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Volume 22

August, 1963

Number 8

WHERE GOES THE IOWA DUCK?



Jim Sherman Photo

Working their way across the marsh, these drivers are sending ducks into the traps to be banded.

Banding Tells a Fascinating Tale!

Bob Barratt

Assistant Superintendent of Game

Each fall with the advent of cooler weather, wild fowls eagerly await the arrival of the waterfowl from the north. Yet few hunters understand that not all birds which they harvest in the fall come from some far northern summer home. Many of the ducks taken in each year were hatched and raised in our marshes and potholes. Others may move northward before beginning their fall migration and are harvested by hunters in the Dakotas, Minnesota, Wisconsin and other northern states. Still others may move laterally across the United States and may be taken in states to the east or west.

Banding Tells the Story

Many persons might wonder how we know the travels of these birds. Banding provides most of the answers on migration routes, the distribution of breeding and wintering populations, hunting mortality,

natural mortality and other data vital to the management and regulation of our migratory game birds.

The migration of birds is a phenomenon which has aroused the curiosity of people since our earliest recorded history. During ancient times and even as late as the 19th century, eminent persons expounded many superstitious theories regarding the destination of migratory birds. Many persons believed that certain species hibernated by burying themselves in the marshes and lakes. Others were believed to travel to the moon. Many other such fantastic theories were accepted as fact. Only in recent times have we begun to learn the answers on the migration phenomenon.

The marking of birds with numbered leg bands began in Europe during the 19th century under the sponsorship of various groups and individuals, but lacked a central clearing house to collect and analyze the data. Even today most banding in Europe is carried on in this manner. Marking of birds in America first occurred in 1803 when the artist-naturalist Audubon marked a brood of phoebes in his

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Iowa Conservationist

Vol. 22 August, 1963 No. 8

Published monthly by the State Conservation Commission, East 7th and Court Avenue, Des Moines, Iowa. Address all mail (subscriptions, change of address, Form 3579, manuscripts, mail items) to street address above.

Subscription price: two years at \$1.00
Second class postage paid at
Des Moines, Iowa
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COMMISSION MINUTES

Des Moines, Iowa
July 2, 1963

GENERAL

Earl Jarvis of Wilton Junction was elected Chairman for the coming year. Sherry Fisher of Des Moines, was elected Vice-Chairman for the coming year.

Travel was approved to the annual Conservation Education Association Workshop, Johnson City, Tennessee; the National Conference on State Parks, Washington, D. C.; the State Nurserymen's meeting, Rolla, Missouri; the Radio Communication's annual meeting, Dallas, Texas.

Former Commissioner, Clyde Frudden, was authorized to represent Iowa at a forestry meeting in Alaska at no expense to Iowa.

A report was made on the possible creation of an access to an area located near the Decatur Bridge over the Missouri River.

A report was given on the Badger Creek Watershed project by the Superintendent of Game.

A tentative budget was submitted to and discussed by the Commission.

Approval was given for a joint meeting with the Nebraska Commission at Missouri Valley, September 28 and 29.

Procedures for the issuing of shotgun permits for the deer season were discussed.

A motion was passed expressing appreciation to Clyde Frudden for a gift of an air-conditioner for the Commission Conference Room.

The Eldora Chamber of Commerce presented a certificate to the Commission in appreciation of leadership in the conservation of Pine Lake.

The Commission met with two delegations from Mason City and Forest City to discuss the use of Pilot Knob State Park for skiing.

LANDS AND WATERS

A request was granted for a fireworks display on Little Wall Lake.

A request to drain pasture land into Clear Lake was granted.

Approval was given for the construction of a retaining wall on West Okoboji Lake.

A request to develop a beach on Lake Cornelia in Wright County was denied.

Approval was given to the request by the Northwestern Bell Telephone Company to place a submarine cable under the Des Moines River at Ottumwa.

The Anita Fire Department was given permission to burn a building on the Lake Anita site in Cass County.

Approval was given to a request by Robert Fredricks of Mt. Vernon to operate a concession in Pali-sades-Kepler State Park.

The Commission authorized the Chief of Lands and Waters to investigate sand and gravel removal from the Mississippi River by the Molo Sand and Gravel Company of Dubuque.

The Commission discussed the priority list concerning capital improvements in state parks.

COUNTY CONSERVATION BOARDS

Black Hawk County received approval for the acquisition of 30 acres of land located along the Wapsipinicon River 2½ miles east of Dunkerton at a total cost of \$1,050 to be used as a fishing and hunting access area.

Davis County received approval for a 20-year lease on 85 acres of land on the west shore line of the Bloomfield City Reservoir called Lake Fisher for general park use.

Floyd County received approval for the acquisition of 50 acres of forest land at a total cost of \$7,000 located on the Shell Rock River one-half mile southeast of the town of Nora Springs to be used as a forest preserve, and called Mather Forest Area.

Sac County received approval for the acquisition of 80.36 acres of land at a total cost of \$8,036 located 1½ miles northwest of the town of Auburn on the Coon River to be used for general park development.

Franklin County received approval for a development plan for the Burkley Historical Area which will be principally a forest and game preserve with an old stone house as a historic monument and picnicking development.

Franklin County received approval for a development plan for the Wisner School Historical Area incorporating a one-room schoolhouse with grounds for picnicking.

Story County received approval for development plan for the Hickory Grove Park which would be a multiple use outdoor recreational area including an 83-acre artificial lake.

Lee County received approval for a development plan for Montrose Roadside Park on the Great River Road one mile north of the town of Montrose adjacent to the Mississippi River.

