

Volume 24

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1965 Hunting Prospects

Max Schnepf

Autumn is reserved for hunters, and this fall Iowa hunters will have a better chance than ever to bag a variety of upland game birds and mammals in the Hawkeye State.

But this year hunters must also be willing to accept a little bad with the good. The waterfowl situation is critical, especially in the case of mallards and pintails; and pheasant hunting will be spotty in northern Iowa as a result of the severe March blizzards.

Populations of game birds and mammals are subject to wide variation from year to year. The degree of variation is based almost entirely on the severity or mildness of weather and the availability of protective cover.

Iowa's hunting seasons are adjusted—in most cases—according to annual population fluctuations. An attempt is made to harvest as much of the game surpluses as possible and provide maximum opportunity to sportsmen. And although many of the same game management techniques can be applied to all game animals, each species presents a slightly different situation to game managers.

A pheasant population, for instance, is not affected by hunting. Only cock birds are harvested. Since the birds are polygamous, a sex ratio of one cock bird to 10 hens is more than sufficient to insure adequate reproduction. In actuality a pheasant population is limited by the quantity and quality of winter cover and nesting cover available. If surplus roosters are not harvested by hunters, the cock birds compete with hens for protective cover during severe winter weather.

In the case of quail there is no selective shooting of one sex or the other by hunters. However, a very high annual turnover is characteristic of a quail population, and if surplus birds are not harvested by hunters, they will succumb to natural causes anyway.

Waterfowl populations are not characterized by high annual turnovers like the gallinaceous birds, such as pheasants and quail. Population levels are determined by the quantity and quality of nesting habitat, and since these birds migrate to favorable climate areas in the winter, they are rarely subjected to winter kill. Hunting pressure is a limiting factor to waterfowl populations in that it can create a shortage of brood stock for the nesting habitat that is available each spring.

Squirrel and rabbit populations, like upland game bird populations, are limited by weather and availability of protective cover and are subject to high annual turnovers. Since these species are generally underharvested, however, seasons and bag limits remain long and liberal.

Deer on the other hand can be stockpiled so to speak from year to year. And because these larger mammals do not have the reproductive capabilities characteristic of small mammals and birds, populations can be overharvested if not regulated.

Following are the hunting prospects for each species.

PHEASANTS:

The last two years Iowa hunters have enjoyed some of the finest pheasant hunting ever in the Hawkeye State. In fact last year Iowa had the distinction of recording the highest pheasant harvest of any state in the United States—1,737,000 ringnecks.

Two severe March blizzards took their toll of ringnecks in northern Iowa, however. As a result pheasant populations are down approximately 50 percent in the northwest and north central part of the state. Ringneck populations in parts of the state not hit by the storms are as high or higher than last year. Iowa's pheasant population today is comparable to statewide populations in the early 1960's before the two bumper years.

Hunting will be good but spotty in northern areas of the state, excellent in west central Iowa and fair to good in the remainder of the state.

(Continued on page 72)



Jim Sherman Photo.

ere is more to becoming a hunter than aiming a gun and pulling a trigger. For the young man about to embark into the wonderful world of hunting, there are many important things he should know about hunting basics. Fathers, his first step in that direction begins on "opening day."

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CIRCULATION THIS ISSUE 52,000

COMMISSION MINUTES

August 17, 1965

Oelwein, Iowa

FISH AND GAME

The Commission met with a delegation from the north Kossuth Rod and Gun Club and heard recommendations concerning the pheasant situation in that area.

Hunting and trapping seasons were established for 1965.

Approval was given to exercise an option on 66 acres of land at a total cost of \$7,345 adjacent to High Lake in Emmet County.

Approval was given to exercise an option on 40 acres of land adjacent to Big Springs in Clayton County at a cost of \$100 per acre for access to the Big Springs Trout Hatchery.

Approval was given to institute condemnation proceedings on the Fitzgerald tract of 30 acres at the Hendrickson Marsh site in Story County.

The Commission declined to accept an offer by Weed to sell four lots on Spirit Lake at a total cost of \$28,000.

A proposal concerning property exchange with the Izaak Walton League adjacent to Dudgeon Lake in Benton County was heard and the Commission asked for a specific offer in writing.

Approval was given to temporary department rules which would regulate hunting on Lake Odessa and other refuges.

Approval was given to award a contract to the Dahm Construction Company for \$300,455.99 for the construction work on Otter Creek Marsh in Tama County.

Approval was given for a construction permit for the relocation of a transmission line by Iowa Electric Light & Power Company on Otter Creek Marsh.

Approval was given for the Director to sign a new agreement for financial support of the Cooperative Fisheries Research Unit at Iowa State University.

Approval was given to the appointment of Kenneth Kakac as Superintendent of Enforcement.

The expenditure of \$3,000 for water quality studies on the Coral-

ville Reservoir in cooperation with various other agencies was authorized.

A report was given by the Superintendent of Engineering concerning difficulty in obtaining materials for construction on Miami Lake in Monroe County.

LANDS AND WATERS

Approval was given to start immediate work on seven capital improvement projects in state parks.

A resolution was passed stating that a five acre tract adjacent to Lake Anita in Cass County had no conservation value and recommended to the Executive Council that this land be sold.

Approval was given to exercise an option on four acres of land in Lacey-Keosauqua State Park at a total cost of \$7,500.

A report was given by the Director on the proposed development of the Decatur Complex on the Missouri River.

COUNTY CONSERVATION ACTIVITIES

Franklin County received approval for the acquisition of one acre of land for \$300 for the development of a picnic area adjacent to the town of Alexander.

Grundy County received approval for the acquisition of .50 acre of land as a gift for the development of a highway safety rest area approximately two miles east of Grundy Center.

Grundy County received approval for the acquisition of 3.30 acres of land at a total cost of \$400 for the development of a spring fed fishing pond located eight miles northwest of Grundy Center.

Monona County received approval to acquire 253 acres of land by a renewable 10-year lease from the Iowa State Highway Commission for the purpose of developing a wildlife area adjacent to Interstate 29 near Whiting.

