

# IOWA CONSERVATIONIST

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## REVIEW OF 1948 HUNTING SEASON

### FLYING SQUIRRELS

By Roberts Mann

Few people ever see a flying squirrel, although they are widely distributed throughout the wooded areas of the northern hemisphere and numerous in many localities. Unlike other squirrels, they sleep all day in their dens, coming out at dusk to feed and play during the night—less in winter than in summer. They spend more time in the trees and less on the ground than any other squirrel. Most peculiar, of course, is their ability to glide through the air.

Flying squirrels do not fly. On each side of the body is a loose elastic membrane or fold of skin, covered with fur and extending from the wrist of the foreleg to the ankle of the hind leg, with a delicate rod of cartilage, attached only to the wrist, at the edge. Another membrane fills the triangular space between the foreleg and the neck and side of the head. When the animal leaps outward from a tree, it spreads its legs so that, with the flaring membranes stretched between them, it appears almost square and flat in shape and sails diagonally downward in a long swooping glide. Its long bushy tail, broad and flat, probably is used as a rudder and as a brake to make the short graceful swoop upward when it lands on another tree.

There are several kinds of flying squirrels including one that ranges across the Arctic Circle. Those common in the eastern half of the United States are smaller than elsewhere, the tail making up almost half the total length of nine inches or less—about the size of a small rat.

The flying squirrel of the central states may vary from tawny gray to pinkish cinnamon above, with white underparts. Its thick silky fur is as soft as velvet.

Like other squirrels it has a blunt-faced head and small rounded ears, but the unusual feature is a

(Continued on page 110)



Rabbit hunting was reported poor in 57 of Iowa's 99 counties, with only 29 counties reporting better shooting than in 1947. Jim Sherman Photo.

## IOWANS GO OUTDOORS

### One in Five Hunt; One in Three Fish

The Iowa Poll shows that hunting and fishing are two extremely popular self-participating sports among Iowans. The poll was conducted by Henry J. Kroeger, Director of Research and the Iowa Poll for the Des Moines Register and Tribune. It was made the first week in December 1948 to determine the popularity of hunting and fishing among Iowans.

The poll was based upon a representative cross-section of the state designed by Dr. Norman P. Meyer of the State University of Iowa. The people of Iowa are represented in proper proportion by place of residence. In other words, there is the correct proportion of persons living on farms, in places under 2,500 and over 2,-

500, with various occupational and income groups represented with satisfactory accuracy.

The poll reveals that approximately 580,000 men, women and children from Iowa went hunting in 1948, while about 990,000 went fishing during that period. Combined figures total about 1½ million, although many in these groups undoubtedly went both hunting and fishing.

In other words, about one out of every five Iowans went hunting and one out of every three went fishing this year.

Iowans from all parts of the state and in all walks of life were asked:

*"During the past year, has anybody in your immediate family gone hunting or fishing? If so, how many men, women and*

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By Paul Leaverton  
Superintendent of Game

Hunting in Iowa during the past season was better than average, according to a summary of reports from conservation officers. Hunting pressure was the heaviest it has ever been in the state's history. As is always the case reports from some areas were poor while from others excellent.

Officers' reports show better results than the previous year for squirrel and pheasants and poorer for rabbits, quail, ducks and geese.

Rabbit shooting dropped off. Heavy hunting pressure and high fox populations are blamed for the decrease in hunter success in the officer summary following:

**Rabbits:**  
Good Season—26 counties  
Fair Season—47 counties  
Poor Season—26 counties

In comparison to the previous season:  
Better than last year—29 counties  
Poorer than last year—57 counties  
Same as last year—13 counties.

**Squirrels:**  
Good Season—43 counties  
Fair Season—49 counties  
Poor Season—7 counties

In comparison to the previous season:  
Better than last year—53 counties  
Poorer than last year—28 counties  
Same as last year—18 counties

Pheasants continued to improve, with Mahaska, Keokuk, Washington and Muscatine being added to the open list, making 68 counties in 1948. There was unprecedented heavy hunting pressure in the southern pheasant counties.