FISH AND GAME

The Superintendent of Conservation Officers was authorized to

CONSERVATION OR RECREATION?

Bill Brabham

Superintendent of Game

"Conservation" is defined by Webster in part as "conserving, preserving, guarding or protecting." To the purist this often reflects a policy of letting nature take its course. Some of those more liberal have injected the needs and desires of people into "conservation" which has led toward the management objectives of today. The views of the purist combined with the views and needs of the liberal have been tempered through the decisions of "conservation umpires" agencies such as those responsible for the conservation activities of the various states—to yield a program of "wise use."

In recent years we have found increased use of the word "recreation." The usage has become a synonym of conservation to many people. This may or may not be true. Again to Webster, recreation "refreshment by any means, refreshment of the strength and spirit after toil; diversion or play."

Most certainly we can look to the past at our many experiences in outdoor activity and recall refreshment in strength and spirit. Unfortunately with the present trend to all-out recreation, there is the possibility of total transformation of some area use. What was once a very important and needed conservation-recreation facility may be transformed into a recreation area which will ignore basic conservation values.

Specifically, this could mean that a highly productive Iowa marsh which is capable at the present time of producing good populations of waterfowl, furbearers, and upland game birds and mammals could through man's wishes be dredged to allow limited water activity.

This would indeed be unfortunate. In Iowa we have too many marshes now to meet the needs of sportsmen. A marsh is a major with its primary purpose being the support of waterfowl and creation dependent upon an aquatic environment. The waterfowl plot can only be brightened through habitat. Many forces feel the primary purpose of state-owned areas should be preserved and if additional can be made without damage to that primary purpose, such use can be compatible.

We must remember our guideline "wise use." Is it wise to attempt dredging a highly productive marsh into a substandard lake with ensuing loss in recreation and conservation values? Is it wise to have high water levels on a marsh thereby ruining the growth of vegetation so necessary to our waterfowl merely to provide just fair fishing and boating?

We think not. The sportsman indirectly through his hunting activities provides funds for the acquisition, development, and maintenance of areas which perpetuate the sport of hunting. Rather than transforming present areas we need a program of planning for additional areas to provide the needs of other recreational demands. Harmony between conservation and recreation will then be maintained.

advertise for bids for a four place airplane.

Approval was given for an option for two acres at a total cost of \$600 at Willow Slough in Mills County to provide an access road.

Approval was given for an option for 30 acres at a total cost of \$1,500 as part of the Miami Lake Site in Monroe County.

Approval was given for an option on 285 acres of land at a total cost of \$35,000 as an addition to the State Game Farm in Boone County.

A permit was approved for a power line crossing in the Pali-sades Access area, in Linn County.

A discussion was held on Clear Lake Fish Hatchery sites from the sketches reviewed and the staff was instructed to proceed on a design and cost estimates plus a parking lot located at the present site.

Approval was given to an option on Otter Creek Marsh Area consisting of 34 acres at a total cost of \$7,800.

Approval was given for an option of 20 acres of land at a total cost of \$1,350 as part of the Meadow Lake site in Adair County.

Things You May Not Know—

The so-called silver eel is just a common green eel with a silvery color for their trip out into the ocean to spawn and die.

The "song" of the tiny cricket is an insect which is less than an inch long, can sometimes be heard as far as a mile. Mister Cricket is the only one who "sings" a song. Mrs. Cricket makes no sound at all.

When they're a little more than two months old, young Goshawks fly straight off from their nest and join their parent's flight.

The vicuña is the smallest of the camel family and has been domesticated owing to its wild and active nature.

Shortly after they hatch, 100 mouth bass feed mainly on aquatic animals known collectively as zooplankton.

A DUCK—

(Continued from page 57)

yard by fastening silver threads around their legs. He was recorded the following year when one of these marked birds returned to nest in that vicinity. Not at the end of the 19th century, however, was a serious attempt made to study migration by marking birds with numbered leg bands. In the efforts in Europe, these bandings provided little useful information until in 1920 the United States Government took over the banding of all migratory birds, and arranged to keep records and disseminate reports of all bandings in the country.

Since that date, more than 12,000,000 birds have been banded in this country, and approximately 400,000 new bandings are added annually. Approximately 850,000 of these bands have been recovered and the records are available for study.

Persons are allowed to band birds in this country only with the permission of the Fish & Wildlife Service of the U. S. Department of Interior. Aluminum leg bands bearing a serial number and the return address of the Fish & Wildlife Service are fastened on the leg of captured birds. Detailed records of these bandings, including band number, species of bird, age, sex, the location where banded, and other pertinent data, are sent to the Fish & Wildlife Service Bird Banding Laboratory where the data is entered on punch cards. When a band is returned to the laboratory, additional information on where the bird was banded, how it was killed, the date of capture, and location, are also entered on

the records so that a complete history of the individual bird is available for study and analysis.

Iowa's Role

Here in Iowa, personnel of the Conservation Commission trap, band and release several thousand ducks and other migratory game birds annually. The information gained from these bandings is of great value to the department in determining what happens to the waterfowl which are raised on our marshes. This information is also vital to the Federal Government and other states within the Flyway in setting seasons, bag limits and other regulations.