Sac County received approval for the acquisition of 67 acres of land at a total cost of \$10,000 to be called the Hagge Recreation Area and located on the Raccoon River 2½ miles south of Sac City.

Sac County received approval for the acquisition of 18.4 acres of land for \$1,840 located adjacent to and east of the Hagge property on the Raccoon River.

Sac County received approval for an additional 16.23 acres of land to Grant Park on the Raccoon River two miles northwest of Auburn for use as an Outdoor Classroom and as a wildlife and timber preserve.

Appanoose County received approval for a development plan for the Cincinnati County Park area for use as a picnic and playground area.

Fayette County received approval for a development plan for their 40-acre Downing Park located two miles west of Westgate.

Jones County received approval for a partial development plan for the construction of a 25-acre artificial lake on their multiple

Conservation Forum

Dear Editor:

I understand that it is permissible to use and carry a handgun while hunting and target shooting if the handgun is worn in an holster and in plain sight so that everyone can see it.

Is this true, or is it necessary to have a concealed weapons permit by a minor while hunting and target shooting?

J. B.

Dubuque, Iowa

It is permissible to hunt or practice with a handgun without a permit so long as it is not concealed. Regarding transportation of handguns, the law states that one or more unloaded pistols or revolvers can be carried without a permit so long as they are carried either in the trunk compartment of a vehicle or in a closed container which is too large to be effectively concealed on the person or within clothing. The same applies to minors. Anyone who carries a concealed weapon needs a permit.—Ed.

Dear Editor:

I am in the process of making a crossbow with the assumption that hunting with it in Iowa in season is legal. A friend of mine told me this is not true. Would you please tell me if I am correct?

D. M.

Ackley, Iowa

Crossbows can be used in Iowa on all game except deer and waterfowl.—Ed.

Dear Editor:

I am interested in purchasing some live channel catfish for stocking in a private pond. Can I buy these fish from trot line fishermen on the Mississippi?

D. M.

Sturgeon Bay, Wisconsin

You can purchase catfish from commercial fishermen, taken from the Mississippi or Missouri River.—Ed.

use outdoor recreation area seven miles east of Anamosa.

Kossuth County received approval for a partial development plan for a 53-acre artificial lake located on the Highway 169 area.

Page County received approval for a revised development plan for Nodaway Park which would include relocated park roads, a four-acre fishing lake, forest maintenance trails, a primitive camping area for youths, etc.

Winneshiek County received approval for Baker Park for scenic, picnicking, parking, camping, boat launching facilities on the Upper Iowa River.

Wright County received approval for Pikes Timber Park for picnicking, camping and fishing access to the Iowa River, hiking, a naturalist reserve and an outdoor classroom.

Chickasaw County received approval for acquisition by lease of a portion of the Little Cedar River for the purpose of doing stream improvement work to create better fishing habitat.

A report was given by the County Parks Coordinator concerning remedial work on the Humboldt Dam.

GENERAL

The Commission heard George A. Wilson of Des Moines describe a proposed subdivision and lagoon to be built at Lake Manawa and granted a construction permit contingent on certain restrictions.

The Commission reviewed and

approved an operating budget 1965-66 fiscal year.

Travel requests were approved to the Natural Resources Council of Illinois Annual meeting at Mount, Illinois; the Conservation Business Management Association meeting at Milford, Michigan; the International Association of Game Fish and Conservation Commissioners and American Fishery Society meetings at Portland, Oregon; to the Association of Conservation Engineers meeting, Boise, Idaho.

A gift of an island in the Mississippi River located near Waukegan Junction in Allamakee County by Mr. and Mrs. Noble of Oelwein was accepted by the Commission.

Informational reports include the planning section's preliminary report on non-resident use in Iowa funds allocated by the Bureau of Outdoor Recreation for work in Iowa; a report by the Waters Section concerning boat registration on the Badger Creek watershed planning for dredging and a lake trade on Casino Bay in Story Lake.

The weird mournful cry of the loon has given rise to the phrase "crazy as a loon," but the bird is far from crazy.

During one of their huge migrations, a herd of caribou was seen to form an unbroken line for miles long with the large animals walking 12 and 15 abreast.

WHAT THE LAND AND WATER CONSERVATION FUND MEANS TO IOWA

Bill Brabham

Director of Planning and Coordination

In 1958, Public Law 85-470, passed by the Congress of the United States, established a National Outdoor Recreation Review Commission (ORRRC). ORRRC was charged with the task of making a complete study of outdoor recreation resources in this country.

Following three years of intensive survey work, which included an inventory and evaluation of existing outdoor recreation facilities and resources and a projection of what would be needed in the future, ORRRC suggested that a national outdoor recreation policy be set. The Commission recommended expansion, modification and intensification of outdoor recreation programs and that guidelines be set for management of outdoor recreation resources.

More important, however, was the recommendation that a Bureau of Outdoor Recreation be established along with a Federal grant-in-aid program to states.

Immediately following this study report, the Bureau of Outdoor Recreation was established. On September 3, 1964, Public Law 88-578, the Land and Water Conservation Fund Act, was signed by the President to become effective January 1, 1965, under the direction of the Secretary of the Interior with the Bureau of Outdoor Recreation as the Federal administrative agency. Financed by admission fees on Federal recreation areas, proceeds from the sale of surplus Federal real property and a Federal tax on motorboat fuel, the Land and Water Conservation Fund will make approximately \$450 million available for state and Federal outdoor recreation purposes over the next 25 years.

To qualify for participation in the Land and Water Conservation Fund Act, Iowa must prepare a comprehensive statewide outdoor recreation plan. The plan must be approved by the Bureau of Outdoor Recreation before the state is eligible to apply for grants-in-aid.

The Governor of Iowa has designated the State Conservation Commission as the official agency to formulate this plan and to accept and administer grants-in-aid received in the program. The Conservation Commission's Director is the official State Coordinator of the Land and Water Conservation Fund Act in the Hawkeye State.

