

IOWA CONSERVATIONIST

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Number 10

WINTER BIRD FEEDING FOR FUN

FROST

By Roberts Mann

In warm weather, on calm clear nights, the surface of the earth quickly cools as it radiates its heat up into the sky. Heavy cold air settles into every valley and depression. This surface layer of air becomes further cooled to the point where, if it is damp and the earth is moist, it must lose some of its moisture, and this is deposited on plants and other objects near the ground as "dew." On cloudy nights when there is less surface cooling because the clouds act like a warm blanket, and on windy nights when the air is kept mixed and prevented from settling, little or no dew will form.

Under conditions otherwise favorable for dew, but when the temperature during the night goes below the freezing point, then "hoar frost" forms. In late fall and early spring it usually appears as a white coating of fine ice-needles, spine-like or feathery; sometimes as tiny flat six-sided flakes resembling snow crystals. Grass, weeds, shrubs and trees will be silvered with a delicate fur of frost; roofs of buildings will be coated white.

Sometimes, when the air is too dry or windy for hoar frost to form, but the temperature falls several degrees below 32° Fahrenheit, we have a "black frost"—so-called because many plants freeze and later become limp and black when thawed out by the sun. Frost damage to a plant is not caused ordinarily by the frost crystals themselves, but by freezing of the plant juices, which disrupts the plant's living substance and the tubes bringing nourishment to it.

Some garden plants, such as tomatoes, and especially tropical plants like peppers and eggplant, are extremely sensitive, even to a light frost. The length of the growing season for most hardier plants is measured from the date of the last killing frost in spring

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ASK THE FARMER FIRST



Jim Sherman Photo.

More hunters than ever before are taking to the fields this year in pursuit of wild game. It is well to point out that some 97 per cent of all land in Iowa is privately owned and unless the hunter is hunting on his own land it is necessary to secure permission of the owner first.

Farmers as a group want to know who is hunting on their land. They want to know that the hunter will be careful about shooting near livestock, that gates will be closed, and that property will be protected against damage. One careless act on the part of a hunter may close a farm permanently to all.

Many "No Hunting" signs have been posted. Most of the posted properties are open to hunters in whom the landowner has confidence. It is, therefore, the responsibility of the individual sportsman to make himself welcome.

Hunters cannot be urged too strongly to contact the owner of the property on which they expect to hunt and secure his permission. The importance of farmer-sportsman relationship in Iowa cannot be overstressed.

If every hunter conducts himself as a true sportsman at all times, the "No Hunting" signs will soon go the way of the dodo.

By Gib Knudson

Iowans who neglect to put up a winter feeding station for birds are missing a lot of entertainment. For very little trouble you can have a show all winter long right outside your favorite window.

It isn't too late to attract birds if you put any one of several feeds they like outdoors. We have tried about everything and have found suet, either cooked or uncooked, is the best of all.

Our favorite winter birds, the chickadees, won't leave suet alone once they have discovered it. This sprightly little songbird prefers suet above grains, bread crumbs or such foods because his natural diet is almost entirely insects, spiders and their eggs, picked off branches of trees. So as a meat eater you may expect the chickadee to be a frequent visitor at your suet holder.

The chickadee is a hustler and will stand up for his rights even when bluejays, sparrows, juncos, nuthatches or the downy woodpecker try to muscle him out of the feeding station. He is the smallest of the lot of them, but quick on the rebound and will beat all rivals in a race to the suet perch.

Songbirds show less fear of people in the winter when their feed is covered by ice and snow. You can bring the black-capped chickadee right up to your window sill if you put the suet there. It is a good idea to fasten the suet down so the birds can perch on it and eat it without the suet falling down into the snow.

Our feeder is about four feet from the window and all the birds we have mentioned here have used it and while feeding have eyed us through the window with no particular signs of fear. The chickadee is the first out in the morning, showing up regularly for breakfast between 8:15 and 8:30. The sparrows come early, too, but instead of the suet, munch the toast crumbs and crumbled dog biscuit on a lower shelf.

There seem to be two chief feed-

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REPORT ON RIVER POLLUTION

The mystery of what caused the death of thousands of fish in the Cedar River just below Waterloo has been cleared up. The direct cause was the dumping of a large amount of insecticide into the sewer by employees of a Waterloo warehouse. Previous pollution from other sources may have been a complicating factor.

This information is contained in the official report made by the Iowa Department of Health to the Waterloo city council. It gives the council authoritative information upon which to act.

It should be remembered, however, that the river pollution problem has two phases. First is the question of what caused the mass extermination of fish last month. This has now been cleared up and should result in an ordinance mak-

ing the discharge of poison into the sewers in large quantities a misdemeanor. This should be adequate to take care of the intermittent or accidental pollution.

The second phase of the problem, however, involves the question of more or less continuous pollution over a long period. This is just as important, if less spectacular, than the recent mass poisoning of fish. Solving this problem requires proceeding under a chapter of the Iowa Code which requires the Iowa Department of Health to make an investigation of pollution upon request by the city council. The Waterloo council has voted to make such a formal request and the investigation should therefore get under way soon.

Following the collection of this scientific and authoritative information on the causes of pollution, a public hearing will be held at

which those accused of pollution will have the opportunity to present their defense and cross-examine witnesses. Then the health department has power to order steps to prevent the pollution.

This action has now been started by the council and should result in action to clear up the Cedar River. But the authorities working on the problem need the continued interest and support of the general public. The uproar created over the mass extermination of fish last month should be turned into constructive channels by directing continual public pressure toward eliminating obnoxious pollution conditions.—*Waterloo Courier.*

There is scarcely any land and practically no water on the face of the earth which does not have a particular population of living things. Vegetation very largely determines the kind of animals inhabiting a particular area.



Beaver are heavy animals, often weighing more than 60 pounds. After burs and mud have been combed from the fur, the animal for convenient handling should be placed back down on a bench or table. The first step in beaver skinning is to make a single lengthwise cut through the skin from the hair line at the base of the tail through the lip of the lower jaw.

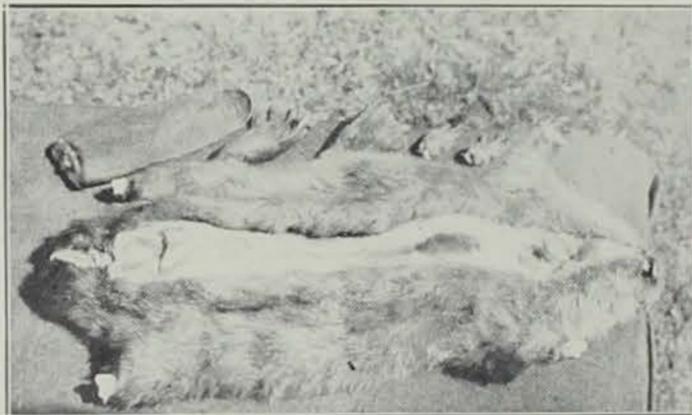
* * * * *

With beaver trapping to be allowed in Iowa for the first time in 75 years, pelting this valuable fur-bearer becomes a problem for the trapper.