**Pheasants:**  
Good Season—37 counties  
Fair Season—27 counties  
Poor Season—4 counties

In comparison to the previous season:  
Better than last year—52 counties  
Poorer than last year—10 counties  
Same as last year—6 counties

Quail populations were below pre-season estimates. Mild open weather allowed birds to range widely and gave the birds a break but made hunting more difficult. Good breeding stock left after season closed.

**Quail:**  
Good Season—8 counties  
Fair Season—28 counties  
Poor Season—10 counties

In comparison to the previous season:  
Better than last year—5 counties  
Poorer than last year—27 counties  
Same as last year—14 counties

Ducks either gathered in large, inaccessible flocks or spanked on through because of low water. Many duck marshes were dry. Heavy hunting pressure on all public waters.

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(Editor's Note: "Wing Shots" will ex-  
pire with this issue unless readers send  
in specific questions they would like to  
have answered. The open forum type  
letters printed below were addressed  
to this column and are being run in this  
issue because of our failure to receive  
specific questions bearing on wildlife,  
laws, policy, etc.)

Bloomfield, Iowa.

Mr. Pot Shots:  
Gentlemen:

Was really shocked to read to-  
night in "Conservationist" the  
article about Bill Nelson's record  
and his secrets. Now, we the  
hunters who know their way  
around the woods and know what  
goes on have for many years been  
aware of Mr. Nelson's "secrets"  
and have been afraid some maga-  
zine such as yours would sometime  
publish them. Even Mr. Nelson  
states a fox does quail very little  
harm. When the fox's main diet  
is the quail's second worst enemy,  
the bush rat and ground squirrel.  
His Enemy Number One is the  
shotgun and bird dog. Down here  
if you had some quail, as a farmer  
stated yesterday, that needed feed-  
ing and you should report it to  
local game club, you would have  
to keep all cows and sheep in barn  
for a week for all club members  
and bird dogs would be there be-  
cause they couldn't rest till the  
last quail was shot.

We can see no other reason,  
although I know you don't, we  
would like a written statement  
from you that you are not making  
any profit from Mr. Nelson's sale  
of pamphlets on how to trap foxes.

There has been a feeling among  
many hunters who are really  
sportsmen for years that as things  
are going we had just as well kill  
all game and then when we see

what God put here we could start  
over, and if we had any we would  
know where it came from.

Yours truly  
Floyd Hubbart  
Bloomfield, Iowa.

No member of the conservation  
department has any interest in the  
sale of Mr. Nelson's very small  
booklet. Every member is inter-  
ested, however, in the public tak-  
ing advantage of the recreational  
opportunities presented by a high  
fox population.

Editor.

Cherokee, Iowa.

"Iowa Conservationist"

To the Editor:

I like the "Iowa Conservationist"  
very much. Such is the reward of  
living in a country like ours. Are  
there others? We can express our  
own views.

Have lived in Cherokee county  
on the farm where I was born all  
my life. Of that time, have toted  
a rifle, or gun, or fishing rod some  
35 odd years.

In that time have seen quite a  
few changes. Beaver, for instance,  
from an almost extinct animal  
have multiplied to the extent of a  
nuisance some places.

Long after learning some of the  
finer phases of the smooth bores  
and wing shooting and lots of the  
less pleasing phases of feathered  
game's disappearance had been un-  
folded, well—Br'er Fox came into  
the front page.

Seemed a few sportsmen con-  
ceived the idea of old English fox  
hunting revived. So protection for  
vermin. Today organized fox  
hunts, no seasons. Bounties. Not  
so many years ago coons were un-  
known in our territory. Heard  
rumors they did haunt the Little  
Sioux bottoms as the catamount  
is supposed to haunt some sections  
today. Overnight farm chicken  
flocks—yes my own—sweet corn  
patches. Well, you know the story.

Getting back to your excellent  
magazine, I read the very well  
written article by Margaret Pol-  
lock on Deer Value. Would like to  
talk to some of the farmers she  
mentioned. Yes, maybe one or two.  
After all, I farm myself.