Iowa's statewide outdoor recreation plan will not be a composite of individual local plans, but a broad plan based on supply, demand and need. It will:

1. Include an inventory of existing and potential outdoor recreation facilities including private facilities.
2. Determine the present and projected demand for all types of outdoor recreation facilities.
3. Determine the present and projected need for additional facilities by relating demand to supply.
4. Formulate a program of implementation to meet these needs.

The state plan, anticipated to be submitted this month to the Bureau of Outdoor Recreation for approval, will be all inclusive and all factors will receive consideration.

While many Iowans spend a week or two each year visiting the scenic coastal or mountain regions of the United States, this type of vacation or recreation is of short duration. Most of their leisure time must be spent near their homes. As work weeks become shorter, more leisure time will be available. The demand for local recreation will increase proportionately.

Iowa's population is expected to increase by two-thirds between the years of 1960 and 2000. During the same period, the nation's popula-



tion will double, and participation in outdoor recreation activities will triple.

The Land and Water Conservation Fund Act is founded on the principle that adequate outdoor recreation facilities can be provided only if all levels of government cooperate and share the task of developing recreation facilities. Fifty percent of all funds received by the State of Iowa in the program will be reallocated to political subdivisions of the state.

The Act provides that funds may be used for comprehensive recreation planning, land acquisition and development of outdoor recreation facilities; however, there are other Federal funds available for planning so Land and Water Conservation Fund money will not be reallocated to local levels for this purpose. Fund money cannot be used for maintenance of an outdoor recreation area.

To aid local agencies, the Conservation Commission has prepared a booklet, "Guidelines for Local Participation in Iowa." This booklet, available from the Conservation Commission, sets forth general requirements for participation in the grants-in-aid program.

Federal funds will not be adequate to meet all needs or sufficient to match all state and local funds which may be available for land acquisition and development of recreation facilities. Therefore, it has been and will be necessary for the Conservation Commission to develop a system of project priorities.

Recreation regions for Iowa have been determined as an important part of the recreation planning process. They will aid in determining which projects merit Federal cost-sharing and in which order. Priorities will be used on demonstrated need and the equitable distribution of funds among the various recreation regions, levels of government and classes of outdoor recreation areas considering population and resource distribution. And it should be specifically pointed out that the Land and Water Conservation Fund program is not intended to replace existing programs but rather supplement them in the effort to provide outdoor recreation facilities in Iowa.

To date, Iowa has received two grant-in-aid apportionments under the Land and Water Conservation Fund Act. These funds are available for the fiscal year and remain available to the state on a dollar for dollar matching basis for two additional fiscal years if they are not spent immediately. Receipt of the funds hinges on whether or not the state's comprehensive plan is approved by the Bureau of Outdoor Recreation.

The first grant-in-aid apportionment of \$157,868.00 covered the period of January 1 to June 30 of this year. This allocation will be available to Iowa for qualifying projects through June 30, 1967.

The allocation for the present fiscal year totaled \$1,283,864.00 and can be spent anytime before June 30, 1968.

The Land and Water Conservation Fund will be a tremendous boost to the development of outdoor recreation facilities in Iowa. It is apparent that we now have funds to carry out the ambitious acquisition and development programs through sound cooperative planning by the Conservation Commission and local units of government.

Conservation Conference Dates Announced

"Effective Conservation Teaching—How to Do It" will be the theme for this year's Fall Conservation Conference to be held October 8-9 at the State 4-H Camp near Luther, Iowa. At least 100 teachers from all parts of the state are expected to attend the meeting.

Reservations can be made through Mr. Charles Ballantyne, Extension Soil Conservationist, Iowa State University, Ames.



Jim Sherman Photo.

Four Iowa Conservation Commissioners pose with Secretary of the Interior Stewart Udall at the Tourism and Recreation Conference held recently in Backbone State Park. From left, N. K. Kinney, Earl Jarvis, Udall, Ed Weinheimer and Mike Zack.



Since Iowa's hunter safety program was initiated in November of 1960, more than 18,000 young men and women have participated in training programs in 94 counties. Over 2,000 volunteers are trained and certified instructors.

Most hunting in Iowa is on private land. Respects for hunting on private land.

KEEP SHOOTING A SAFE SPORT



Be sure barrel is always clear of obstructions. Use ammunition only of the proper size for the gun you carry.



Never shoot a bullet at a flat hard surface or water. Always be sure your backstop is adequate, and be sure of your target before you pull the trigger.



Watch that muzzle! Carry it at anything you

Photo
Jim

the safely, an
not want to sho



Respect private property! If possible make arrangements and always ask permission.



Never climb a fence or jump a ditch with a loaded gun. It's not only dangerous to you but to your hunting partner.



Guns should be carried in cases to the shooting area. Take them down or have the action open when not in use.



When crossing a fence, one hunter should hold unloaded guns while the other climbs over, then hand guns over.

Photo Feature by Jim Sherman



Gun safely, and never point it want to shoot.



While relaxing, unload your gun and place it in a position where it cannot fall. Untended loaded guns cause accidents.



Never pull a gun toward you by the muzzle. A gun must be unloaded and taken down or in a case while in an automobile.

FOLLOW THAT MUSKRAT

Ron Schara

Few muskrats which have been trapped in Iowa have lived to tell about it. There are some in Elk Creek, however, and it is probably the talk of the marsh in muskrat circles.

For the past two summers, muskrats have been live-trapped, tagged, examined and released to roam again as part of a muskrat study being conducted by two Iowa State University wildlife biology students, James Karr and DeVere Burt.

Their study on the 1,600 acre marsh, located four miles east of Lake Mills, is administered by the Conservation Commission and is paid for by Pittman-Robertson Funds.

Although the students are interested in anything pertaining to the furbearer's life, they are particularly trying to learn what happens to a muskrat population under conditions of fluctuating water levels. Muskrats, being aquatic animals, spend most of their lives in or near the water. Their homes are usually built on the water in the form of lodges or in dirt bank burrow systems at the water's edge. Consequently, the stability or instability of the water level is of primary importance to the animal's well-being.