Beaver are one of the most difficult of all the fur-bearers to skin because the skin sticks tight to the flesh.

It is necessary to carefully cut away all fatty tissues to keep the pelt from heating and causing the fur to slip.

Beaver are also unique in that they are skinned in such a manner that the pelt may be stretched round while curing. The following series of photographs is designed to show how to properly pelt this fur-bearer:

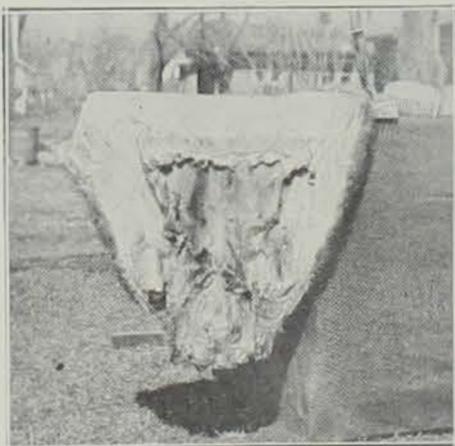


The second step in skinning beaver is to cut off the feet and tail at the hair line as shown in this photograph. Do not make any additional cuts through the skin.

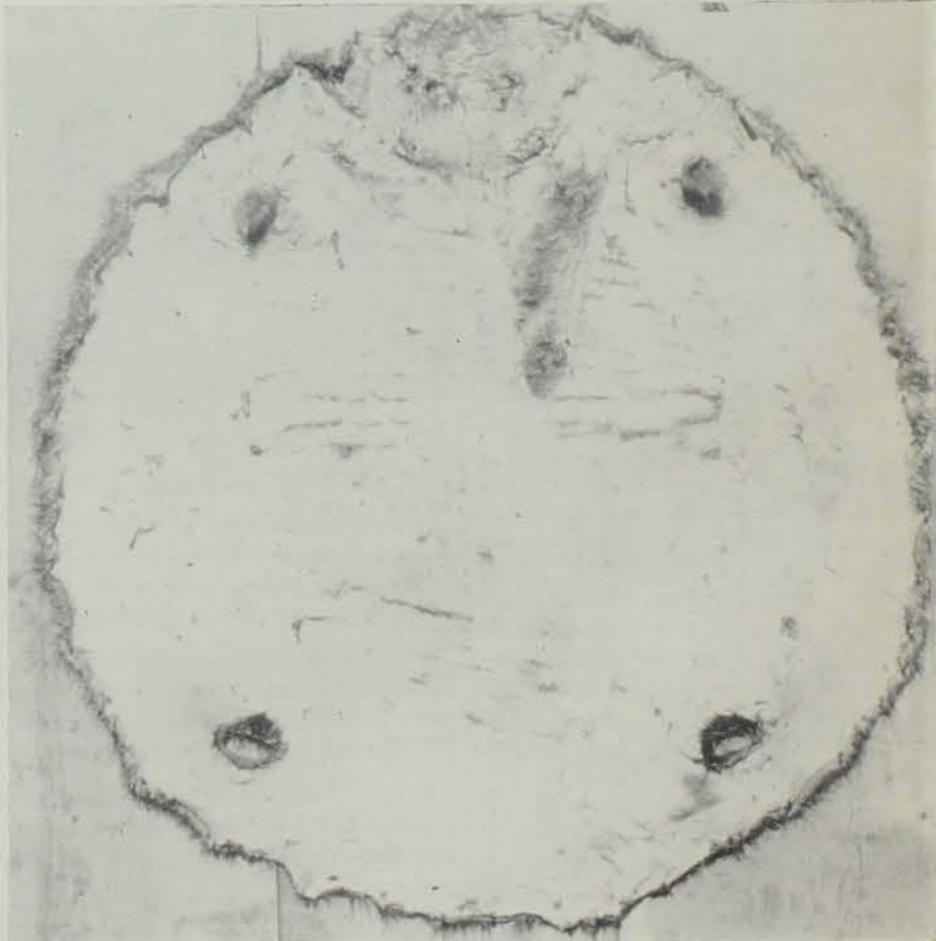


The skin is then cut carefully away from the carcass, removing as much of the tissue from the skin as possible, but being extremely careful not to cut through the pelt. Note in the picture the two round holes where the left fore and hind legs have been pulled through without cutting the skin, and also the tendency of the skin to roundness without stretching at this stage of the operation.

BEAVER PELTING



Beaver, like all other skins, before they are stretched to dry, must have the fatty tissue removed to prevent burning or hair-slipping. This is best accomplished by splitting an eight-inch fence post and attaching one-half to the work-bench with the smooth, round surface up. The skin, hair down, is laid over the surface and the tissue carefully cut from the skin with a sharp knife. Extreme care must be taken in this operation, and the trapper must make certain that no burs nor other hard objects are in the fur which will cause an uneven surface and consequent cutting of the skin. Half of the pelt in this picture has been cleared of all tissue.



Beaver pelts may be sewn to a round wheel or, as in this picture, tacked on a flat surface. On the board mark out several concentric circles with a string and a piece of chalk. Stretch the pelt by pulling the margin of the skin to the circle most nearly the right size and tack with lath nails. Note in this properly stretched beaver the four leg holes.

OUTDOOR NOTES

By Joe Austell Small

Father Did Not Know Gaspergou!

He is a nice young fellow from the north, working for his father's company in Louisiana. When he goes to Shreveport, there are friends who see that he is properly entertained.

He was through with his last Shreveport business by Friday afternoon. Usually he managed to rest up on some lake over the weekends. This time friends took him to the Dallas-Caddo Club. By Sunday he had decided that father would understand if he took a few days off. So he wired:

"Caught gaspergou Saturday here. If nothing urgent, will stay over until Thursday."

The young man was greatly surprised when the answer came:

"Do not take chances. Go to hospital at once. Have doctor keep us advised as to your condition. Father."

