,613	14,000	4%	188,819	35,358	2.5	13.5	5.3	0.5	0.2	0.04	28
Bow	538	2,900	1%	131,270	22,848	7.9	45.3	5.7	0.2	0.1	0.01	244
Both	7,151	16,900	5%	320,089	58,206	3.4	19.0	5.5	0.4	0.1	0.02	44
Totals	6,489,363	314,900‡	100%	14,528,957	4,338,332	13.8	46.1	3.3	20.6	1.5	0.45	2

*Waterfowl figures not from postcard survey; estimated from other data and sources.

†Deer figures includes estimate obtained from separate source for non-licensed land owners and/or operators.

‡Includes 7,500 non-resident hunters.

COONHOUNDS TO COLLIES

Eugene D. Klonglan

Assistant Superintendent of Biology

The sight of a dog bounding ahead of the hunter in pursuit of wild game or sitting obediently beside his master in a duck blind is a common one in Iowa during the fall months. To find out how many and what kind of dogs are used by Iowa hunters, the State Conservation Commission included questions to this effect in its 1963-hunting season postcard questionnaire. (The questionnaire and its results are discussed in another article in this issue.)

By projecting the replies to the questionnaire to cover all hunters, it was found that approximately 100 of the 307,400 licensed resident hunters and 7,500 non-resident hunters own what they consider a hunting dog. Among them are over 75,000 such dogs. See accompanying table.)

Few dogs not commonly considered hunting dogs turned up in the poll, but in all instances the hunters' word was taken at face value.

In the process of projecting figures from a small sample of hunters to cover all hunters results in the "rounding off" of the figures given. They are considered estimates and not actual counts. Although no precise accuracy is needed for the results shown, they give a fair idea as to the types and numbers of hunting dogs that are roaming Iowa fields this

NUMBER OF HUNTING DOGS REPORTEDLY OWNED BY IOWA HUNTERS

Coonhounds	14,720
Pointers	13,440
Labrador Retrievers	3,360
Spaniels	3,040
Terriers	8,800
any Spaniels	2,400
ger Spaniels	2,240
an Shorthairs	2,240
ters (unspecified)	2,080
en Retrievers	1,760
ish Setters	1,760
er Spaniels	1,600
hounds	1,600
Terriers	1,600
ers (unspecified)	1,280
apeakes	960
iels (unspecified)	960
ish Pointers	960
t Danes	960
etts	640
rs (unspecified)	640
Setters	480
Terriers	480
ch Braqued' Auvergue	480
shound	480
a	160
regian Elkhound	160
ch Poodle	160
ish Shepherd	160
s	160
d Breeds	3,840
own Breeds	1,920
	75,520

During migration, Canada geese often assume the well-known V-formation with the leader in the head. During long flights, changes of leadership sometimes take place.



Rich "edges" are a lifeline to much of the animal kingdom.

Jim Sherman Photo.

THE RICHEST EDGE

Rooted aquatic vegetation may interfere with boating and swimming, but many forms of wildlife cannot exist without it. The zone where land and water meet is one of the most important environments in the animal kingdom. In nature, all "edges" are rich, and this is the richest.

Some wildlife species live wholly in aquatic vegetation while others depend on it to only a relatively slight degree. Some species live out, and feed in, because the vegetated area (near shore) is rich in life of all kinds. Some species live in, and hunt out, using aquatic plants as a foraging base. Others live in deep water, or on land, and use the marsh or lily pads or pond weeds for shelter at special seasons—for example, the breeding season.

Edge Species

The list of dependent species includes moose, deer, porcupine, beaver, muskrat, otter, mink and

frogs. Among birds, it attracts ducks, geese, swans, cranes, herons, bitterns, coots, gallinules, rails, snipe and other shore birds. The fish that use the habitat include maskinonge, pike, bass (especially smallmouth) and most of the so-called warm water species. In winter, still other species (pheasants, rabbits, foxes and the like) can use this environment.

The growth of aquatic vegetation is a stage in the endless process of the aging of lakes. The establishment of the pioneer plants of water lily and pond-weed makes it easier for other species to follow. The trend is towards dry land-pondweed to cattail to sedge to spirea to willow to poplar to cedar to spruce to beach and hemlock.

In many areas, the process is slow and the lily pads last a lifetime. Elsewhere, the change may be faster, and it may be found that it is highly desirable to hold as close to one successional stage as possible.