I visited a farm in pheasant  
season. A neighbor said there was  
no use going to John. He wouldn't  
let us hunt. Drove in yard and  
talked. Asked about pheasants.  
Yes, lots of them. Such pretty  
birds didn't know how anybody  
could bear to shoot them. They  
were so much company. I never  
asked to shoot. No one else did,  
and we were all sportsmen. Other-  
wise, we would have shot them  
without permission as plenty do on  
my place.

Back to deer. I have talked  
with a great number of farmers,  
hunters, etc. Yes, we have deer.  
If our stock get on the highway  
some car hits them. We pay car  
damage. Here in Cherokee county  
two or three deer have either run  
into cars or in front. Car dam-  
age. Does the state pay? I sup-

pose those deer in a corn field in  
spring or summer look swell? May-  
be. Here comes the rub. Barring  
out of the usual circumstances,  
some kind of a deer season will be  
necessary in Iowa.

If the state wishes to upset all  
the good it has done in 30 years  
of conservation here are two ways:

1. A license of from \$20 to \$1,-  
000, a commonly accepted idea  
hereabout. A farmer will love  
that?

2. A bow and arrow season.  
(Who will protect the archers?)

Have only mentioned a few ob-  
jections to deer propagation in  
Iowa. Of course I have not type-  
written this, but if you can read  
my writing, I wish you to print it.

Melvin E. Wilson  
Cherokee, Iowa.

Most conservation departments  
publish magazines. Write to the  
Fish and Game Department, State  
Capitol, in the various states.  
Subscription rates are quite rea-  
sonable. Some of the publications  
are outstanding.

Editor.

### FREE AMMUNITION HANDBOOK

Filled with useful facts and tips  
which all shooters and hunters can  
put to practical use, a new, revised  
edition of the popular Western  
Ammunition Handbook is now  
available to sportsmen without  
charge. The 76-page edition of the  
Handbook, one of the leading pub-  
lications of its kind and of which  
many thousands have been dis-  
tributed, may be had on request  
by writing to Department 200,  
Western Cartridge Co., Division of  
Olin Industries, Inc., East Alton,  
Illinois.

Shooting lore and hints, ballistic  
data and valuable information on  
ammunition, shotgun and rifle per-  
formance are among the many  
facts presented in the illustrated  
Handbook. It reveals, for example,  
which of today's center fire car-  
tridges are best for various species  
of game animals and makes a sim-  
ilar listing of shotgun shells for  
waterfowl and upland game birds.  
The science of trajectory is ex-  
plained and diagramed in simple  
language. Western's unique charts  
showing the distinctive trajectory  
curves of many popular bullets en-  
able shooters to determine how  
much to hold over or under to score  
hits when the target is at a dis-  
tance greater or less than the  
range for which their rifle is  
sighted in.

Shotgun patterns, shot sizes and  
the proper use of various degrees  
of choke are among the many  
phases of shotgun shooting dis-  
cussed, along with the speed of  
flight of wildfowl (a vital consid-  
eration in "leading" birds) and the  
weight of individual pellets in com-  
mon use today. Among other var-  
ied subjects explained are sight-  
ing in a rifle, the meaning of the  
numerals used in modern cartridge

## MAMMALS IN WINTER

Many North American mammals  
go into hibernation, a state of sus-  
pended animation, during the win-  
ter months.

Curled up in snug nests below  
the frost line are the gophers and  
the moles. Their hearts almost  
stop beating and what little energy  
is used to maintain the lowered  
body temperature creates little de-  
mand on their empty stomachs and  
the fat in their bodies. The long  
winter months are a rest period  
for these animals.

It has been said that polar bears  
do not hibernate, choosing to ride  
the ice-floes and roam the wind-  
swept Arctic tundras in search of  
food. This is partly true, the male  
polar bear does not sleep but the  
female enters a cave or some sort  
of shelter and during this time  
gives birth to her young.