Elk Creek Marsh is a waterfowl area. At three points on the seven and one-half mile long marsh there are or will be water control structures. Two of the structures have been completed and plans are being made for the third structure. These structures will allow the water levels of the northern Iowa marsh to be reg-

ulated for the benefit of waterfowl.

If Elk Creek is to be managed primarily for ducks, why the concern for muskrats? Muskrats, during their daily activities play an active, but indirect role in the management of marshes. Marsh areas with little or no open water are not favored by most nesting ducks. A marsh with dense stands of emergent vegetation interspersed with small pockets of open water is preferred. Muskrats, because they are vegetarians, cut out pockets of vegetation for food and for housing material thereby creating the preferred type of waterfowl habitat.

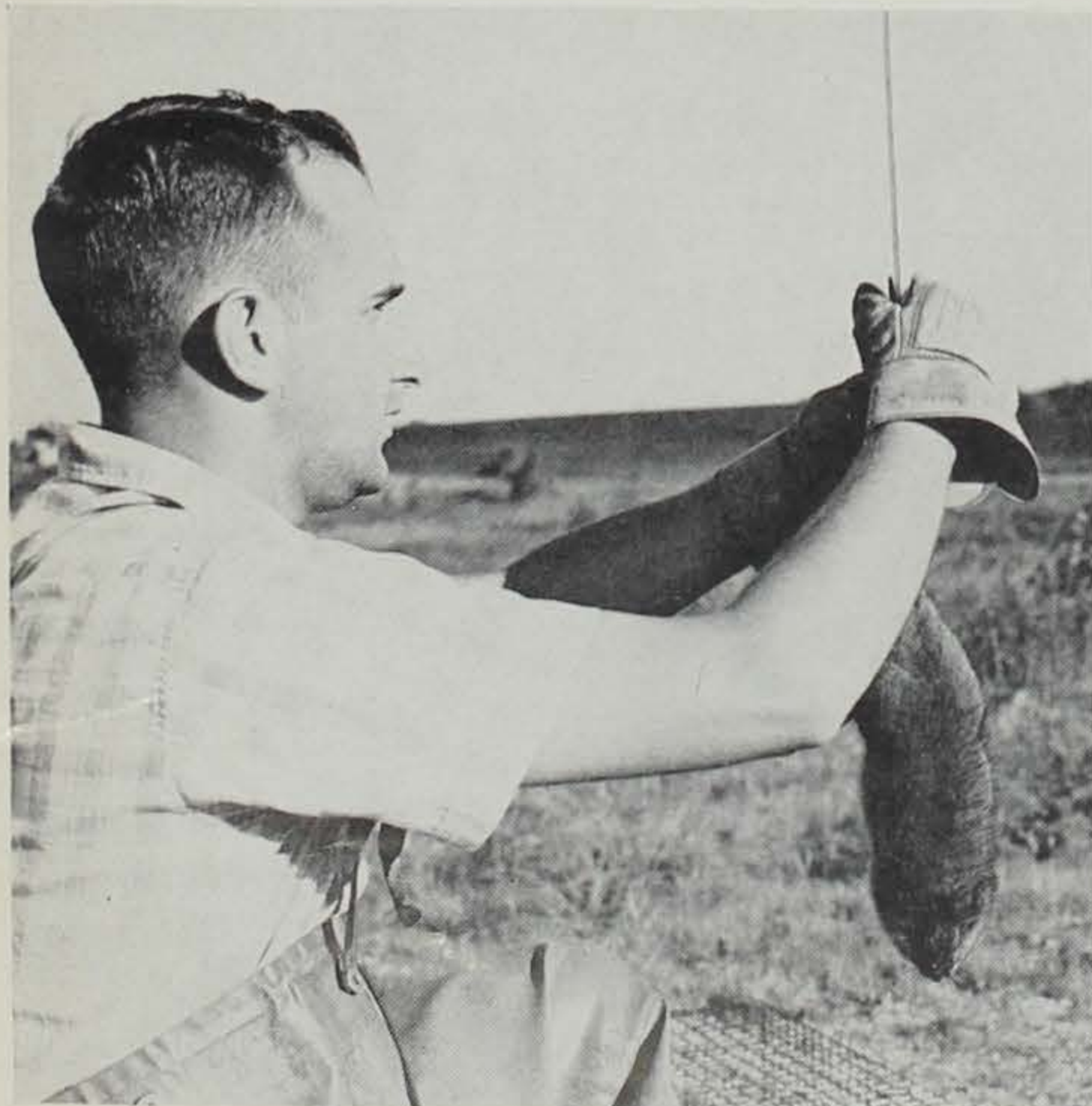
On the other hand, with too many muskrats, too much vegetation is removed leaving mostly open water and no protective cover or nesting material for ducks. There is, then, a point where the number of muskrats and the amount of vegetation is at an optimum level.

Since the muskrat is a cog in the wheel of marsh management, it is necessary that man knows just how important he is, how to control his numbers and what happens to the small furbearer when man changes or fluctuates the water level of a marsh. The two students' study activities are an attempt to answer some of these questions.

TRAPPING MUSKRATS

The muskrats are trapped with box traps which are placed in muskrat runways along the shore. Apples and carrots are sometimes used for bait; however, bait is not necessary. Once caught, the furbearer is held by the tail and

(Continued on page 72)



Ron Schara Photo.

Each muskrat is measured, aged, sexed and checked for disease, then released.

Principles of Game Management: Part Three

GAME REFUGES

John Madson and Ed Kozicky

The history of game management includes a long roster of cure-all remedies such as restocking, restrictive laws, predator control, habitat improvement and game refuges. At some time, each has been hailed as the final solution to game scarcity, but to date none has been effective in increasing game under all conditions.