Wild birds banded in North America have been recovered as far away as Siberia, Africa, France and the Mid-Pacific. Although we have no records of Iowa banded birds which can compare with the pintail banded in California, and recovered in New Zealand, we know that many birds raised in our marshes do travel considerable distances. Young blue-wing teal raised in Iowa marshes and banded there during 1961 and 1962 were taken by hunters in Iowa, Minnesota, Michigan, Wisconsin, Texas, Florida, Louisiana, Panama, Mexico, British West Indies, Haiti, Dominican Republic, Venezuela, Colombia, British Guinea. The greatest number of recoveries come from Venezuela indicating that this South American country is a prime wintering area for blue-wing teal raised in Iowa. Other species raised in Iowa marshes do not ordinarily travel so far south, but do disperse widely as evidenced by banded returns from North Carolina, Florida, Texas, South Dakota, Indiana, Georgia and other states.



Jim Sherman Photo

Banding provides needed information on the movements of Iowa waterfowl as they travel the flyways north and south.

Many of the birds travel long distances in comparatively short time. A blue-wing teal banded near Keokuk was shot 33 days later in British Guinea, South America. Other birds linger on their home area for a considerable length of time as evidenced by numerous band returns of birds taken by hunters in October on the same area where they were banded the previous summer.

Not All Hunted

Although most band returns from migratory game birds come from hunters, other sources of recovery provide valuable information. We have band recoveries from birds entangled in fish nets, found dead, caught by hand, killed by automobiles, trapped by state or federal agencies in banding operations in other states or countries, and obtained in other ways.

You can help solve some of the riddles which still remain regarding the migration of birds. Remember, banding should be carried on only for scientific or research purposes, and never should be used as a hobby or for amusement. Banding of migratory birds can be carried on only when you have a permit from the United States Government and in most cases from the state in which you live. If you shoot or otherwise recover a banded bird, send the band together with the exact location of the recovery, the exact date and the method in which the bird was obtained, to the address on the band. Accurate reporting is essential in order to obtain the necessary information. If you wish to keep the band as a souvenir, it will be returned by the Fish & Wildlife Service.

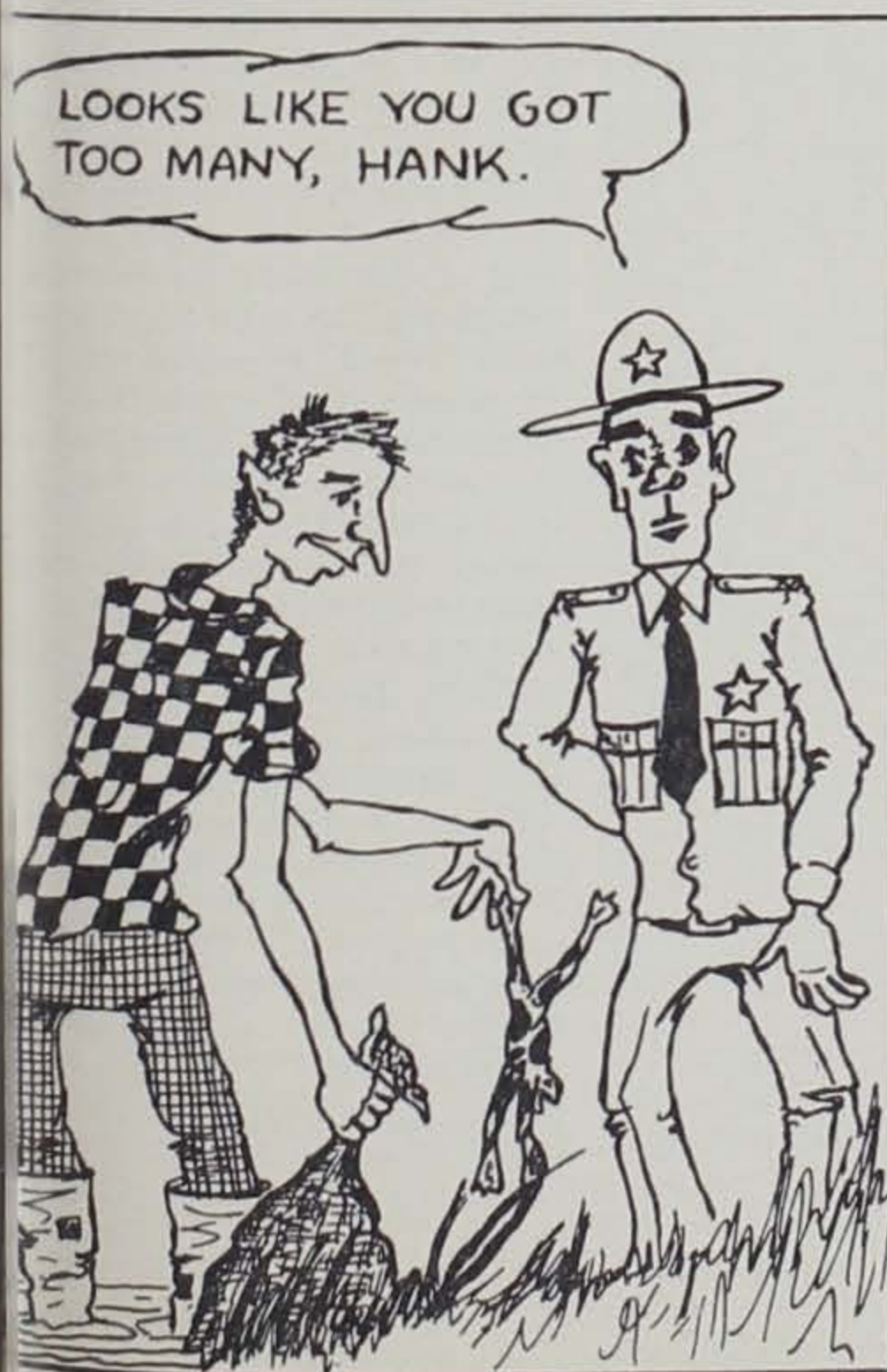
During the next open season, waterfowl hunters will again take a number of banded birds. When you see a banded bird, remember again the long journeys this bird may have made, and the other facts about his life which are recorded in the bird banding laboratory. This information is sent to anyone who returns a band to the laboratory. Remember too, the mysteries which have been solved by banding, and those questions which still remain unanswered.