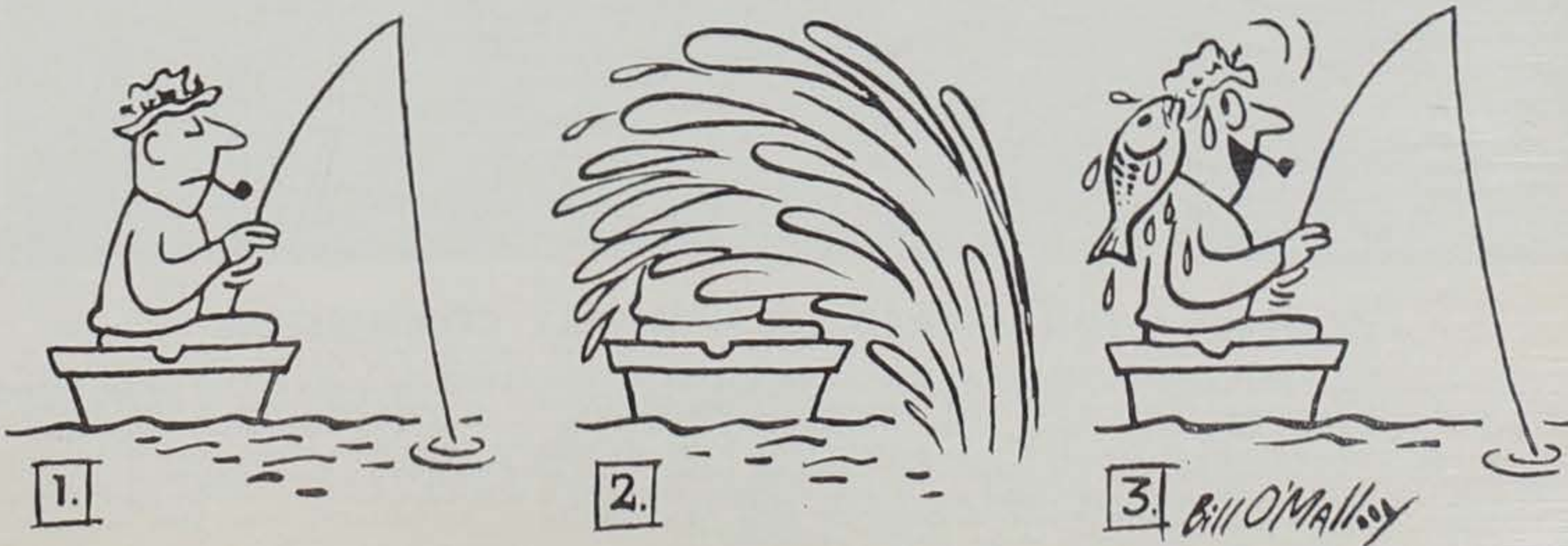
In the past, this has been accomplished by burning and mowing. Selective chemical control (either of species or of areas) has been tested and found to have its uses. Muskrats, too, with their capacity to clear and deepen areas within a marsh, are valued in management.

In general, the removal of aquatic plants eliminates wildlife to whatever degree it is dependent. Therefore, wildlife management is extremely jealous of any procedure that can have only one effect—a permanent reduction in the capacity to produce. In all management plans, the absolute requirement is that the desired vegetation shall develop.

Pollution Kills

Certain forms of pollution (that fish might tolerate) will kill the plants that provide the fish with cover. Birds, too, will tolerate pollution that will kill their food and cover plants. Miles of rice beds have died out because of the rot-

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Jim Sherman Photo.

COUNTY BOARD GETS AWARD FOR OUTDOOR CLASSROOM

The Chickasaw County Conservation Board recently received a National Merit Award from the American Association for Conservation Information for development of the Twin Ponds outdoor classroom area near New Hampton. Twin Ponds is used for nature study by area schools. Ben Freed, left, who coordinates county board activities for the Iowa Conservation Commission, presented the award to Dr. A. J. Nelson, right, chairman of the Chickasaw Board. Other members of the board are, from the left: Vince Geble, executive secretary; Henry Justen; Bob Price and Jim Rouse.



Jack Kirstein Photo.