Pheasant Fights Snake

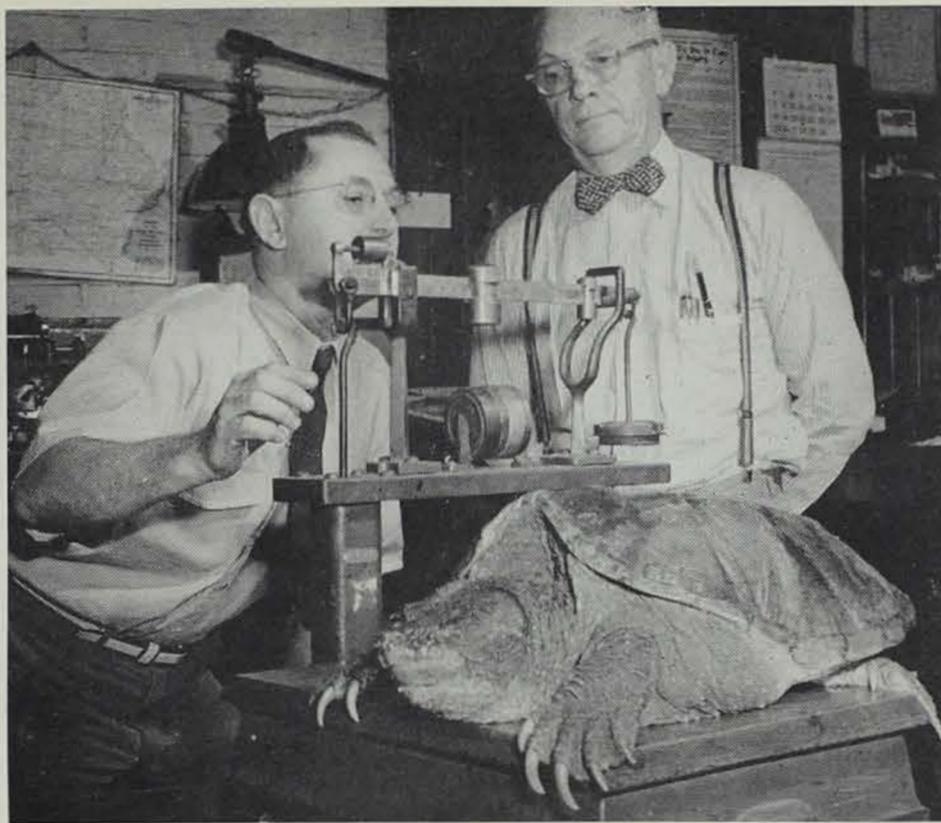
Warren Cody, 13-year-old Kansas fisherman, sends in an account of a fight he witnessed near his home in Decatur County. "While on the way to my old fishing hole, I ran across a rooster pheasant fighting a bullsnake three and one-half feet long. The snake would strike at the pheasant, but the bird would fly just high enough over the snake to spur it in the head. I watched for ten minutes before the pheasant saw me and flew away. The snake was so near gone that I finished it. An examination revealed that the pheasant's spurs had penetrated through the head."

Different

The most noticeable difference in the wild and domestic strains of the turkey is the markings on the tail feathers. The tips of the tail feathers and tail coverts are deep rust or chestnut in the true wild turkey, while in the domestic strain they are white. Also, the wild bird has longer and more slender legs and has a more slim and erect appearance as a whole. The domestic bird has short, rather thick legs and is plump in appearance.

Alma Sportsman

The top sportsman's trailer that I've seen this year (and I've seen plenty of 'em!) is the Alma Sportsman. Seventeen feet one inch overall and 85 inches wide, it is fully equipped for travel or, by golly, you can even live in it! The baby's a neat apartment on wheels, you might say. Completely insulated with fireproof spun glass, she's got solid comfort. Wardrobes, trunk storage, drawers galore, cabinets, complete kitchenette—oh, hecksfire, every time I get to telling somebody about this Alma, I want to hook on, pull to some quiet lake or rippling stream and start living! They'll send you a beautiful folder with all details if you'll drop a card to Alma Trailer Co., Dept. WS, Alma, Michigan.



Big Hattie weighs in at the Des Moines post office, 31 pounds 14 ounces. Jim Sherman Photo.

BIG HATTIE— 31 LBS. 14 OZS.

When the fisheries crew on the upper Mississippi found an unusually large snapping turtle in their nets, they immediately christened it "Big Hattie" and sent it to Des Moines for exhibition at the State Conservation Commission's fish and game exhibit at the fairgrounds.

When a dozen Commission employees got into a "free-for-all" argument about the big reptile's weight, it was decided to put on a guessing contest during the fair. The contest was an outstanding success, with more than 10,000 of the estimated 250,000 visitors taking time to fill out a contest blank.

Almost 10,000 of the visitors overestimated the snapping turtle's weight. The average guess was 93 pounds, three times the actual weight. Only 4.5 per cent of the estimates were too low.

Mrs. Gene Lucas of Des Moines hit Hattie's weight squarely on the nose with an entry of 31 pounds 14 ounces. Runners-up were John Furrer, Indianola, Iowa, and Nels Lindhart, Lehigh, Iowa, with 31 pounds 13½ ounces and 31 pounds 13 ounces, respectively.

Big Hattie will not be returned to the Mississippi River bayou from which she was secured, and she will not find her way into a stew kettle, but will be held in a nursery pond until next state fair time.

It is hoped that Big Hattie will fatten up considerably before next year, but it will take a long time to make her as big as she looks and she probably will never reach the average weight guess of 93 pounds.

The largest Iowa snapping turtle known to fisheries employees weighed 63 pounds and was taken from Spirit Lake many years ago.

Alligator snapping turtles, found in the southern part of the United States, grow to a much larger size, often exceeding a hundred pounds. Some of the sea turtles reach several hundred.

The commission would be interested in hearing about any snappers that exceed Big Hattie in weight, but guess-weights don't count.

The following entries in the guessing contest at the state fair were within eight ounces of Big Hattie's correct weight:

Ed B. Mertes, Adair, Iowa.
Gene Rasmussen, Anita, Iowa.
Richard Bridgford, Sidney, Iowa.
Geo. Rowley Jr., Box 505, Fairfield, Iowa.
Richard D. Moss, Ames, Iowa.
Mrs. R. W. Douglass, 4029 Muskogee Ave., Des Moines, Iowa.
Mrs. Richard Brobston, Route 1, Libertyville, Iowa.
Orval C. Sherwood, Hamilton, Iowa.
F. W. Wright, Moulton, Iowa.
Mrs. C. E. Stein, Delta, Iowa.
Elizabeth E. Moore, Griswold, Iowa.
Golden Couzhenour, Maxwell, Iowa.
John Wilhelm, 438 Church St., Chillicothe, Ohio.
John A. Shedd, 2521 Garfield Ave., Des Moines, Iowa.
Ben McKeag, Montezuma, Iowa.
W. O. Plummer, 3223 E. Douglas Ave., Des Moines, Iowa.
Bernard A. Gehl, 115 51st St., Des Moines, Iowa.
Gertrude Warren, 2137 Maple St., Des Moines, Iowa.
Cecil Clark, Box 88, Albion, Iowa.
C. D. Clark, 887 23rd St. Pl., Des Moines, Iowa.
Mrs. John Thorn, 312 S. Cadwell, Eagle Grove, Iowa.
Mrs. Earl C. Davis, Farnhamville, Iowa.
Marlin Edwards, 1430 Tiffin Ave., Des Moines, Iowa.
Herb Gutschmidt, Box 4, Carroll, Iowa.
Lewis Brundige, 807 S. E. Edison Ave., Des Moines, Iowa.
Mrs. A. B. Graybeal, 3742 Rollins Ave., Des Moines, Iowa.
Carolyn Johnson, Box 297, West Liberty, Iowa.
Bill Feltus, Allison, Iowa.
Mrs. Paul F. Welch, 1218 Indianola Ave., Des Moines, Iowa.
Earl Freel, Box 383, Ames, Iowa.
F. C. Tokarz, 3024 Leado Ave., Des Moines, Iowa.
Clifford McKillip, 1015 E. Third St., Muscatine, Iowa.
M. Enabnit, 3819 Eighth St. Pl., Des Moines, Iowa.
P. H. Lowe, 3000 E. Washington Ave., Des Moines, Iowa.