One of the most ancient of these principles, the game refuge, can be highly effective when applied properly to certain situations. It is not, however, a cure-all for game scarcity.

A refuge may be an inviolate sanctuary intended to preserve a rare or vanishing wildlife form. For the purposes of this discussion, however, a game refuge is an area that provides breeding ground, sanctuary or other vital services to game in an effort to cause and support a larger game supply. The effective refuge corrects or alleviates the most serious defects in the adjacent range—defects that depressed the game supply in the first place. If, for example, game is limited by excessive hunting pressure, the refuge should be set up in an area naturally used by game as a refuge during the hunting season. Or, if the game range is deficient in food, water or cover, the refuge must be set up in an area where these necessities can be assured.

Game managers recognize three general types of refuges: 1) big game, 2) small game, and 3) waterfowl.

The goal of a big game refuge is to protect breeding stock and increase the big game population. But in doing this, the refuge can defeat its own purpose. Deer and elk, for example, may build up a breeding momentum that is difficult to retard, and they can increase to the point where the available food supply is exhausted. The classic example is the Kaibab Plateau in northern Arizona, where total protection starved countless deer and damaged browse plants almost beyond recovery. As a result, regulations governing many big game refuges today are quite flexible and permit game managers to open special hunting seasons for the good of herd and habitat alike.

Refuges for small game can make important increases in the game supply if they contain adequate food and cover for year-around use. Such refuges should be small—seldom more than a few acres—so that close-ranging small game animals can easily move out of the refuge and become available to hunters. Unfortunately, most ideal small game habitat is in premium farmland, where initial costs and long-range expenses prohibit the development of extensive refuge systems.

A waterfowl refuge may be a breeding area, wintering area or

flyway refuge. Breeding and wintering areas are concerned with reproduction and survival until the next breeding season. The flyway refuges provide rest, food and safety during long migration flights. They are of immediate interest to the hunter, for such waterfowl way-stations strung between breeding areas and wintering grounds cause ducks and geese to linger in districts where they might otherwise be quickly "burned out" by hunting pressure.

Refuges are essential to the future of ducks, geese and the sport of waterfowling. But state and federal refuge programs—hamstrung by political borders, public apathy, lack of funds and the conflicting programs of other agencies—cannot keep pace with rising waterfowl needs. Dan Jansen, director of the Bureau of Sport Fisheries and Wildlife, recently stated that we have only half as many waterfowl refuges as are needed. Bad as this situation is, it will surely grow worse for it is improbable that public wetlands can be acquired as swiftly as private wetlands are being destroyed.

Although a game refuge is usually a legal unit with fenced or posted boundaries, some refuges are simply natural coverts inaccessible to man and policed by nature. They may be remote tablelands far from roads, dense swamps, tracts of virgin forest, or simply blank, open range where game is protected by sheer space. These unofficial refuges may even be heavy cover within city limits where shooting is prohibited, or safety zones around farm homesteads.

Where such natural refuges exist, the wise game manager may limit his refuge acquisition and development and channel his funds into other game management efforts.

The game refuge is not the only answer to greater game supplies, just as predator control and other management devices are not panaceas. The refuge is simply one tool which, applied in conjunction with other basic principles, can increase game. But blind reliance on refuges alone can waste money, time and effort, and dampen public enthusiasm for game management programs.

The horned toad is not a toad. It is a lizard. It does not lay eggs, but gives birth to living young.

The black-footed ferret, whose numbers have been reduced to near-extinction, is protected by law in New Mexico.

Bearded seals live in the Arctic across the entire top of North America from western Alaska to Labrador.

MARSH PICNIC

Jack Higgins

Ignored by man for all but a brief time during waterfowl and trapping seasons, Iowa's marshes pulse with life. During the growing season, rank, luxurious vegetation crowds outward from shore and conceals most of the drama of life that is unfolding. And it's the uninviting vegetation that keeps people out. During nesting season this is good. But for a period in late summer everyone should take time to venture onto a marsh and see what is going on.

Life in a marsh is a 24-hour a day affair, but activity is highest during twilight hours. To gain a meaningful experience, include at least the head or tail end of the day as part of a marsh observation period. Go equipped to stay for an extended period of time.

Basic provisions include standard observation gear such as binoculars, identification keys and cameras, plus plenty of water and a picnic lunch. Marsh visitors also need a canoe or light aluminum sportboat that can be paddled, since bladderwort and water smartweed make the use of a motor impossible. Besides, a motor's roar will spook wildlife and create a visual impression of a barren wasteland.

Goose Lake, located northwest of Jefferson in Greene County, is typical of the many fine marshes managed by the State Conservation Commission for the people of Iowa. It is a 456 acre, shallow marsh that was once drained and filled at great expense. The boggy soil refused to be tamed by man, however, and the project was abandoned. The Conservation Commission has incorporated the old tile outlet into a simple control structure that now helps maintain a good waterlevel.

Contrary to the impression one gets by viewing the area from the roadside, the marsh isn't a solid mass of cattails. These tall, water-loving plants are restricted to areas that exactly match their needs. If the water gets too deep, the wind uproots them, and they blow away to die. The master builder of the marsh, the muskrat, also continually thins their ranks. Some he uses for building the lodge or house in which his family will be reared; others he uses in constructing his feeding houses or platforms, and still others he eats. Because of the muskrat's continual activity, there are broad stretches of open water connected to smaller water areas by boat-width channels.

From the parking area near the control structure a shallow dredge channel leads directly to the heart of the muskrat's hidden domain. And once the noise of launching and loading canoes has subsided, the adventure of marsh exploration can begin.

The quiet approach of canoes

will cause little excitement among the marsh inhabitants. They seem to think that since the intruders are on the water, they must belong there. The inhabitants don't throw all caution to the wind, however. Even the silly sounding coot will duck into hiding, if he feels you are getting too close.

At Goose Lake one need not paddle too far before spotting an unusual—to the average man, at least—species. Near the put-in spot a pair of least bitterns have made themselves a home. They might not be visible, but a short, soft *coo-coo-coo* call indicates they are still around. Careful observation might net a rare photograph of this tiny heron.