CONSERVATION AWARD TO HIGHWAY COMMISSION

An award for cooperation in wildlife conservation practices was presented to the Iowa Highway Commission late this summer by the Iowa Conservation Commission. Sherry Fisher, right, Conservation Commission Chairman, presented the plaque to Harry Bradley, Chairman of the Highway Commission. Present at the ceremonies were, from left to right: Highway Commissioners Derby Thompson; John Falb, Jr.; and Everett Shockey; L. M. Clausen, Chief Engineer for the Highway Commission; Bradley; Everett Speaker, Iowa Conservation Commission Director, and Fisher. The walnut and bronze plaque cited the Highway Commission for its program of delayed mowing of roadside game bird nesting cover. Prior to July 1, the Highway Commission mowing crews cut grass only on road shoulders. This allows the growth of cover in ditches and along fence lines where pheasants and other game birds frequently nest, and reduces nest destruction during mowing operations.

HARDY RINGNECK—

(Continued from page 73)

less. In average years about 60 percent of all roosters have been taken. Last year this figure exceeded 70 percent for the first time. Even so, we know we could take 90 percent with no risk to population. People sometimes come alarmed in winter when they see large flocks of hens but not cocks with them. However, in winter it is a common habit for two sexes to segregate into different flocks. The cocks, who have just survived the perils of the previous hunting season, are wary and often remain as loners in small groups well away from the roads. Thus it is easy to get a false impression of the true situation.

Competition

Another angle in the overall picture of how many roosters are shot is the matter of their competition with hens for food and shelter in winter. This is particularly important in areas of limited winter cover, such as found in many of northern Iowa. In many northern areas farm windbreaks protect about all that is left to protect birds from severe blizzards. If a farm windbreak and nearby fields can support only 50 pheasants through a bad winter, then if there are only 25 cocks and 25 hens (in case if no hunting at all were allowed). However, if only 5 cocks are present, there can be 45 hens—and 45 hens will lay a lot more eggs and raise far more chicks than 25!

Habitat Important

This brings up another significant point. It is a cold fact that hunting success each fall depends primarily on the production of young birds that year. Usually about 80 percent of the birds harvested are young ones raised that year. Pheasants are relatively short-lived birds. Nearly three-fourths of them never see their first birthday, hunted or not. The total population an area can support is determined by the habitat—food and cover—that is present. If we want more birds, we must provide better habitat—particularly nesting and winter cover here in Iowa. The "reproductive potential" of pheasants is so great that it can increase in numbers tremendously in one year if conditions are right and there is unused habitat to fill. If more birds are produced than there is room for, the surplus will have to perish one way or another. By hunting we are able to convert some of this surplus to our own use. Stop and think. In numbers of birds, even un hunted game birds, about three-fourths each fall's population are young birds. Yet year after year the populations do not vary a great deal. Obviously, about three-fourths of the total must be harvested each year in order for their numbers to remain relatively stable.

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DRESTS—

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f young seedlings and damage large trees. The trampling of live-stock hoofs destroy the sponge at nature has taken centuries to develop. The organic matter is destroyed and the porosity of the soil destroyed through compaction. This results in greatly increased runoff after a heavy rain. The water is no longer allowed to evenly soak into the soil to be used by trees and to replenish underground water supplies. Instead it is turned into a destructive force. This force carries topsoil which has taken centuries to develop and deposits it in our silt clogged streams. The water and soil nutrients which could be used by trees to make rapid growth are thus resulting in less vigorous trees, trees which lose their vigor are targets for the onslaught of tree diseases and insect pests. These are the agents which cause a decline in the health of the forest and destroy its value for any of the multiple use items.

Livestock feed on young tree seedlings and damage large trees. When the hoof of an animal rips a piece of bark off of a tree root, an entry is made for infection. This infection is in the form of wood rotting fungi, which destroy the tree from within. Livestock compete intensely with wildlife. They destroy the watered qualities, ruin the esthetic value and lay waste to the productive capacity of the forest. By destroying the productivity of the forest the timber products are destroyed along with the many jobs they would create.

As an incentive to prevent this form of destruction Iowa's Timber Service Law provides a tax reduction for those owners who restrict livestock from their woodland.

IMPROPER CUTTING

Improper cutting practices will bring about the decline in the productive capacity of any forest. It will eventually destroy all the multiple use aspects of a woodland. Iowa forests have suffered for over 100 years through indiscriminate cutting. One-half of our original forest cover has disappeared and the other one-half has been badly used for the most part. The proper selection of trees for harvest is of great importance if the forest is to continue being productive. To maintain its watershed qualities, retain its wildlife habitat and keep its scenic values the forest must be used wisely.