A RARE CATCH

Fred Meyne of Greene made a 'rare' catch on the Mississippi River. His anchor caught on something solid and it took the concerted effort of three men to pull it and a large stump it had become fastened to out of the water.

To their surprise, the stump was almost encircled by line, sinkers, plugs, hooks, swivels, leaders and almost anything an imaginative fisherman would use.

After sorting the loot, Fred placed it in a basket and the total was a little over 40 pounds, which should establish some sort of record with the State Conservation Commission.—*Greene Recorder*.



BOB-WHITE IS VALUABLE

M. E. Stempel
Quail Biologist

"Bob-white" calls the cock quail from his corner post in the brushy fence row. Nearby is the green corn. On the corn leaves the fresh dew glistens in the rising summer sun.

There are many opinions on the "Bob-white" call which is the song of the matured male. According to an authority in the south, the calling is largely done by unmated males. On the other hand, several Iowa game raisers report that both the mated and the unmated males call. Our own records indicate that where there is the most calling there are the most quail; or, "where the girls is the boys are."

Let's take an example of what calling can tell us. We are recovering from the heavy losses of recent bad winters. In 1962, in Johnson County, which is in marginal quail territory, the quail count in summer indicated that at sunup on a July morning, in average territory, there were 20 calling males along a 25 mile route (the checker made 25 stops one mile apart to count the callers). In southern Iowa quail range, there were over 100 birds on a similar route. When quail are counted in two territories, the place with the higher count will have the most fall coveys. Remember that when production seasons are most favorable, we have the most birds. Thus, maximum fall populations occur when high breeder populations are combined with good weather conditions.

Best Hunting Spots

Calling quail counts are the simplest means of locating the best spots for hunting: calling is done throughout the summer. It is also done throughout the day with the best time for finding these birds being the sunrise period. Thus any of us can find places where quail populations are good.

What happens to those who do not locate quail before going out to shoot is demonstrated in results from interviews with a random sample of average quail hunters.

In the sample, those who do not locate quail before going out to shoot, reported that their number (277) in 1962 hunted 2 hours for each quail shot. Not all used trained dogs. These men hunted from one to five times per season. Most of them did not locate quail previous to the hunt.

On the other hand, when 114 experienced hunters were interviewed, they indicated that they flushed one to 7 coveys per trip. They worked one hour for each quail, and they used dogs. These men hunted one or more times per week of the open season. It was worth-while to hunt often as they always found quail. This was not left to chance, for they continued



The most successful quail hunter has been out before the season opened scouting likely territory to insure his fall hunting.

the search for a place to hunt throughout the year. Thus there was no reason for them to "shoot the whole covey" as they were sometimes accused of doing. These shooters always knew where there were a lot more coveys, and they only "skimmed the cream" from each covey.

While these hunters had a lot of coveys "spotted", they cannot be expected to divulge their hunting secrets. It is hard work to locate the 20 or more coveys needed for a fall's shooting. Besides, if anyone will put in a little time, he can find all the coveys he will desire, that is, he can find where the quail stay. Over half of the people in Iowa do live in driving distance of quail country. There are 69 counties open for shooting quail. These are listed in the game law insert.

Best populations and most extensive cover is in the southern portion of Iowa. But there are a lot of other brushy areas in the moderate priced land of many sections of the state. Find some of these spots and locate the calling males; find where there are two or more calling quail in one area (one section of land). Thus you can locate where the coveys will be next fall. Find your quail by listening at sunup any nice morning up to the last of August.

Elephants do not drink through their trunks, as people sometimes suppose, but suck water up into their trunks and then squirt it into their mouths.

The road runner, a cuckoo famous for its ability to kill rattlesnakes, is also known as the "snake-eater."

AUGUST—MONTH OF TRANSITION

You would like to go fishing, but your rifle should be cleaned, with squirrel season around the corner . . . it is hot today, and a little time spent on water skis would be refreshing, but you should be taking a drive to scout some likely quail hunting areas.

This is a common dilemma in August, a transitional month when activity begins to shift its attention from fishing and park-hopping over to hunting and trapping. The weather is hot, fishing is usually rather slow, the kids are being readied for school, and you are looking forward to the hunting season.

However, just because August seems to be a pivotal month, there is no need to assume activities are starting or stopping. September and October will be offering some fine opportunities for camping trips and excellent fall fishing. Likewise, good hunters have already been out scouting for likely territory in which to plan their fall hunts. Farmers and landowners have been contacted about possibilities on their property and the wise sportsman has established his lines of communication to assure pleasant hunting this fall.

What should we do during this month of transition? Some recommendations would surely include swimming and camping to keep cool, a little target practice to sharpen the eye, a few purchases for fall hunting, and certainly some fishing—that's always enjoyable.

WILD BLACKBERRIES, RASPBERRIES AND STRAWBERRIES

Summertime means berry-picking time to a lot of forest preserve visitors. Some merely pop an especially tempting one into the mouth as they stroll along. Others go on in family groups, year after year, and pick berries all day long in favorite spots that they try to keep secret. In seasons with plenty of moisture they often take home gallons of wild blackberries for making jelly, jam and pie—or for eating fresh with sugar and cream. Wild strawberries and raspberries are picked in pints or quarts rather than gallons.