The restored marsh has drowned out a grove of trees that runs the entire width of the area. Near one side is a large rookery of black-crowned night herons. The adults will probably fly at approach, but they'll soon settle down. The observer should have his camera ready for instant use. The black-crowned's stark form and almost pilgrim like colors of black, white and grey, when silhouetted against the sky and framed by naked tree limbs, creates a never-to-be-forgotten moment. One word of caution. When the young herons become frightened, they regurgitate their food. Don't paddle any closer than necessary to get a good picture.

The predominant bird species nesting in the marsh is the coot. Although this dark-colored, lobe-footed bird paddles around much in the same manner as a duck, it actually is a member of the rail family. One of its major distinctions is that it has a beak like a chicken rather than a bill like a duck. Long before he comes into view, one can hear the guttural *kuk-kuk-kuk* call that signals his every activity.

If laughter can be stifled when this fellow flaps his wings and makes a dash across the surface of the open water, it's a miracle. The mad, flurry of rapidly paddling feet made during a helter-skelter take-off helps explain the saying "crazy as a coot."

Another unusual bird inhabiting the summer and fall marsh is the yellow-headed blackbird. It's robin-sized, and, as the name suggests, has a yellow head. In flight a white patch appears in the wing feathers. By fall there are huge flocks of blackbirds constantly swooping back and forth across the waving cattails making the job of spotting the yellow-head more difficult. Diligence with binoculars will pay off.

Occasionally, paddling will lead one down a blind channel that ends at an abandoned muskrat lodge. Stumbling upon one of these spots creates emotions similar to those



At an installation demonstration in August, Chickasaw County Conservation Board members demonstrated the ease with which their stream improvement device can be installed. The water was six inches deep before installation of the structure.

POOR MAN'S STREAM IMPROVEMENT

Three years ago, Chickasaw County Conservation Board members came up with a poor man's stream improvement device that is capable of creating quality fish habitat with little effort.

Constructed of discarded sawmill slabs, the funnel-like device consists of two wings protruding into the stream from opposite banks. The wings constrict the stream flow and accelerate the water through the mouth of the funnel. As a result, holes are carved in the stream bed along the wings and through the funnel's mouth.

The stream improvement technique is especially effective on the long, broad sand flats characteristic of many small streams. Keeper smallmouth bass were taken from the hole around one of these funnel arrangements within one week after the device was constructed on the Little Cedar River near Nashua. Previous to construction, the stream bed of the Little Cedar in this area was nothing but a long sand flat covered by an average of four inches of water.

experienced while viewing a deserted house or farm. The senses are awakened by the sight, the lack of sounds, and the odor of methane gas rising from the dismal scene. What was it that caused the rats to leave? No one can tell for sure. Maybe it was disease, maybe a natural predator, or maybe a trapper. Whatever the answer, it causes one to pause.

When it's time, and for a change let your stomach dictate "time" to you, pull into a cattail stand and have a picnic right in the canoe! Even between the "pass the pickles," and "have some chicken," marsh life will go on. Perhaps you will choose some coot's favorite play spot. If you have, he'll noisily tell you about it from the safety of near-by vegetation.

For comfort's sake, be sure to take along a poncho, or other suitable rain gear for each member of

The sawmill slabs are sunk three to four feet into the stream bed behind a nozzle on the hose of a centrifugal pump. Once the slabs are set, the tops are cut off within five or six inches of the water surface. The entire structure can be installed in 20 minutes.

Cost of the Chickasaw County Conservation Board project is almost nominal. A centrifugal pump was purchased, and, of course, gasoline to operate it. Nearly all the labor involved is donated by sportsmen's clubs, although paid County Conservation Board employees assist in the installation. Most of the work is done late in the year when water levels are low.

Six of these stream improvement devices have been installed over the past three years on the Little Cedar River, and all have remained intact to date. Plans call for the installation of 25 additional structures yet this fall on the East Wapsipinicon, Little Turkey and Crane Rivers as well as the Little Cedar.

the party. They might not be needed, but if they are, their protection during a sudden shower will be appreciated. By the way, it is quite an experience to be in the marsh when an unexpected rain comes driving across the prairie. Pelting drops hit waving cattail fronds and create a sound that's beyond description.

Are these few impressions all that a marsh explorer can expect? Hardly! A marsh is one of the richest environments on the face of the earth and a day on one will be as rich as the beholder's imagination and eyesight—have a picnic!

The mountain beaver is not a beaver at all but a burrowing rodent of the Pacific slope.

The word "mouse" is descended from the ancient Sanskrit word "musha" meaning thief.

HUNTING PROSPECTS—

(Continued from page 65)

The pheasant season opens November 13 and closes January 2, 1966.

QUAIL:

Last year, quail hunters enjoyed the best hunting in Iowa in years. The outlook for the coming season points to comparable if not even better hunting than last year.

Despite a rough winter in northern Iowa, the winter was mild in southern Iowa which constitutes the primary quail range in the state. Sight counts made last spring and in July indicate a population similar to last year. Summer whistle counts are up from last year, however, in southern Iowa.

Hunting prospects are excellent in south central and southeast Iowa.

Because of the optimistic situation, Iowa's quail season which opens November 6 has been lengthened nearly a month over last year. It closes January 31, 1966.

WATERFOWL:

Although water conditions are the best they have been in a decade in Iowa and throughout most of the pothole country of the United States and Canada, the duck situation is critical, particularly in the case of mallards and pintails. An overharvest the past few seasons has cut brood stock populations to a point where the improved nesting conditions cannot be fully utilized.

In Iowa, wood duck and blue-winged teal reproduction was up as a result of improved nesting conditions. These two species are the most important nesting ducks in the state.

The coming season should provide shooting comparable to the last year or two mainly because of stable or slightly increased populations of ducks other than mallards and pintails.

Iowa will depart from the split season setup of the last two years and return to a 40-day season which opens October 23 and closes December 1.