The selective harvesting of trees will actually increase the wildlife population. The occasional opening will create an increase in browse for deer. By leaving the proper number of den trees per acre homes will be provided for boreal animals.

The weeding out of poor quality trees and the selection of mature trees for harvest will improve the esthetic value of the forest.

FIRE

Fire is by far the most spectacular of the destructive forces. It injures or kills large trees, destroys seedlings, destroys the water holding capacity of the soil and ravages wildlife habitat with one bold sweep. Fortunately we have been troubled very little with fire damage in Iowa in recent years. There is a short period in the autumn and another period in early spring when the fire danger is serious. One carelessly thrown match or cigarette can destroy in a few minutes what it took nature many decades to develop.

During the past few years the Forestry Section of the State Conservation Commission in cooperation with local fire departments has been conducting "Smoky Bear" forest fire prevention programs in the grade schools throughout the state. This program has helped eliminate a considerable amount of unnecessary destruction of our family sized forests and state owned forests.

Grazing, indiscriminate cutting and fire can eventually cancel out the benefits of the multiple use concept. With increased education and cooperation Iowa's forest heritage can be enhanced for the benefit of all.

The Forestry Section has eight foresters located in various parts of the state. They provide management services for the family sized forests. These foresters have been trained to make management plans for the privately owned woodland keeping in mind the multiple use features. They make recommendations for improving the timber through timber stand improvement or "weeding" and reforestation. They mark trees for commercial sale or home use. This service is provided free at the request of the owner.

To find who your district forester is, address a letter to the Forestry Section, State Conservation Commission, E. 7th and Court Ave., Des Moines 8, Iowa.

RICHEST EDGE—

(Continued from page 77)

ting of excessive amounts of organic matter (depleting the water of oxygen). Dredging and filling have destroyed vegetation and altered currents so that beds have been wiped out.

Most impoundments (that might have created marshes) have draw-downs that turn their shores into biological deserts. The original marshes, of course, are destroyed by flooding. Since the first settlement, there has been a constant reduction in the habitat provided by aquatic plants.

The private owner or developer, who wants to remove the plants from public water, may measure his private interest against the public interest in many forms of fish and wildlife.—*Canadian Audubon.*

1964

HUNTING AND TRAPPING SEASONS
OPEN ZONES AND LIMITS

The Conservation Commission is authorized by law to change by administrative order, seasons, bag limits and possession limits.

OPEN HUNTING SEASONS

PHEASANTS—Open season: November 7, 1964-January 3, 1965, both dates inclusive. Shooting hours 8:30 a.m. to 5:00 p.m. Bag limit three (3) cock birds, possession limit nine (9) cock birds. Entire state open except south of State Highway 92 from Muscatine to Knoxville and east of State Highway 60 from Knoxville to the Missouri line.

QUAIL—Open season: October 31, 1964-January 3, 1965, both dates inclusive. Shooting hours 8:30 a.m. to 5:00 p.m. Bag limit eight (8) birds, possession limit sixteen (16) birds. Entire state open.

HUNGARIAN PARTRIDGE—Open season: November 7, 1964-January 3, 1965, both dates inclusive. Shooting hours 8:30 a.m. to 5:00 p.m. Bag limit two (2) birds, possession limit four (4) birds. Hunting allowed in area west of U.S. Highway 65 from the Minnesota line to Iowa Falls and north of U.S. Highway 20 from Iowa Falls to Sioux City. Remainder of the state closed.

SQUIRREL—Open season for gray and fox squirrels: September 12-December 11, 1964, both dates inclusive. Bag limit six (6) per day, possession limit twelve (12). Entire state open.

RABBIT—Open season for cottontail and jack: September 12, 1964-February 21, 1965, both dates inclusive. Shooting hours 6:00 a.m. to 6:00 p.m., Central Standard Time. Bag limit ten (10) per day, no possession limit. Entire state open.

RACCOON—Open season (hunting only): 12:00 noon, October 17, 1964 to midnight February 28, 1965. No daily bag limit or possession limit. Entire state open.

WEASEL, RED FOX, GRAY FOX, GROUND HOG, COYOTE—Continuous open season, entire state.

DEER HUNTING

DEER—Open season for bow and arrow only from October 17-December 6, 1964, both dates inclusive. Entire state open.