Wardens Tales

Shop Talk From the Field

George Kaufman, Lansing, conservation officer for Allamakee and Clayton Counties, reports a complaint from a CONSERVATIONIST reader in his territory.

"Last winter after the duck season," says Kaufman, "Dr. Wilson of Lansing stopped me and said he wished to protest a statement I had made in the CONSERVATIONIST that duck hunting was good and everyone satisfied.

"He informed me that he was not satisfied and wanted me to know it. There were plenty of ducks, he admitted, the weather was good, but still he did not have a good season. The very first time he went duck hunting it seems Dr. Wilson, in the act of retrieving a duck, went in the water over his boots, causing him to catch a severe cold which stayed with him for the rest of the duck season.

"I didn't get out again and I am not satisfied."

Conservation Officer Vern Shaffer, of Murray, whose territory is Clarke and Decatur Counties, while on routine patrol last winter stopped to check two hunters. Drawing closer, he noticed that one of the men was bleeding badly from a lacerated cheek.

Reaching for his first aid kit, Shaffer asked, "What in the world did you tangle with—a bear?"

The hunter grinned sheepishly. "Well, to tell the truth, it was a rabbit."

He went on to explain that he had taken a long shot at a rabbit in a deep ditch. The cottontail had collapsed convincingly, but when the unsuspecting hunter scrambled down the bank to recover his game he came literally face to face with it. Mr. Rabbit, only stunned, rushed blindly up the bank to meet him, and the hunter's cheek served as a convenient ladder where he left his mark in the form of three deep scratches.

"Yes, and besides committing first degree assault, the durned thing got away!"

Walter Harvey, of Marshalltown, conservation officer for Grundy and Marshall Counties, writes:

"One time Conservation Officer Bill Ayers and I stopped in a small

(Continued on page 175)

John Turner, 1754 16th St. N.W., Cedar Rapids, Iowa.
Harry Liggett, Mount Ayr, Iowa.
Moye R. Quick, 1710 Greene, Boone, Iowa.
Ervin S. Grask, 534 39th St., Des Moines, Iowa.
Mrs. James Winchell, 530 Brady St., Davenport, Iowa.
Mrs. Sam Mazza, 946 Loomis Ave., Des Moines, Iowa.
Mary Kay Kurtz, Eldora, Iowa.
F. F. Everett, New Sharon, Iowa.
W. W. Fritz, Harlan, Iowa.
Joy Peters, 509 Arthur Ave., Des Moines, Iowa.
Herman Korb, 3424 Tracy, Kansas City, Mo.



The pheasant population has definitely increased over last year with surveys indicating an over-all increase of 15 per cent. Jim Sherman Photo.

HUNTING PROSPECTS FOR 1949

By Paul Leaverton
Superintendent of Game

Iowa hunters may expect better than average hunting this fall for the major game species, except for rabbits and quail. Squirrel shooters are already having excellent shooting in many parts of the state, but rabbit shooters are finding cottontails abundant only in limited localities.

Iowa's game seasons, set each year, are designed to allow harvest of only the surplus game birds and animals, with leeway left to guarantee adequate seedstocks for next season's crop. A brief glance at the prospects for Iowa's "big five" follows:

The pheasant population has definitely increased over last year with surveys indicating over-all increase of 15 per cent. Additional counties have been added in the south with a short season. A half hour has been added to the open shooting time each day, and the season has been lengthened in the long zone five days.

Throughout the middle west the past two years pheasants have been gaining in numbers. We believe the "Kill No Hens" campaign has helped to increase populations of this game bird in Iowa. Weather conditions were ideal during the nesting season. All indications are that hunting success will be better than last year, with over-all populations looking best in the northwest section of the state.

The season for ducks and geese has been set beginning noon, October 21, to November 29, both dates inclusive, with a definite increase of from 15 to 25 per cent in duck populations. Iowa hunters can look forward to an increased number of ducks on their flight through Iowa although many small sloughs are dried up.

Duck hunters will find the best shooting on the northwest Iowa lakes and sloughs, the Mississippi River bottoms, and the lower Missouri River.

The squirrel season opened September 15, and the first few weeks hunters in many areas reported better squirrel shooting than had been expected. Squirrels are in excellent shape with an abundance of nuts and fruits all over Iowa. Squirrels are becoming more cagey as the leaves fall.

The rabbit season opened September 15, but the cottontails are not expected to feel heavy gunning pressure until after the first snows. The population took a decided drop this season, and the commission felt it necessary to place more restrictions on bag and possession limits in order to protect breeding stocks. Also, this year a possession limit of 12 rabbits has been placed on the cottontail with shooting hours from 6:00 in the morning until 6:00 at night.

Although the quail season has



The cottontail population took a decided drop this year, and in most parts of the state bag limits will represent a long, hard day of hunting. Jim Sherman Photo.

DECAY IN WOOD

It is generally accepted that all wood, in the course of time, just naturally decays as a result of age. This belief is greatly in error. Decay in wood is caused by only one thing, and that is the attack of wood-destroying fungi. A fungus is a plant, and to grow and remain active it must have food, moisture, air and heat. If any one of these can be eliminated the fungus cannot grow and decay can be prevented. The wood itself provides the food. If it is poisoned by a preservative the fungi cannot attack it. If the wood is kept at extremely low temperatures, dry or shut off from air, the fungi cannot grow and decay will be prevented.

To bear this out, the Fairbanks House in Dedham, Massachusetts, is standing structurally intact after three centuries. Timbers several hundred years old have been recovered from the ruins of Indian pueblos in Arizona and New Mexico. A part of a Roman emperor's houseboat that sank in Lake Nemi was sound enough nearly 2,000 years later to be identified by the Forest Products Laboratory as spruce. A log seven feet in diameter was found not long ago in a tunnel being dug 150 feet below the bed of the Yakima River in Washington. A piece of it was sent to the Forest Products Laboratory where it was identified as an extinct species of sequoia, of an age estimated by geologists at 12 million years.—"Iowa Sawmills," Iowa State College.

not been set at this writing, pre-season reports indicate that the quail population has not made the hoped-for increase, but possibly decreased in numbers from last year. Definite quail information awaits further census returns.

All in all, Iowa hunters may expect a little better than average season for the "big five."



Immediately after shooting, the feathers of pheasants may be brushed off with ease and without danger of tearing the skin. Jim Sherman Photo.

FIELD-PICKING PHEASANTS

Many people skin pheasants and, say the experts, thereby destroy much of the fine flavor of this game bird. Because of tender skin, the pheasant is difficult to pick once it has become cold after shooting. They may be picked very easily without breaking the skin, however, by brushing off the feathers immediately after the bird has been killed.

In warm weather, the bird should be rough dressed in the field and the body cavity stuffed with coarse grass, cornhusks or newspaper to help the cooling out process.

After picking and dressing, the birds should be dropped in individual paper sacks carried for the purpose before being placed in the hunting coat. Head and feet should always be left attached in the field for identification.

The deer mouse has the widest range of any North American mammal.