Almost every forest preserve has areas well suited for wild berries. The strawberry ripens all through June. It produces its best fruit in sunny meadows and on open slopes with poor soils. Raspberries are ready to pick in late June and early July, and blackberries from mid-July to mid-August. Both of the latter thrive on former farmland which have grown up in thickets and bramble patches from seeds dropped by birds; also on roadsides and the edges of woodlands. Blackberries are much more abundant than raspberries.

In quality of flavor, our common Wild Strawberry is among the choicest in the world. Crossed with a South American species, it is the ancestor of several large-fruited cultivated varieties. However, these cannot compare in deliciousness with our little wild berry. In addition to occasional propagation by seed, strawberries multiply by sending out long creeping "runners" which take root and start new plants where they touch the ground. Thus, in a few years, a large patch can grow from a single plant.

Our Raspberry, or Black Cap, is a prickly shrub that follows a regular cycle of growing, fruiting and dying. In its first year tall leafy stalks called "canes" grow up from the root. Next year these canes bear flowers and fruit—then they die. Some canes arch over, take root where their tips touch the ground, a yard or two away and form new clumps. Travelling in this way step by step, it could be called Walking Berry.

Likewise, the tall canes of Blackberry bloom and yield berries only in their second year. Dense thorny thickets of them are formed by new canes sprouting from the spreading roots. The Dewberry kind of blackberry with large juicy berries, crawls over the ground in viney tangles.

The easiest way to tell raspberries and blackberries apart is the berries and the canes. As the berries mature, the fruits of both change color from green to red to a purplish black. However, the raspberry is a cup that slips off

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The Ups and Downs of Water—How it Affects...



... Ducks ...

J. P. Linduska
Remington Arms

Thousands of prairie potholes grow hay crops, or flax, or barley during the drought.

Then the pendulum swings back. And when water floods these restored areas, the response is immediate. Plants useful to waterfowl grow rank. Insects and other small animal life, essential for the growth of young ducks, appear in new profusion. And waterfowl flock to this new-born habitat, the most productive in the entire nesting range. The result is evident in subsequent autumns when waterfowl again fill the skies.

But let's assume for a moment that a reverse situation could be made to prevail, that water levels on the prairies would be static, all ponds at full-pool for all time. Wouldn't that be better for ducks? Wouldn't that assure bumper crops from here on out? It would not.

Nothing is static in nature, least of all aquatic areas. Ponds, lakes, marshes—all of these are intermediate stages in a progression from open water to dry ground. The pond of yesterday is the marsh of today, and the bog and woodland of tomorrow. Certain plants are characteristic of newly flooded lands, whether pothole or lake. They occupy the area for variable lengths of time, later to be replaced by others. In potholes, it's the early successional stages of plant life that best meet the needs of waterfowl. But with continuous flooding, these are replaced in time by others less desirable. Over geologic time, this parade of plant life leads to conditions ill-suited to waterfowl.

But drought halts the progression, resets the evolutionary clock.

(Continued on page 63)



Jim Sherman Photos

... and Fish

Tom Moen
Fisheries Biologist

The volume of water in our lakes and streams is constantly changing in spite of the many efforts to stabilize or bring about a static condition. Engineers build big dams, little dams, and many related structures. The soil conservationists pride themselves on terraces, contours, and grass waterways to control run-off. Man has not learned to control rainfall; changes in water volume and flow continues. A constant water level is still the exception and not the rule. Evaporation and rainfall, plus man's manipulation, may bring about a wide range of water levels or volumes in a body of water during any given time. These changes may vary from a minute difficult-to-measure change to flooding or complete depletion of water. As Dr. Linduska reminds us in his discussion of ducks and drought, "Nothing is static in nature, least of all aquatic areas."

What About Fish?

What happens to fish during these periods of great fluctuations? Obviously, a dry lake or a stream reduced to pools will not produce fishing, nor will extreme cases of flooding. But in many of these extreme cases, particularly in the case of drought, there are benefits to fish that often outweigh the loss of the original population.

A number of important biological and fish management principles are involved. First of all, fish need food and space in order to take advantage of their potential growth. High water or increased volumes bring about added

space and new sources of food. Growth rates increase, fishing success picks up, until the new or added habitat is taken up by growth and reproduction. The reverse situation, or a reduction of volume and habitat, normally brings about a reversal of the process mentioned above.

A reduction of water volume is a recommended fisheries management procedure for artificial impoundments where the water level can be controlled. This deliberate lowering of the water level concentrates the small range fish making them more available to the bass or other predator fish. When water levels are returned to normal the remaining fish take a new lease on life, resulting in an improvement in the quality of the fish and the fishing. Periods of low water have long been recognized by the fisheries manager as opportune times to carry out management practices, especially when undesirable fish are present. These undesirable fish can be removed more efficiently at low water levels than at normal or high levels, either by application of chemicals or mechanical operations.

A thorough job of fish removal is accomplished when the lake, pond or stream goes dry. When the wet cycle returns the "new water" forms ideal habitat for fish. At this time stocking of desirable species of fish can be accomplished. Many of our streams restock themselves after low water or drought conditions. The upstream migration of fish is one of the better known habits of fish. Biologists consistently report the best growth rates and highest fishing success from these areas.

(Continued on page 63)

HOT WEATHER CAMPING

Some Cooling Tips

Jack Kirstein

The high point of camping activity is reached about the same time the high points of summer temperatures are pushing the tops off thermometers all over the state.