Open season for shotgun only—Zone 1, December 12 and 13, 1964. Zone 1 is an area bounded by highways on the east by U.S. 63 from the Minnesota line to Waterloo and U. S. 218 from Waterloo to its junction with Iowa 92. It is bounded on the south by Iowa 92 from its junction with U.S. 218 to Winterset, then north along U.S. 169 from Winterset to its junction with Iowa 141, then west on Iowa 141 to its junction with U.S. 71, then north on U.S. 71 to its junction with Iowa 175, then west on Iowa 175 to its junction with U.S. 59, then north on U.S. 59 to its junction with Iowa 3, then west on Iowa 3 to its junction with U.S. 75 at LeMars, then north on U.S. 75 to the Minnesota line.

Zone 2, remainder of the state, is open December 12-15, 1964, both dates inclusive.

Daily bag limit one (1) deer, possession limit one (1) deer, season limit one (1) deer.

Shooting hours each open day for bow and arrow, one-half hour before sunrise to one-half hour after sunset. Shooting hours for shotgun season, 8:00 a.m. to 4:00 p.m.

Deer season open only to Iowa residents holding special deer licenses. Deer of any age or sex may be taken.

WATERFOWL

DUCKS, COOT OR MUDHEN—Open season-SPLIT SEASON: October 3 and 4, 1964; and October 24 to November 26, 1964, both dates inclusive. Entire state open. Shooting is allowed each day from sunrise to sunset. Bag limit on ducks collectively other than mergansers is four (4) daily and eight (8) in possession and on coots is ten (10) daily and twenty (20) in possession.

The daily bag limit on ducks other than mergansers may not include more of the following species than: (a) two (2) wood ducks; (b) two (2) mallards or two (2) black ducks or one (1) of each; and (c) two (2) canvasbacks or two (2) redheads or one (1) of each. The possession limit on ducks other than mergansers may not include more of the following species than: (a) two (2) wood ducks; (b) four (4) mallards or black ducks, singly or in the aggregate of both kinds; and (c) two (2) canvasbacks or two (2) redheads or one (1) of each.

The limits on American, red-breasted and hooded mergansers, in the aggregate of these species, are five (5) daily and ten (10) in possession, of which not more than one (1) daily and two (2) in possession may be hooded mergansers. This is in addition to the bag limit and possession limits of other ducks.

GEESE—Open season: October 3-December 11, 1964, both dates inclusive. Shooting allowed from sunrise to sunset. Bag limit and possession limit five (5) and may not include, in the alternative, more of the following species than: (a) two (2) Canada geese or subspecies; (b) two (2) white-fronted geese; or (c) one (1) Canada goose or subspecies and one (1) white-fronted goose. The entire bag may be made up of either blue or snow geese or any combination of them.

WILSON'S SNIBE OR JACK SNIBE—Open season: October 3-November 21, 1964, both dates inclusive. Shooting allowed from sunrise to sunset except on opening day when the shooting hours will be from 12:00 noon, Central Standard Time, to sunset. Bag limit eight (8) birds and possession limit sixteen (16) birds.

ROSS' GEESE, GREBES, RAILS (Except Coot) AND GALLINULES, MOURNING DOVES, WOODCOCK, SWAN—No open season.

TRAPPING

Special regulations shall be enforced on all State Game Management Areas and Federal Wildlife Refuges. The trapping on all State Game Management Areas and Federal Refuges will be by "Permit Only" including a harvest quota on fur species to be determined by the Commission and the Bureau of Sport Fisheries and Wildlife. Permits for the State Game Management Areas are available from the State Conservation Commission, Des Moines, Iowa. The permits for Federal Wildlife Refuges are available from the various Refuge Offices.

On State Game Management Areas and the closed-to-hunting areas of the Federal Refuges, the seasons will open at noon the day following the close of the duck season, or noon November 14, 1964, whichever is the latter, and extend to midnight November 30, 1964, for mink, and to midnight January 31, 1965, for muskrat, and to midnight February 28, 1965, for beaver, badger, skunk, civet cat, opossum and raccoon.

MINK—Entire state open from noon November 14, 1964, to midnight November 30, 1964.

MUSKRAT—Entire state open from noon November 14, 1964, until midnight January 31, 1965.

BADGER, SKUNK, OPOSSUM, BEAVER, CIVET CAT—Open entire state from noon November 14, 1964, until midnight February 28, 1965.

RACCOON—Open entire state from noon November 14, 1964, until midnight February 28, 1965.