DUCK BOOK STILL AVAILABLE

"Waterfowl in Iowa," published at cost by the State Conservation Commission, is still available and will be mailed postage paid to any address in the United States for \$1.

"Waterfowl in Iowa," by Jack and Mary Musgrove, contains color plates of all the Iowa ducks, geese and swans in their full plumages (important to the duck hunter), as well as a short life history study of each species. In addition to the color plates, the 130-page book contains numerous black and white drawings.

If you do not have a copy of this book in your library, order one now. If you do have, order a copy for your duck hunting partner.



It is unlawful to carry any gun in or on any vehicle on a public highway unless such gun is taken apart or contained in a case and both the barrel and magazine unloaded. Jim Sherman Photo.

IT'S THE LAW

109.23 Transportation for sale prohibited. It shall be unlawful for any person, firm, or corporation to offer for transportation or to transport by common carrier or vehicle of any kind, to any place within or without the state, for the purposes of sale, any of the fish, game, animals, or birds taken, caught, or killed within the state, or to peddle any of such fish, game, animals, or birds.

It shall be unlawful to ship from the state any birds caught, taken, or killed in the state, or to take, ship, or carry from the state for any purpose any such fish, game, animals, or birds unless lawfully caught, taken, or killed by a non-resident licensee under the provisions of this chapter, who may take or carry such birds as have been lawfully caught, taken or killed, or take, carry or ship such fish, game, or animals as have been lawfully caught, taken or killed to his place of residence as indicated on such license.

109.24 Transportation regulations. Any person, firm, or corporation desiring the shipment or transportation of any fish or animals shall deliver to the common carrier to which the shipment is offered, a statement under oath, in duplicate, showing the name and address of the shipper, the date and number of his license, where and by what officer issued, the name and residence of the consignee to whom the shipment is made, the kind and number of fish or animals in the shipment, that the same have not been unlawfully killed, bought, sold, or had in possession, and are not being shipped for the purpose of market or sale, and that such shipment does not contain a greater number of fish or animals than may be lawfully shipped in one day. One copy of such affida-

vit shall be retained by the common carrier receiving such shipment, for the period of twelve months thereafter, and the other copy shall be attached in a secure manner to the package or container of such fish or animals.

109.31 Game brought into the state. It shall be lawful for any person, firm, or corporation to have in possession any fish or game lawfully taken outside the state and lawfully brought into the state, but the burden of proof shall be upon the person in such possession to show that such fish or game was lawfully killed and lawfully brought into the state.

109.57 Possession and storage. Any person having lawful possession of game may hold same for not to exceed ten days after the close of the open season for such game. A permit to hold such game for a longer period may be granted by the commission.

109.88 Selling furs outside state. It shall be unlawful for any person except a licensed fur dealer to ship, transport, or sell any skin or hide of any fur-bearing animal defined in this chapter to dealers or buyers outside of this state unless he first obtains from the commission a special permit tag authorizing such shipment.

110.12 Showing license to officer. Every person shall, while fishing, hunting or trapping, show his license, certificate or permit, to any conservation officer, constable, sheriff, deputy sheriff, police officer, peace officer, or the owner or person in lawful control of the land or water upon which licensee may be hunting, fishing or trapping when requested by said person to do so. Any failure to so carry or refusal to show or so exhibit his license, certificate or permit shall be a violation of this chapter.

110.23 Manner of conveyance. No person, except as permitted by

GOOD NEWS FOR SPORTSMEN

Heartening indeed for sportsmen in this area is news that the Iowa general assembly's committee on retrenchment and reform (the interim committee) has advised the State Conservation Commission of Iowa that funds have been released for use by the Conservation Commission this summer and fall for doing preliminary work essential to the proposed improvement of Little Wall Lake 17 miles north of Ames along Highway 69.

This means that initial work will actually get under way this year toward the accomplishment of what has been a long cherished hope of people in this part of Iowa—a first-class public recreation area at the state-owned lake south of Jewell.

The initial development work for which funds have been specifically approved calls for taking soundings, making surveys and gathering other information required preliminary to drawing up plans for the proposed improvements.

And V. W. Flickinger, chief of the Conservation Commission's Di-

vision of Lands and Waters, says the survey will proceed in the very near future.

There is no doubt but what the development of Little Wall Lake is a highly desirable project since there are so many residents of central Iowa who would benefit by having a first-class lake nearby to which they could retreat for relaxation and recreation.

Action by the interim committee in approving funds for preliminary work at the lake is to be commended and appears to be an indication that the committee has given appreciated consideration to the people of central Iowa.—Ames Milepost.

ROADSIDE WAR

Conservationists throughout Iowa are opening a war against the wholesale destruction of brush and shrubs along roads and railroad rights-of-way. This cover is most important to the wildlife of the state, and its widespread cleaning out will do much to halt the building up of the wildlife population of Iowa. The weed seeds are important feed for the winter birds, and the shelter of the brush provides fine nesting places. This does not mean that weeds should be permitted to take over the roadsides, but it does mean that the wholesale and indiscriminate destruction of weeds and brush must be halted if the wildlife of the state is to be maintained.—Atlantic News Telegraph.

CAESARIAN SNAPPING TURTLES

While dressing a 12-pound snapping turtle caught on Decoration Day, the editor found 60 almost fully developed eggs in the body cavity. They were buried June 1 in the garden with a covering of two inches of soil. At two-week intervals eggs were opened to study embryo development, and approximately half of the eggs were found to be infertile.

By August 20 the shells of the fertile eggs had lost their firmness,

were of a leathery texture and had increased about 50 per cent in size. On August 26, the first of the turtles hatched and eggs continued to hatch each day for a week.

At birth, the little snappers, like young fish, had a large egg sac almost the diameter of the turtle's shell attached to the abdomen. The young were quiet for several days while the egg sacs were absorbed, but within two weeks the young turtles were completely self-sufficient, swimming in a small aquarium and feeding on small pieces of fish.



Five of the inch-long Caesarian snapping turtles a few days after birth. Jim Sherman Photo.



The tufted titmouse, one of the most engaging of the common winter birds at the feeding station, waxes "fat and sassy" on nut meats and suet. Jim Sherman Photo.

Bird Feeding . . .

(Continued from page 169)

ing periods, along in the middle of the morning and again in the middle of the afternoon. The birds are much busier at those times than in the early morning, and they rarely visit the station after 4 p.m.

Four to six chickadees will be feeding off and on at one time, with two or three usually waiting their turn, perched on slender stems of a nearby bridal wreath. Sometimes when the chickadees are gathered about, the bluejay swoops among them and drives them away, but only for a moment. The jay is a pig, gobbling up quantities of suet and flying away with large chunks. He is supposed to bury food he can't stuff into his gullet and is accredited with starting new trees in this fashion.

As for us, we would be pleased if the jays left our station alone. One day one of them hammered the suet so hard he knocked our feeder, a hanging type, off its perch. He has other bad habits, but, even so, like him or not, he is a colorful figure when his blue plumage is framed against the snow.