Goose populations are at least stable if not increasing. Hunting should be comparable to the last year of two and might be termed good.

Iowa's goose season opens October 2 and closes December 10.

RABBITS:

No change pretty much describes the status of the cottontail rabbit in Iowa. Statewide rabbit counts made in July indicate a stable population. The March blizzards cut northern Iowa's rabbit population slightly, but populations in that part of the state are still above the population average for the 14 years previous to last year.

What population drop occurred in northern Iowa was offset to a great extent by an increase of rabbits in western Iowa.

Cottontails are generally underharvested in Iowa, especially early in the season. Best hunting prospects are in southern and western Iowa. Hunting prospects in the northern and eastern parts of the state are fair.

Iowa's rabbit season opens September 11 and closes February 20, 1966.

SQUIRRELS:

Squirrels, like rabbits, are generally underharvested in Iowa. Both gray and fox squirrels are abundant, and their populations could absorb more hunting pressure than they have received in past years.

Hunting prospects for bushytails can be termed very good in southern and eastern Iowa and good in the northern and western part of the state.

Squirrel season opens September 11 and closes January 2, 1966.

DEER:

Iowa's deer population is up approximately 18 percent over last year.

FOLLOW THAT MUSKRAT—

(Continued from page 70)

placed into a wire funnel which holds the animal secure so it can be tagged with a small numbered ear tag. The animal is also checked for wounds or signs of disease, then released.

Information, such as where and when the animal was caught, its general condition, age, length, and sex, is recorded. When the same muskrat is recaptured at a later date, a map is made illustrating how far the animal has moved since the first trapping. The map also illustrates muskrat territories and lodge locations.

Running the trap lines has produced some unusual surprises for the trappers. At different times upon checking a trap they found not a muskrat but weasels, raccoons, woodchucks, rabbits, mice, birds, and of course, skunks. One time they trapped a muskrat that had lost its tail. With no "handle" to hold the muskrat, it provided some real excitement and teeth marks on their gloves before the tail-less muskrat was released again.

The muskrat study is actually part of an over-all study of the Elk Creek Marsh. In years to come, annual census will be taken of the waterfowl in the area and surveys of the vegetative growth and change will be recorded.

Hopefully, in the future, an overall picture of the dynamic character of a marsh area and its inhabitants will be painted.

In regard to the muskrat study it is too early yet to state any definite conclusions. However, the students feel they are obtaining information that shows a close relationship between the muskrat and the water levels.

For example, muskrats seem to demonstrate a change in where they build their homes according to the water level. During times of low water they utilize burrow systems, but during high water stages they build lodges out over the water. When there is a drastic drop in the water level, the students feel muskrats become more vulnerable to predation from mink and farm dogs. This is because the muskrat must seek out a new home closer to the water and, in doing so, he exposes himself to natural enemies.

Nature's formula of who effects who or what changes what, is complex and difficult to understand. Nature might be compared to a puzzle composed of small parts which fit together to complete the picture. The muskrat is one of those small parts. The student work attempts to fit that part of the puzzle with the water-vegetation-duck parts. Maybe someday the whole puzzle will be complete.

Biologists estimate the state's deer herd at 43,500 animals. Most of the increase has occurred in the long hunting zone, however, which includes eastern, southern and western Iowa. About 90 percent of Iowa deer population is in this zone.

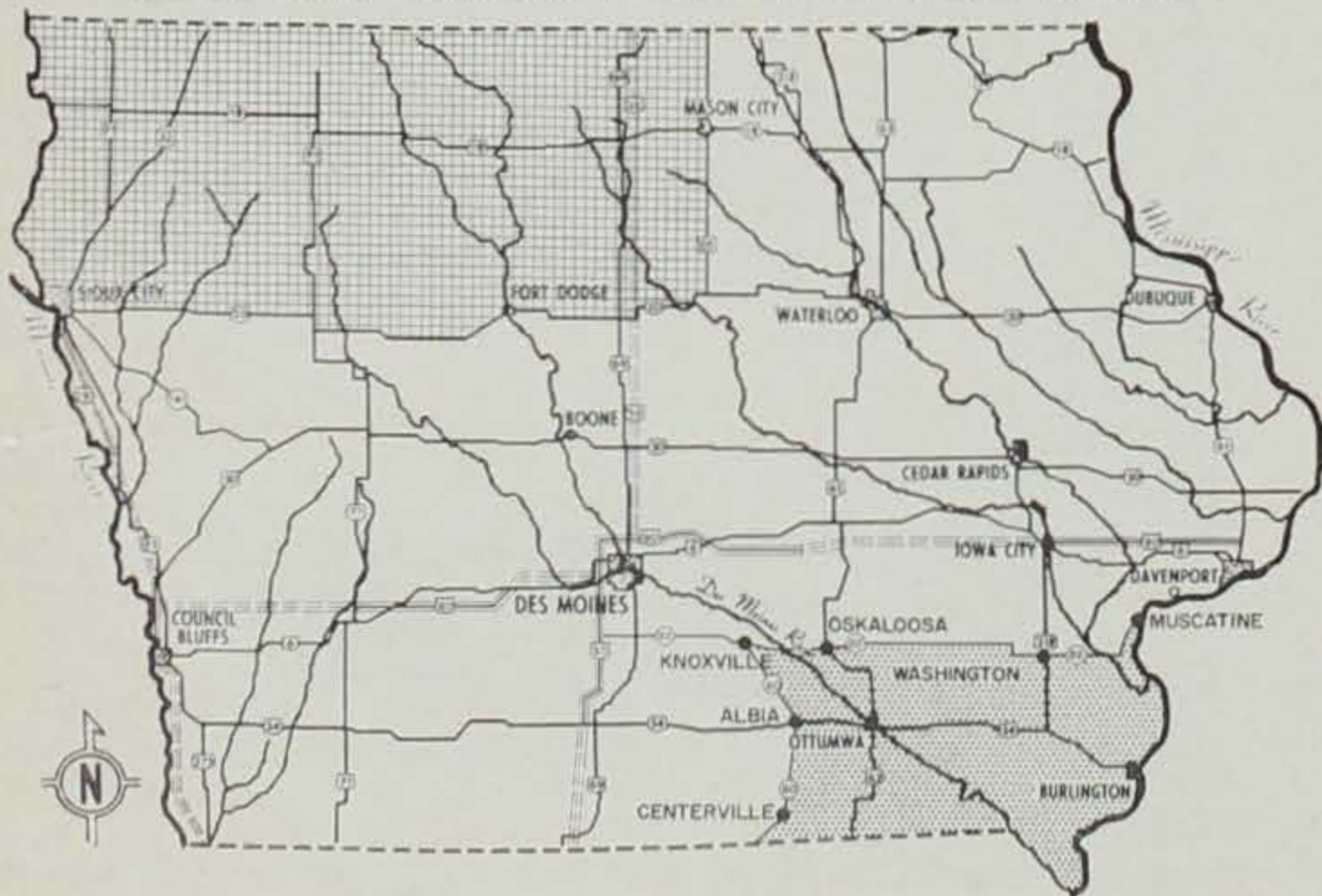
Hunting prospects are excellent in the long zone. Southern Iowa especially has received light hunting pressure in relation to deer populations in that part of the state.