This can be one of the most enjoyable times for you in your camping season. Of course, it can also be one of the most miserable trips you'll make, if you fail to exercise a little good judgment as to a change in your camping habits.

The gentle evening breezes and cool night air of the open country is most enjoyable in the campground with no great expanses of steel and concrete city construction to trap and retain the heat of day. This natural air-conditioning of the outdoors is further enhanced by your use of the usual hot weather cooling aids employed by the non-campers in town.

Cold beverages, light-colored clothing, abbreviated and loose fitting apparel, sun shields, and any other idea may be used to add to your camping comfort.

Tent Sites

In addition, your choice of a tent site will be of great help in beating the heat. Where possible, choose a location that avoids the intense sunrays of the midday and afternoon period. It is not necessary to place the tent directly under the trees to reap the benefits of the shade. In fact, the activity of birds in the trees may limit your desire to put your prized canvas in a dangerous position. A good spot might be one where a little early morning sun would flood the ground near the tent for mother or daughter's sun bathing. Then as the sun moves higher in the



This sleeping trailer is placed to take advantage of afternoon shade. Careful choice of campsite during hot weather months make the difference between a comfortable trip and one to be quickly forgotten.

sky, protective insulation of oak branches or other leafy species would be between your tent and the sun. As the path of the sun remains constant during each day of the week or so you may be using the campground, you should be able to spot the shadow paths of the trees on the ground easily during the first day in camp.

If you've made a mistake in choosing your campsite, and the heat is high in your tent at the end of the day, move to a site that affords better sun protection.

Try to avoid a spot that has

nearby windbreaks to hold back the breezes of evening. Better a spot in the open that has afternoon shade and evening winds, than a spot that has shade all day, but is against a high bank or hill, or perhaps adjacent to a densely wooded area that stops the breeze.

Sun Shade

If it is absolutely impossible to find a spot out of the hot afternoon sun, improvise your own shade. Use of the dining fly that keeps rain from the picnic table can ease some of the heat for your tent.

If the canvas is large it can be spread entirely over the tent and act as an umbrella for the whole area. If it is small, it can be propped up in a lean-to fashion in line with the tent and the position of the sun late in the day. Leave some distance between this canvas sun-shade and the tent for good air circulation.

Shade Your Equipment

Hot weather brings other considerations as well as keeping yourself cool. The intense heat of the sun becomes expensive if allowed to fall on coolers sitting in the open. To make your ice last, keep that portable ice-chest in the shade.

The same thing applies to stoves, lanterns, and fuel containers. High heat adds to the speed of evaporation of gas and other fuels.

When camping it is still possible to enjoy that cool evening shower in most campgrounds. Also, and sometimes as an alternative, a nearby lake or shallow stream provides its own enjoyment with a refreshing dip.

BLACKBERRIES—

(Continued from page 60)

a central knob or core. In blackberry the core is part of ripe fruit. The cross-section blackberry cane is a five-pointed star. The raspberry's is circular. Also, the latter is dusted with silvery powder that rubs off the touch of a finger.

Wild berries are a special enjoyed by people only a few years. For many kinds of life, on the other hand, berries have top rank in their summer diet. Particularly prominent are the berry-eaters are such birds as the cardinal, robin, tanager, catbird, brown thrasher and towhee. Quantities of berries are eaten by foxes, raccoons, weasels, chipmunks and white-footed mice, as well as by box turtles and land snails.

The thorny thickets of blackberry and raspberry offer places for small summer bird nest and, in winter, protect robins and mice from their enemies owl, hawk and fox.

What is green when it is black? A BLACKBERRY! — David Thompson, Cook County Forest Preserve.

The mallard duck's food consists mostly of sedges, grasses, weeds, pondweeds and other aquatic plants.

The most backward of animals, the crayfish, has its tent in its stomach and its liver in its head.



The dining fly used to keep rain from the picnic table is also useful as a make-shift sunshade when you can't keep your tent site from the hot afternoon sun.

Jack Kirstein Photo

CONSTRUCTOR SNAKES

David H. Thompson

Snakes feed almost exclusively on other animals which they catch and swallow whole. A few the eggs of birds or turtles they rarely touch anything they find already dead. A snake's jaws are so loosely joined its throat so elastic that it is able to stretch around prey large enough to form a big bulge in the stomach. The jaws with backward-slanting teeth are able to "walk" over the victim, one side at a time, like pulling a rug case over a pillow.

Most kinds of snakes merely swallow their prey and down it with any further ado. In contrast, the venomous snake, for instance a rattlesnake, stabs a rodent with its fangs and trails it until the venom takes effect. Still others, called constrictors, grab their victims, coil around them, and squeeze them to death.

These constrictors all have similar life histories. In early summer the females lay a half dozen to two dozen elongate eggs with leathery shells. These are hidden under rocks, in rotten wood or loose soil. They hatch in late summer or early fall. The young snake by cutting slits in the shell of an egg tooth on the tip of its snout—like the egg tooth on the beak of a young bird. They become sexually mature in their second or third year but, unlike birds and mammals, they continue to grow throughout life. They spend the winter in hibernation, hidden away below the frost line in burrows, under stumps, or deep in rock crevices.