HARDY RINGNECK—

(Continued from page 78)

It is a difficult thing for many people to realize that hunting as presently done (cocks only) has little or no effect on the number of pheasants we will have to hunt the next year. The weather during the spring nesting season is the prime determining factor. Cold and/or wet spells are most unfavorable. It is not at all unusual to find that the spring breeding population is higher than the previous year's, but the resulting fall population is lower than the year before or vice versa. As an example, in 1959 we had one of the highest breeding populations on record, yet only a mediocre hunting season. Why? A cold, wet May resulted in a poor hatch. Last year with a good, but not unusual, breeding population and a very favorable spring, a considerable increase in birds occurred over most of the state, except parts of north central and northeast Iowa where local rains and storms prevented such an increase.

Long Season

Some people have expressed concern that the longer season may result in birds being too vulnerable in the event there is snow before the closing date. Actually, severe snowstorms or periods of prolonged snow of the type that may be hard on pheasants seldom occur until after the first of the year. And we should remember that during the latter part of the season the birds are much wilder and more difficult for the hunter to approach—snow or no snow. Even if a few more birds are shot under snow conditions, we will still have a considerable surplus of cocks left to harvest without hurting the population.

This same thought applies to the often expressed idea that the recent lengthening of the shooting hours, allowing hunting earlier and later in the day, makes the cocks more vulnerable, particularly late in the season. True, they are frequently moving to or from their feeding areas at these times; and here in Iowa this often means they will be on or near a road where hunters can find them more easily. Yet when the extra cocks are there to spare, no harm can come to the population if more are taken.

Let's go back to the pheasant picture for this year. The spring survey showed a slight decrease in cocks compared to last year. This would be expected on the basis of the higher winter sex ratio and higher percent of cocks shot. Yet the number of hens this spring was substantially greater than the year before. The excellent production of young in 1963 and the relatively mild winter last year were instrumental in providing more hens to nest in 1964. Weather during the nesting season was, on the whole, favorable, though not as good as in 1963. The primary surveys to measure production are made in

late summer. Last year these indicated the highest pre-hunting population, statewide, in 20 years. It is not surprising that a record harvest occurred. This year's surveys show that the 1964 fall population will be only slightly below last year's, and probably the second highest within this 20-year span.

Opening Weekend

Just because there are a lot of birds around does not guarantee an easy limit for everybody, even the first day. The weather and crop conditions on opening weekend have a strong bearing on opening weekend success. If a lot of the corn has not been harvested, birds will be harder to get. If the weather is on the nasty side, the hunter may be handicapped. If both conditions occur at once, it can mean real work to bag a bird. Past experience has shown it is quite possible to have what seems to be a better opening day hunt in a year with fewer birds than in a year with more birds but unfavorable

opening day hunting conditions. But remember, the birds not taken the first weekend will be there later in the season; and with a long season chances are good for fine hunting conditions sooner or later.

It is up to each hunter to learn how to outsmart Mr. Ringneck. After all, he isn't going to stand up, wave his white ring, and holler, "Here I am, come get me!" Last year this attempt at matching wits was made by more than 275,000 sportsmen. So determined were they to win the battle that they made nearly 1,550,000 pheasant hunting trips involving 5,800,000 hours. Last year the average hunter went after pheasant between 5 and 6 times during the season, and he totaled about 21 hours of pheasant hunting—or a little less than 4 hours per trip. He bagged 7 cocks during the season, or better than one per trip; and it took him about 3 hours hunting for each bird bagged. Of course the rate of success is much better than this

on opening weekend, when young birds have not yet been "educated"; but the extra effort it takes to bag a bird later pulls down the average. Late season hunting, which for the first time last year encompassed Christmas-New Year holiday season, furnishes a lot of sport for those able to take advantage of the added opportunity. About one-fifth of all pheasant hunting trips were made during this 12-day holiday period last year, and close to 20 percent of the total kill was made during that time. This is further evidence the extended season was worthwhile.

Make no mistake, pheasant hunting in Iowa is big-time business. This year "business hours" will again be 8:30 to 5 p.m., with "store" open from November 7 to January 3—a grand total of 120 days. There is a limit of 3 roosts per customer per day, with more than 9 in possession at one time. And it all works on a "self-service" system. It's up to you, the hunter, to find out under what "shelf" the "product" is hiding. Once you locate it, it's still up to you to get him the "check-out counter." Good luck!