Although restricted areas in the short zone in north central and central Iowa have good deer populations, many areas in the two-day zone have been subjected to extremely heavy hunting pressure. Deer have been overharvested in some of these areas, and hunters are encouraged to hunt in the long zone.

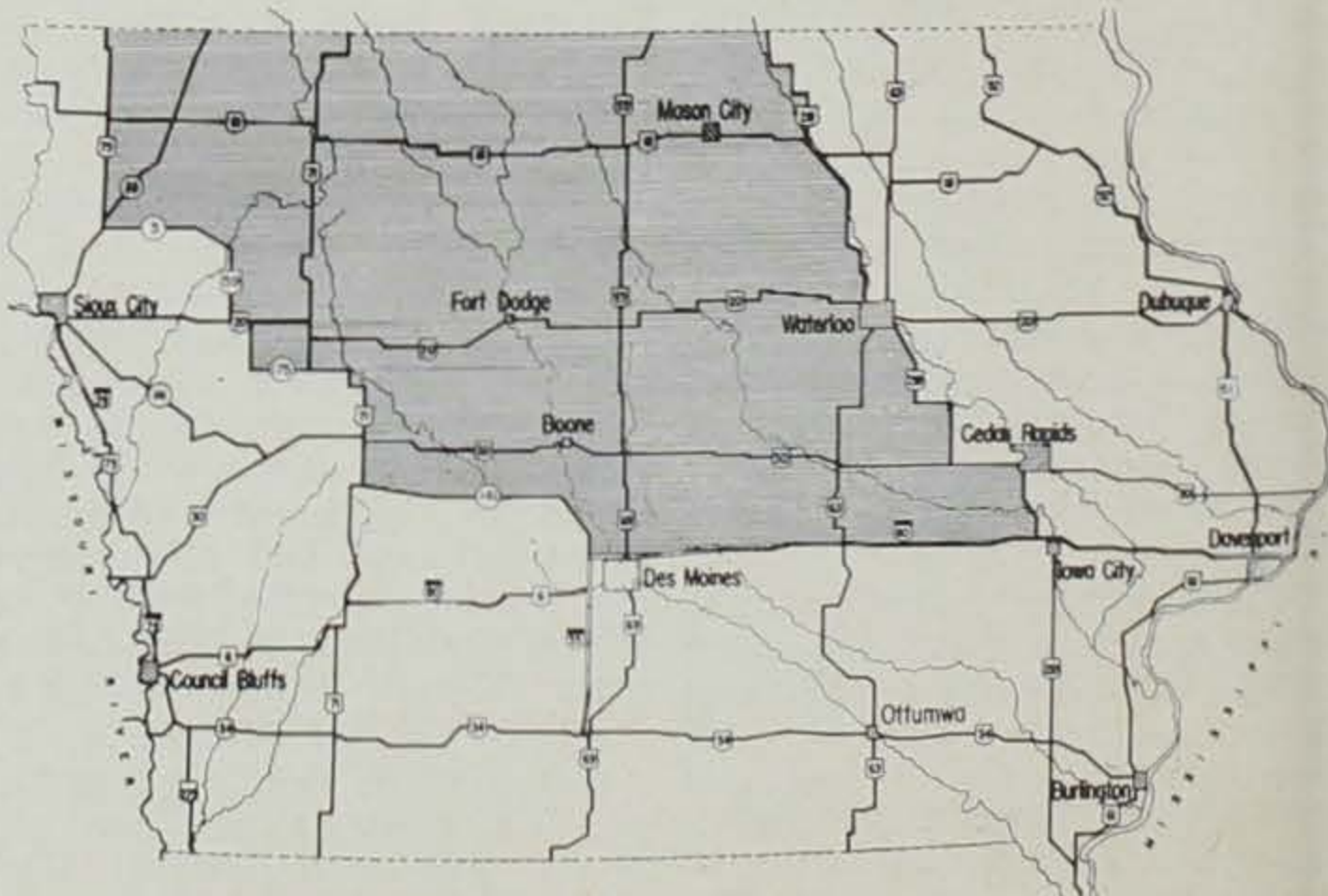
In light of the increase, an additional 1,500 shotgun deer permits will be issued this year—17,500 in all. The short zone season is a two day season, December 11 and 12. The long zone season is a four day season opening December 11 and closing December 14.

Iowa's bow and arrow season opens October 16 and closes December 5.

PHEASANT AND PARTRIDGE HUNTING ZONES



DEER HUNTING ZONES



Grid - Open To Hunts
 Solid - Closed To Pheasants

Solid - Short Zone - December 11-12
 Grid - Long Zone - December 11-14