The Bull Snake is one of our largest snakes, sometimes reaching a length of six feet or more. One of these in a farmer's barn is more valuable than two or three for destroying rats and mice. In fields and woodlands they catch and squirrels, gophers and ground rabbits, or rob birds' nests on the ground and in trees. A bull snake can consume a dozen duck eggs in a single meal; or it can live for months without any food. A bull snake puts on a big show of ferocity when disturbed, but that is all bluff. With the head weaving from side to side and pretending to strike, it hisses and snorts like an angry

The Black Rat Snake also has the name Pilot Black Snake because it once was supposed to lead rattlesnakes of danger. This snake spends much of its life climbing about in brush piles, trees and trees—often 20 or 30 feet above ground. The upturned edge of its belly plates enable it to climb its way up smooth tree trunks and concrete walls. When disturbed, it habitually "freezes" in imitation of a broken branch. The Milk Snake, a medium-sized



Bullsnake.

Jack Kirstein Photo

constrictor, is commonly found around farm buildings where it hides during the day and prowls at night. The superstition that it sucks milk from cows is absurd. Even supposing that it did like milk and could suck, no cow would hold still for that mouthful of needle-sharp teeth. Its diet is mostly mice and other snakes. The milk snake does not make a good pet because it has a mean disposition and is hard to feed. The King Snake, a downstate relative, is famous for strangling and eating rattlesnakes.

The Fox Snake is a rather large serpent with a disagreeable "foxy" odor when first captured. It hunts rodents, frogs, toads and salamanders on the ground, or climbs for birds and their eggs.

Because these constrictor snakes have a row of dark blotches down the back and buzz the tips of their tails when alarmed, they are often mistaken for rattlesnakes and ruthlessly destroyed. That is unfortunate. They are useful.

FISH—

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Many of the lakes of the Dakotas have had a long history of boom and bust in fish populations following wet and dry cycles. Lakes with depths up to 20 feet have been included in this wet-dry situation. These conditions have prevailed in Iowa over the years, in

fact, much of the best fishing of the "good old days" was the result of the ups and downs of our fishing waters. There are a number of examples in Iowa where drouth and/or deliberate manipulation of the water was followed by modern management. Many of these have produced the "hot spots" in the fishing picture in the past few years. These include such areas as Blue Lake, Storm Lake, Lake Macbride, Lake Keosauqua, Springbrook Lake, Iowa River at Iowa Falls, and the Des Moines River in the Humboldt area, to name only a few.

DUCKS—

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Nature's scorched-earth program is the mechanism whereby millions of potholes are restored periodically to peak fertility and maximum duck-producing potential. It's the means whereby the prairie potholes are preserved as potholes and are prevented from filling in by siltation and accretion of plant remains. So, when you curse the drought, do so with reservations. Over the long pull, nature's fallowing system is working to the good. But over the short pull it's a dad-blamed nuisance and worse. It'll be good to see it at end and the ducks back in quantity. And last year seemed to mark the turning point for the road back.

Thistle Ripens the goldfinch begins to nest.

Carol Buckmann

In July and August, when most other birds have already reared their young and sent them from the nest, goldfinches are just preparing to nest. Yellow body, black cap, wings and tail mark these little songsters as Iowa's State Bird.

All wild creatures are given different life habits and goldfinches are certainly no exception. To insure an abundant food supply, these little seed-eaters migrate in mid-May, keeping pace with the blossoming dandelions, the earliest member of the composite family to seed.

These social yellow birds remain in flocks throughout most of the year until their late summer nesting period which coincides with the ripening of thistles. Thistles are their favorite food, with the down used for nest lining and the plants as nesting sites.

In May and early June, while still in flocks feeding on dandelion seeds, they court and choose a mate. While courting, the male goldfinch attracts attention with a courtship song, the beginning of which resembles a song sparrow, before breaking into a faster, higher-pitched song lasting two seconds. He may repeat this every five seconds.

While feeding in flocks, the male suddenly pursues the female and a zigzag courtship flight ensues. The two weave among the trees and shrubs at breakneck speed with the male a few inches ahead. At times they reverse and the female slips ahead. Soon, other males join in or chase other females and the goldfinch "relay" is in full swing.

The flight ends with the females disappearing into the trees and the males serenading with their "song flight." This is a hovering, hesitant flight during which they sing a clear, canary-like serenade.

After pairing, they separate from the flock and take a two-week respite, remaining where food and water are abundant. During this time the male tolerates no other males bestowing attention on his mate. His song from the treetops is heard most often at this time and when the female is on the nest.

At the end of the two weeks, they begin to settle down to the more domestic aspects of goldfinch life and select a territory. In defending his territory, the song flight is a signal to intruders that "this is my territory, keep out!" At the most, a pair's territory extends three hundred yards. Goldfinches flying overhead or pairs feeding in foreign territory are not usually driven out, unless an unwary male takes the offensive.

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Prairieland — Cayler, Hayden, Kalsow and Sheeder

Peak in August

Carol Buckmann

When our pioneer forefathers first ventured into this region, 84 per cent of Iowa was covered by prairie. For miles in every direction stands of deep-pink blazing star and hundreds of other prairie flowers greeted their eyes. Settlers found difficulty guiding their horse-drawn wagons through miles of grasses often higher than the wagons themselves. They trudged through a luxurious plant community later known as Iowa, one of the prairie states.

With the coming of the white man, the prairies were doomed. He introduced the plow and began to cultivate the land. At present, 98 per cent of Iowa is farmland; the prairie has dwindled to a few scattered tracts.

These scattered vestiges of the former prairie were protected by some early Iowans. Then under the 25-year Conservation Plan in 1933, provisions were made for the purchase of some of these areas.

The Conservation Committee of the Iowa Academy of Science has cooperated with the Commission in locating and obtaining ownership, history, and climatic classification of existing prairie areas. The Commission has purchased four prairies representative of Iowa when Indians and bison roamed the land.