REGISTRATION BUILDINGS FOR CAMPERS

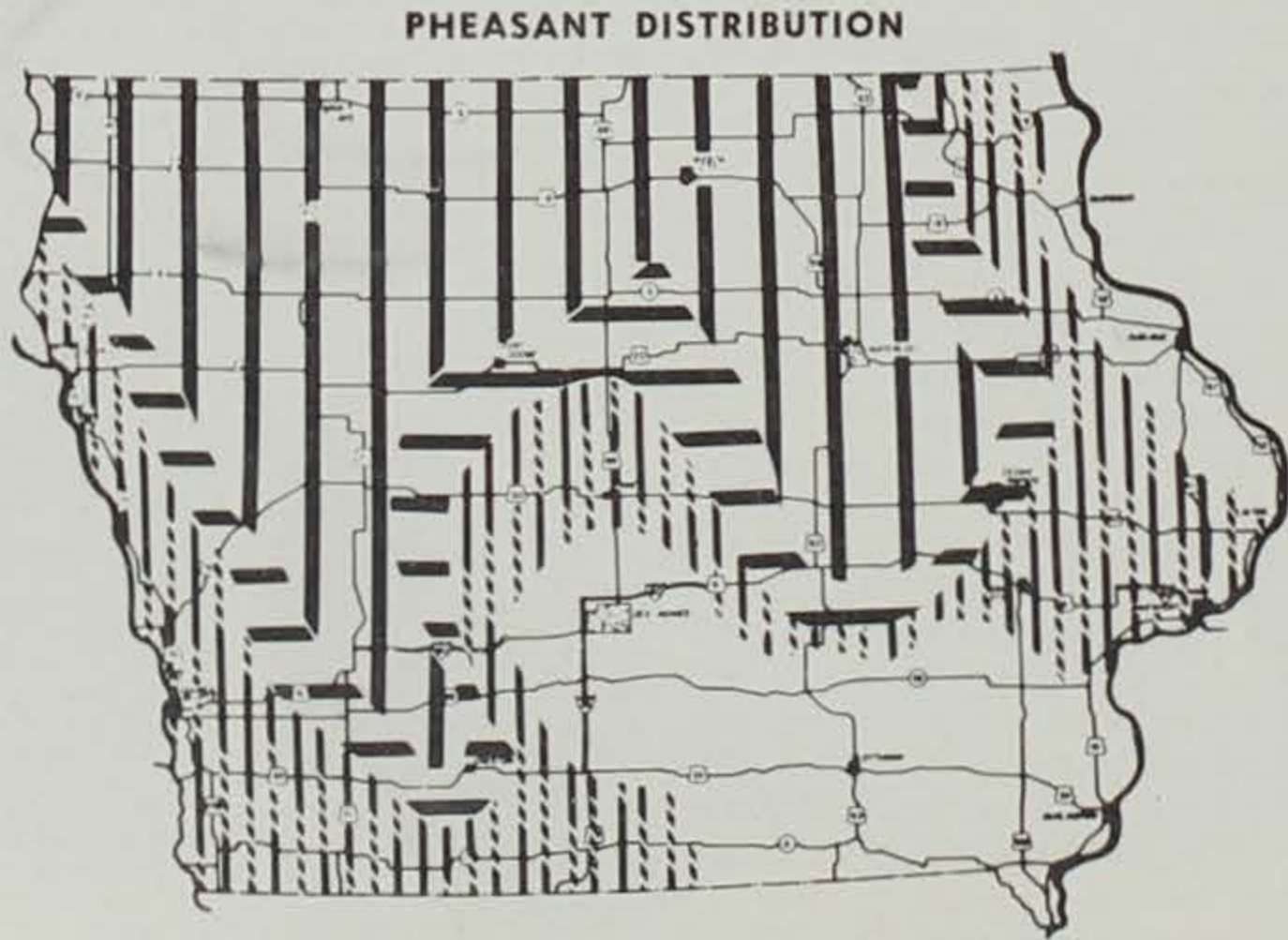
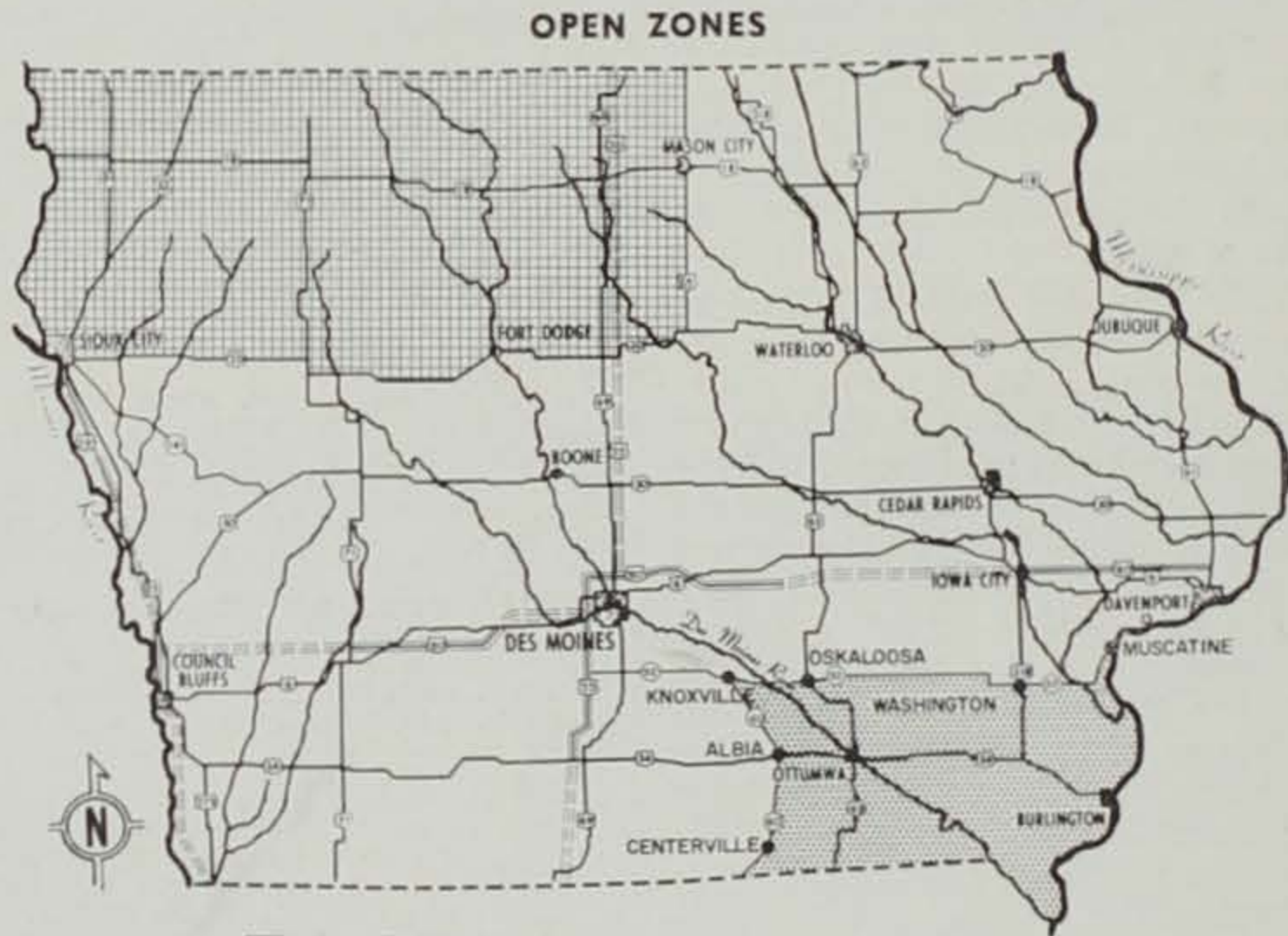
Jack Higgins

Campers in 15 of Iowa's State Parks this year welcomed the innovation inaugurated in the checker system. Rustic wood buildings were placed at the entrance to various camping areas to facilitate camper registration. The program has been so successful that an additional fifteen or twenty buildings will be readied for the 1965 camping season.

Women attendants have been hired to provide full-time checker convenience. Buildings that lack full-time attendants have posted check-in hours.

Upon arriving at the campground the camper need only check the building and register if someone is on duty. If no one there, he is free to pick a camp spot and start enjoying the park facilities, remembering to check in at the building during the stated hours. Campers who inadvertently forget to return at the proper time are visited by the Park Officer during the course of his regular rounds of the camping area.

Since 1961 the use of camp areas has more than doubled. Camping facilities were used by 160,569 people for 243,155 guest days in 1961. By 1963 reports were indicating 285,873 people spend 426,080 guest days in the camp areas of the parks. Figures for 1964 are not available, but preliminary reports indicate a tremendous increase.



Best Pheasant Range Good Pheasant Range
Fair Pheasant Range