The downy woodpecker is timid



The most popular and trusting of all the window box birds is the black-capped chickadee. Its late winter call "Cheer-ree" and inveterate curiosity endear it to all who make its acquaintance. Myrle Jones Photo.

and comes to the feeder less often, usually when no other birds are around, and with an alert eye on any shadows inside the window. This bird, the smallest of the woodpeckers, feeds largely on insects, fruit and nuts when he can get them. He reportedly spends the winter nights in the cavities of trees, going to bed between 4 and 4:30 p.m. and getting up regularly between 7 and 7:30 a.m.

When hunting natural food, the downy woodpecker places his head close to a tree and listens for the sound of borers working under the bark. In this way he locates a supply of food into which the chickadees and nuthatches can't drill.

There is at least one pair of cardinals in our neighborhood, and we have tried to coax them to the feeder without success. These beautiful red birds like to feed on the ground, hunting up seeds, fruit and insects, and they have been very shy. They will alight on the snow under the Scotch pines sixty feet away and watch longingly, we think, the bolder birds stuffing themselves at the feeder.

But so far they haven't come over, at least when we've been home to watch.

When you have a bird feeder, you find yourself spending much time observing your winter guests. You also have the satisfaction of knowing you are doing the birds a good turn.

Here are some suggestions for a feeder, in case you put one out:

It is better to start them in the fall, but any time is all right.

If you start one, be sure to keep it filled. Birds soon learn to rely on it and will suffer from hunger if you neglect it.

The longer it is up the more birds you will attract. Don't be discouraged if birds don't flock to it at once. They have to discover it. We have had our feeder out two winters, and this winter it has attracted many more birds than last.

Recommended foods: suet (all fatty trimmings from meat), seeds

PROTECTING IOWA STREAMS FROM SEWAGE

In a number of our exchanges we notice that their cities of publication are faced with the necessity of building sewage disposal plants on account of the bill recently passed by the legislature and signed by Governor Beardsley. The bill forbids the dumping of untreated sewage into natural drainage courses.

Not in any case has the editor of any one of these comments criticized the legislature or the governor. It is generally recognized as one of the most necessary laws recently enacted.

As Iowa grows in urban population the problem of sewage disposal becomes increasingly critical. The sooner it is met head-on, the less expensive its solution will be in the end.

As Iowa grows in population her streams should more and more become the avenues of recreation and relaxation for her people. Iowa has beautiful streams. We have never used them as extensively as they should be used. We break our necks all year at work, then rush to Minnesota, the Ozarks or Colorado for two weeks.

Are we not overlooking the chance to go to the Des Moines, the Skunk (if you have not seen the Skunk River north of Pella, do so this season), the Cedar or the Wapsipinicon for a few days or hours of rest?

The people of Iowa are entitled to clean streams for recreation, beauty and protection from the spread of infection.

We remember when a laboring man from Ottumwa appeared before a state commission to plead for protection of the Des Moines River from packing house sewage. "It makes little difference," he said, "to people who can afford to

of sunflower, pumpkin, millet, rye, hemp, barley, wheat, small weed seeds in the screenings from grain elevators. Cracked corn isn't attractive for some reason.

Less common winter birds which

BE PREPARED FOR FOX

Fox are again very numerous as the hunting seasons get underway. Again this year hundreds of Iowa hunters will see fox in the wild for the first time and, if prepared, will have a chance to shoot one of the red rascals.

Many fox are killed each year with regular field loads containing No. 5 or 6 shot. However, many more would be knocked down if the average hunter carried three or four shells especially for fox.

Probably the best all-around fox load is a high power shell containing BB shot. Other good shot sizes are No. 2 or buck in No. 4. The latter shell in 12-gauge contains only 27 pellets, but they will reach out much farther than 2's or BB's.

With a few fox loads in a special pocket, the hunter may also have a chance to kill a goose, the supreme prize in the Iowa hunter's game bag.

STRIP TEASE

Eternity was just a pup
When nature pulled the curtain up.
Cave man, Persian, Greek and Roman
Knew her as a master showman;
Paul Revere and Bonaparte
Marveled at her cosmic art;
And the lady has a way
With her audience today.
Strip-tease connoisseurs will please
Take a seat among the trees;
Nature now presents October,
The world's most colorful disrober.
—Ogden Nash, in *The Forest Log*.

spend the summer in Minnesota or Colorado. But we working people with small incomes have to take our vacations closer home. If our Iowa streams are polluted with sewage and industrial waste, we have lost one of the closest areas for healthful recreation."

All of us, working people, farmers, business and professional people alike, should learn to enjoy Iowa more.—*Indianola Record Herald*.

may show up: Bohemian waxwing, flicker, hairy woodpecker, cedar waxwing, purple finch, red cross-bill, tufted titmouse, brown creeper and golden-crowned kinglet.—*Emmetsburg Democrat*.



Throughout the state rural school children maintain and enjoy winter feeding stations for game and songbirds. L. E. Lemke Photo.



Frost decorates trees on the Conservation Commission's service building grounds at East Okoboji. Bob Cooper Photo.

Wardens Tales . . .

(Continued from page 171)

town to check out a license account at a drugstore. Just as we pulled up in front, we noticed a man take an assembled gun out of his car and enter a tavern across the street.

"Thinking it might be best to do a little checking on this, we decided to wait until he came out. About two hours and (apparently) several beers later, our hunter made his appearance. He came back to his car, assembled gun in hand, and placed it again in the front seat beside him.

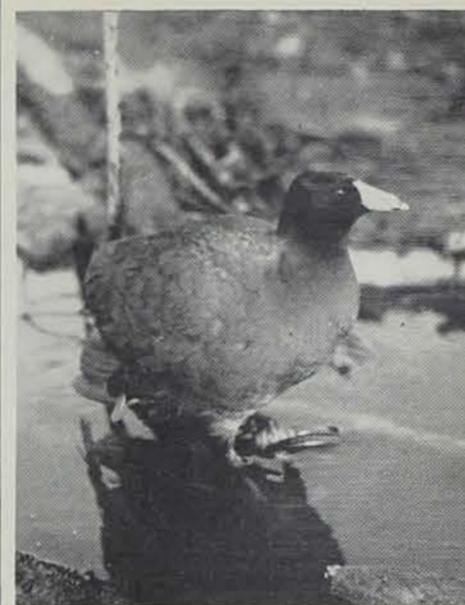
"'You'd better break down your gun,' someone called from the door of the tavern. 'There might be a game warden around.'

"'Ain't no game warden within a hundred miles of here!' answered our foggy friend.

"He soon found he was wrong, for within five seconds one warden was sitting beside him and another standing by filling out a violation report. After a short business session with the J. P., the man remarked, 'You know, I just had my miles a little mixed up.'"

Joe Hopkins, Osage, conservation officer for Mitchell and Floyd Counties, writes:

"The fishermen at Marble Rock have a favorite carp bait that seems a little unusual. They use moss. The approved technique is to wade out onto the dam there on the Shellrock River and gather a little of the underwater moss from the apron or dam proper. A generous helping of this is strung on the hook. Care must be used lest too much be placed on the hook and the bend filled, thus destroying hooking action. This bait is drifted into the current without sinker or float. It is very deadly on carp in that area and consistently produces better strings than any other carp bait."