First, Hayden

The first of these was gently rolling Hayden Prairie, the largest of the four. Hayden is four miles west and four and one-half miles north of the junction of U. S. 63 and Iowa 9 near Cresco.

Prairies are classed as upland (dry) and lowland (less drained and less aerated) prairie. Of Hayden's 199 acres, about 140 are gently rolling upland with the remainder lowland.

According to *Ecology of Native Prairie in Iowa*, by J. Fred Moyer, there are 134 species representing thirty-six different families.

Hayden is outside the northern prairie region, barely within the western Great Lakes coniferous forest region making the soil and climatic conditions acceptable for tree growth. However, due to fire and at times a high water table, trees have never become established.

Kalsow

The plants on Hayden and Kalsow, the second prairie acquired, are very similar, the chief difference being the more luxuriant growth on Hayden. Kalsow is mostly flat, upland prairie lacking the shrubby willow and aspen growth of Hayden.

Kalsow Prairie is one mile west and four and one-half miles north of Manson. The only change on this tract since the Ice Age is the addition of a fence to keep out livestock. An outstanding eighty-



Kalsow Prairie near Manson is a well-known and popular prairie area. This is a good time of year to see our remaining native prairie in bloom.

acre stand of blazing star in wetter places appears in July.

Cayler

The third, an outstanding plant community, is Cayler Prairie, west of the Iowa Great Lakes. This unplowed, ungrazed prairie is undisturbed except for the annual late-August cutting of hay, activities of biologists in the summer, and hunters in the fall.

About 75 of its 120 acres are rolling upland with the remainder intermediate and lowland prairie. Because of the potholes where aquatics grow, some different species are found here than on most prairie areas. Of these aquatics, three types of milkweed are found only here.

Cayler is especially interesting for its rich, varied flora and the number and diversity of its flowers and grasses. A total of 265 species and fifty-three families of flowering plants have been identified at this site. Due to its location, many more western prairie plants are on Cayler Prairie.

Sheeder

Recently added to these natural monuments of native vegetation is Sheeder Prairie six miles west, one mile north, and half-mile west of Guthrie Center off Iowa 9. The closeness of this 25-acre tract to Springbrook State Park has made it the object of study by students attending the annual Teachers' Conservation Camp.

On these unbroken tracts, no native species has entirely disappeared under the disturbance of cultivation, pasturing, and mowing. The prairies have been closed communities excluding most in-

vaders. This stability is increased by the long life-span of native prairie plants with only five per cent being annuals.

In July, August and September, the prairies are in their glory with new varieties blossoming continuously. You are invited to visit the prairies; they are part of our pioneer heritage and are yours to study, enjoy and conserve.

Did You Know—

Mourning doves nest in all of the United States with the exception of Alaska and Hawaii. Two eggs are laid which hatch in two weeks.

The mourning dove's primary sources of food are weed seeds, grass seeds, waste grain, and some insects.

Mourning doves usually nest in low trees and bushes. The nests may be found from a foot over the ground to over fifty feet high in rare cases. They will nest in grass also if other sites are unavailable, but never very far from water.

The mourning dove has a wing span of approximately nineteen inches. The white-edged and pointed tails identify them from other doves and pigeons.

The mourning dove is a migratory bird. The U. S. Fish and Wildlife Service conducts extensive surveys to learn more of its migration habits and the effect of the annual hunter harvest.

The king vulture has one of the oddest heads in the bird world. Its bare, wrinkled skin is brightly colored, and there is a queer ornamental wattle on the bill.

GOLDFINCH—

(Continued from page 63)

Females often drive out other females.

Even though territorial establishment brings an end to the honeymoon, the male still courts his mate, gathering food for her from egg-laying through the hatch. After the first egg is laid, she spends most of her time on the nest. Sometimes he feeds her many as thirty regurgitated seeds at one feeding. He also does his share of feeding the young.

Some ornithologists speculate the "yellow birds" delay nesting until thistles have seeded as they are dependent on thistle down for nest lining, but down from a number of other plants has also been found. There is a definite relationship, though, between the seedling time of thistles, to the nesting cycle, nest sites, food and population densities. This delay insures an abundance of food for the young.

Joe-pye weed, giant sunflower, hemp and lettuce seeds rank high as favored foods. These plants also serve as homes but in high densities, paired goldfinches have difficulty defending nests in places where seeds are in great demand by others of their clan.

Nest construction usually starts the first week in July but some are still busy building homes in September. It reaches the peak in mid-July but still shows a rise in August. Often second broods are reared especially in case of a failure.

Goldfinches nest in a wide variety of trees, shrubs, and bush plants (generally known as for the latter of which they prefer). They wait until these forbs mature and the ripened berry clusters open the crowns. Nests are placed at rosettes near the top three to six feet above the ground or at a site with two vertical branches forming a crotch. The lay from two to seven pale blue-spotted eggs.

Goldfinches are familiar in many parts of Iowa throughout the year but are less common in winter. At this time, they lose the bright yellow plumage, putting on the dusky-brown winter coat with olive tinge and wandering about in flocks to feed on weed seeds.

Under ideal conditions the combined reproduction of 50 crabs can reach an estimated 200 offspring averaging 5.3 inches length in two years.

The southern bald eagle differs from other migrants in that it nests during the winter.

The guinea pig has a sense of taste 1,000 times as keen as that of a man.

The average weight of an elephant's tusk is about 55 pounds although some exceed 100 pounds.