On almost any Iowa marsh opening day shooters who are otherwise good sportsmen slaughter unmercifully the panicky, pathetic coots and leave them to rot in windrows along shore. Jim Sherman Photo.

MURDER OF THE MUDHENS

To some hunters the coot or mudhen is below sea level as far as game birds are concerned. Yet many hunters do consider it favorably because of its eating qualities. In many states it is hunted extensively for food.

In this year's migratory waterfowl regulations the coot limit has been reduced to 10. A year ago it was 15; prior to that, 25. In the future the bag limit may be even less.

This reduction has become necessary because of the habits of this bird. Its slow, awkward flight, lack of wariness and its tendency to congregate in immense numbers on easily accessible marsh areas make it especially vulnerable to gun pressure. The coot might easily become extinct.

It would be a shame if the sportsmen who have allowed and paid for the remarkable recovery of the trumpeter swans and other species that were on the verge of extinction were to send the lowly coot the way of the dodo and passenger pigeon.

On almost any Iowa marsh opening day it is a common practice for shooters who are otherwise good sportsmen to slaughter unmercifully the panicky, pathetic flocks of coot and leave them to rot in windrows along the shore.

This murder of the coots is a violation of the law and a violation of all the rules of decency, conservation and sportsmanship.

This year on opening day and all of the open days thereafter, hunters are urged to refuse to be a part of this ugly picture and to use their influence in preventing their neighbor in the adjoining blind from participating in this senseless slaughter.

Remember Webster's definition of a sportsman: "one who is fair and generous in sport"?

Frost . . .

(Continued from page 169)

until the first killing frost in autumn. This is vitally true of corn, our principal crop in the middle west and most valuable crop in America. Occasionally a late spring frost will make it necessary to replant large acreages; more often planting is delayed by continued rains and cool weather. With such a late start, a severe frost early in September may so damage the immature grain as to greatly reduce the yield for that year.

Other crops like wheat, rye, alfalfa and clover, which commonly live through the winter, may be injured by frost in the ground—especially in periods of alternate freezing and thawing—causing the soil to swell and "heave," perhaps several inches, breaking the roots and exposing them to the air.

Sometimes the trunk of a large tree will be split by "frost," with an explosion like the crack of a cannon, due to freezing of the moisture within it. On the other hand, the seeds of some plants—such as the Alpine willow, some common weeds and certain nut trees—cannot germinate until they have been frozen. Frost helps keep soils loose and crumbly. Frost, too, plays an important part in splitting rocks and causing them to disintegrate into fine particles which, carried by wind and water, become part of the soil.

The windowpane patterns of frost on a bitterly cold morning are beautiful, unique and never the same. An imaginative person can see funny faces, beautiful landscapes, fairy castles or forests of towering ferns. Geometrical designs, a spider's web, tiny blossoms and leaves or intricate lace may be etched in gossamer lines that sparkle in the sunlight. Try blowing on such a frosty pane until your breath melts the crystals into a

POLLUTION AND FISH

Show us a lake or a stream which abounds in fish of good size and we'll show you a watershed that hasn't been mined and otherwise abused by improper farming methods. Erosion and pollution soon show their results in the lakes and streams. Good soil and anti-pollution control show the payoff in clear, pure water.—*Estherville News.*

film of water. Then step back and watch the frost reform a new design.

We are told by the experts that the air of the room must be moist, that various combinations of temperature and moisture affect the formation of the frost crystals and that they are affected by the thickness of the glass, its structure and its cleanliness.

Phooie on the experts! Let's give Jack Frost a big hand!



Window pane patterns of frost are beautiful, unique and never the same. An imaginative person can see landscapes, fairy castles or forests of towering ferns. Register and Tribune Photo.

DUCK SEASON OPENS OCTOBER 21

The duck season in Iowa opens at noon, October 21, and hunters have been given a dividend of 10 days longer than last year as a result of a 15 to 25 per cent increase in migratory waterfowl.

Duck hunters are reminded to purchase a migratory bird hunting stamp, \$2 this year, from their post office, as well as an Iowa hunting license, before entering the blinds.

The regulation requiring guns to be plugged so that a total of not more than three shells can be contained in the magazine and barrel is still in effect. The following hunting seasons have been set by the U. S. Fish and Wildlife Service and concurred in by the State Conservation Commission:



Kind of Bird and Locality	Open Season	Bag Limit	Possession Limit
Ducks—Entire state, except American Mergansers and Red-breasted Mergansers.	October 21 to November 29, both dates inclusive. Shooting allowed from one-half hour before sunrise and closes one hour before sunset, except that the hour of commencement of hunting of waterfowl and coot on the first day of the season shall be 12 o'clock noon.	4—in the aggregate of all kinds except that not more than 1 wood duck shall be included in such limit.	First open day the possession limit shall be the daily bag limit; thereafter a two-day bag limit may be held in possession, except that no more than 1 wood duck may be possessed at any time.
American Mergansers and Red-breasted Mergansers. Entire state.	October 21 to November 29, both dates inclusive. Shooting allowed from one-half hour before sunrise and closes one hour before sunset, except that the hour of commencement of hunting on the first day of the season shall be 12 o'clock noon.	25 singly or in the aggregate.	None.
Blue Geese, Snow Geese, Canada Geese, Hutchins' Geese, White-fronted Geese, Cackling Geese. Entire state.	October 21 to November 29, both dates inclusive. Shooting allowed from one-half hour before sunrise and closes one hour before sunset, except that the hour of commencement of hunting on the first day of the season shall be 12 o'clock noon.	4—except that not more than 2 of the limit may be Canada, Hutchins', Cackling or Whitefronted Geese. Two of any of the above may be included in the limit. The entire bag may be made up of either Blue or Snow Geese or any combination of them.	One day's bag limit.
Ross' Geese. Entire state.	No open season.	None.	None.
Coot, Mudhen. Entire state.	October 21 to November 29, both dates inclusive. Shooting allowed from one-half hour before sunrise and closes one hour before sunset, except that the hour of commencement of hunting on the first day of the season shall be 12 o'clock noon.	10.	10.
Wilson's Snipe or Jacksnipe. Entire state.	No open season.	None.	None.
Grebe. Entire state.	No open season.	None.	None.
Rails (except Coot and Gallinules. Entire state.	No open season.	None.	None.
Mourning Dove. Entire state.	No open season.	None.	None.
Woodcock. Entire state.	No open season.	None.	None.
Swan. Entire state.	No open season.	None.	None.

1949 STATE CONSERVATION COMMISSION

STATE OF IOWA—30 MINUTES BEFORE SUNRISE AND 1 HOUR BEFORE SUNSET SCHEDULE CENTRAL STANDARD TIME

(Note: This table has been compiled from official schedules furnished by the Weather Bureau Stations listed. A schedule from the Omaha, Nebraska, Station is used because there is no station in southwestern Iowa. The difference in time between stations should be taken into consideration in figuring the exact time at your particular location.)

	DAVENPORT		BURLINGTON		DUBUQUE		KEOKUK		CHARLES CITY		DES MOINES		OMAHA, NEBR.		SIOUX CITY	
	30 Min. Before Sunrise	1 Hour Before Sunset	30 Min. Before Sunrise	1 Hour Before Sunset	30 Min. Before Sunrise	1 Hour Before Sunset	30 Min. Before Sunrise	1 Hour Before Sunset	30 Min. Before Sunrise	1 Hour Before Sunset	30 Min. Before Sunrise	1 Hour Before Sunset	30 Min. Before Sunrise	1 Hour Before Sunset	30 Min. Before Sunrise	1 Hour Before Sunset
Oct. 21	Noon	4:14	Noon	4:15	Noon	4:12	Noon	4:18	Noon	4:19	Noon	4:25	Noon	4:35	Noon	4:35
22	5:53	4:13	5:53	4:14	5:53	4:11	5:54	4:17	6:03	4:18	6:05	4:23	6:14	4:33	6:16	4:34
23	5:54	4:11	5:54	4:12	5:54	4:09	5:55	4:16	6:04	4:16	6:05	4:22	6:14	4:32	6:18	4:32
24	5:55	4:10	5:55	4:11	5:56	4:08	5:56	4:14	6:06	4:15	6:07	4:20	6:16	4:30	6:19	4:31
25	5:56	4:09	5:56	4:09	5:57	4:06	5:58	4:13	6:07	4:13	6:07	4:19	6:16	4:29	6:21	4:29
26	5:57	4:07	5:57	4:08	5:59	4:05	5:59	4:12	6:08	4:12	6:08	4:18	6:17	4:28	6:22	4:28
27	5:59	4:05	5:59	4:07	6:00	4:03	6:00	4:10	6:10	4:10	6:11	4:16	6:20	4:26	6:23	4:26
28	6:00	4:04	6:00	4:05	6:01	4:02	6:01	4:09	6:11	4:09	6:11	4:15	6:20	4:25	6:24	4:25
29	6:01	4:02	6:01	4:04	6:02	4:01	6:02	4:08	6:12	4:08	6:13	4:13	6:22	4:23	6:25	4:24
30	6:02	4:01	6:02	4:03	6:03	3:59	6:03	4:06	6:13	4:06	6:14	4:12	6:23	4:22	6:27	4:22
31	6:03	4:00	6:03	4:01	6:05	3:58	6:04	4:05	6:14	4:05	6:14	4:11	6:23	4:21	6:28	4:21
Nov. 1	6:04	3:58	6:05	4:00	6:06	3:57	6:05	4:04	6:16	4:04	6:17	4:09	6:26	4:19	6:28	4:20
2	6:06	3:57	6:06	3:59	6:08	3:55	6:06	4:03	6:17	4:02	6:18	4:08	6:27	4:18	6:31	4:18
3	6:07	3:56	6:07	3:58	6:09	3:54	6:08	4:02	6:19	4:01	6:19	4:07	6:28	4:17	6:32	4:17
4	6:08	3:55	6:08	3:57	6:10	3:53	6:09	4:00	6:20	4:00	6:20	4:06	6:29	4:16	6:33	4:16
5	6:09	3:54	6:09	3:56	6:11	3:52	6:10	3:59	6:21	3:58	6:21	4:05	6:30	4:15	6:34	4:15
6	6:11	3:53	6:11	3:55	6:13	3:50	6:11	3:58	6:22	3:57	6:23	4:04	6:32	4:14	6:36	4:13
7	6:12	3:51	6:12	3:53	6:14	3:49	6:12	3:58	6:23	3:56	6:24	4:02	6:33	4:12	6:37	4:12
8	6:13	3:50	6:13	3:52	6:15	3:48	6:13	3:56	6:25	3:55	6:25	4:01	6:34	4:11	6:38	4:11
9	6:14	3:49	6:14	3:51	6:16	3:47	6:15	3:55	6:26	3:54	6:26	4:00	6:35	4:10	6:39	4:10
10	6:15	3:48	6:15	3:50	6:17	3:46	6:16	3:54	6:27	3:53	6:27	3:59	6:36	4:09	6:40	4:09
11	6:16	3:47	6:16	3:50	6:19	3:45	6:17	3:53	6:29	3:52	6:28	3:58	6:37	4:08	6:42	4:08
12	6:18	3:46	6:17	3:49	6:20	3:44	6:18	3:53	6:30	3:51	6:30	3:57	6:39	4:07	6:43	4:07
13	6:19	3:45	6:19	3:48	6:21	3:43	6:19	3:52	6:31	3:50	6:31	3:56	6:40	4:06	6:44	4:06
14	6:20	3:44	6:20	3:47	6:22	3:42	6:20	3:51	6:32	3:49	6:32	3:56	6:41	4:06	6:45	4:06
15	6:21	3:43	6:21	3:46	6:24	3:41	6:21	3:50	6:34	3:48	6:33	3:55	6:42	4:05	6:47	4:04
16	6:22	3:42	6:22	3:45	6:25	3:40	6:23	3:49	6:35	3:47	6:34	3:54	6:43	4:04	6:48	4:03
17	6:24	3:42	6:23	3:44	6:27	3:39	6:24	3:48	6:36	3:46	6:36	3:53	6:45	4:03	6:50	4:02
18	6:25	3:41	6:24	3:44	6:28	3:38	6:25	3:48	6:37	3:45	6:37	3:52	6:46	4:02	6:51	4:01
19	6:26	3:40	6:26	3:43	6:29	3:37	6:26	3:47	6:39	3:44	6:38	3:52	6:47	4:02	6:53	4:00
20	6:27	3:40	6:27	3:42	6:30	3:37	6:27	3:46	6:40	3:44	6:39	3:51	6:48	4:01	6:53	4:00
21	6:28	3:39	6:28	3:42	6:32	3:36	6:28	3:46	6:41	3:43	6:40	3:50	6:49	4:00	6:55	3:59
22	6:29	3:38	6:29	3:41	6:33	3:35	6:29	3:45	6:42	3:42	6:41	3:50	6:50	4:00	6:56	3:58
23	6:31	3:38	6:30	3:41	6:34	3:35	6:30	3:45	6:44	3:41	6:43	3:49	6:52	3:59	6:56	3:58
24	6:32	3:37	6:31	3:40	6:35	3:34	6:32	3:44	6:45	3:41	6:44	3:49	6:53	3:59	6:58	3:57
25	6:33	3:36	6:32	3:40	6:37	3:33	6:33	3:44	6:46	3:40	6:45	3:48	6:54	3:58	7:00	3:56
26	6:34	3:36	6:33	3:39	6:38	3:33	6:34	3:43	6:47	3:40	6:46	3:48	6:55	3:58	7:01	3:56
27	6:35	3:35	6:34	3:39	6:39	3:32	6:35	3:43	6:48	3:39	6:47	3:47	6:56	3:57	7:02	3:55
28	6:36	3:34	6:36	3:38	6:40	3:31	6:36	3:42	6:50	3:38	6:49	3:47	6:58	3:57	7:03	3:54
29	6:38	3:34	6:37	3:38	6:42	3:31	6:37	3:42	6:51	3:38	6:50	3:46	6:59	3:56	7:04	3:54