At birth the cubs weigh 9 to 12  
ounces and are about 8 inches long.



Mr. Frog takes a deep breath and one  
last look around before submerging for his  
long winter sleep.

blind and covered with little hair.  
They find their way to the mother's  
milk supply and when she wakes  
up in the spring, the cubs' eyes are  
open, their hair has become thick-  
er, and their legs are strong enough  
to carry their chubby little bodies.

Frogs and turtles bury them-  
selves in mud and all breathing  
stops. What oxygen remains in  
their lungs must last them for sev-  
eral weeks so the body processes  
do not function except for the  
feeble and retarded heart beat.

Even the popular Mearns cotton-  
tail rabbit takes to the cover of an  
abandoned groundhog den when  
the sharp wind cuts into his sparse  
fur. The whitetail jack rabbit just  
hunches a little lower in his form,  
flattens his ears, and listens to the  
wind howl as it whips over his  
back.—Waterloo Courier.

designation, the causes of recoil,  
the significance of the ratio be-  
tween velocity and bullet weight,  
and the performance differences  
between solid, soft-point and hol-  
low-point bullets.

The last two pages of the Hand-  
book are devoted to a glossary of  
terms which modern shooters  
should know.

## FISHING LICENSES SALES SOAR TO NEW HIGH RECORD

Fresh water fishing in the United States moved up another notch in its standing in the big league of national sports during the year ending June 30, 1948, when the number of anglers' licenses sold reached a new high record of 14,582,739, according to Albert M.

Day, Director of the U. S. Fish and Wildlife Service.

The gross revenue derived by the 48 states from these license sales, \$28,350,069, also broke all previous records.

Compared with the previous year when 12,620,464 fishing licenses were sold by the various states for \$22,667,301, the 1947-48 season totals show an increase of 1,962,275 in licenses and \$5,682,768 in revenue.

### STATE FISHING LICENSE SALES JULY 1, 1947 TO JUNE 30, 1948

State	Resident	Non-Resident	Total	Fees Paid by Anglers
Alabama	105,940	5,758	111,698	\$ 121,865
Arizona	58,248	9,233	67,481	204,302
Arkansas	210,452	50,136	260,588	459,993
California	1,357,329	16,700	1,374,029	3,280,805
Colorado	253,036	45,451	298,487	770,138
Connecticut	74,311	3,754	78,065	315,261
Delaware	4,562	1,543	6,105	14,138
Florida	160,521	62,629	223,150	519,854
Georgia	119,086	1,384	120,470	157,161
Idaho	148,852	36,482	185,334	571,942
Illinois	659,714	21,818	681,532	711,730
Indiana	540,641	34,646	575,287	695,304
Iowa	324,676	9,177	333,853	655,087
Kansas	221,973	5,086	227,059	344,026
Kentucky	219,915	10,791	230,706	236,422
Louisiana	59,353	4,702	64,055	106,373
Maine	93,750	66,533	160,283	415,395
Maryland	54,286	8,639	62,925	124,860
Massachusetts	206,753	5,535	212,288	480,585
Michigan	826,685	281,825	1,108,510	1,409,904
Minnesota	644,600	198,470	843,070	1,515,272
Mississippi	100,900	9,905	110,805	333,018
Missouri	536,201	35,112	571,313	1,302,495
Montana	137,356	21,356	158,712	492,743
Nebraska	193,022	6,138	199,160	276,880
Nevada	23,616	9,178	32,794	67,651
New Hampshire	90,918	56,581	147,499	563,130
New Jersey	104,945	7,999	112,944	339,536
New Mexico	54,068	28,810	82,878	267,410
New York	616,870	23,558	640,428	1,324,385
North Carolina	143,218	22,283	165,501	433,264
North Dakota	48,269	252	48,521	25,070
Ohio	902,936	28,334	931,270	948,660
Oklahoma	337,953	39,755	377,708	500,519
Oregon	234,014	31,549	265,563	958,591
Pennsylvania	587,913	17,054	604,967	980,725
Rhode Island	20,513	323	20,836	38,092
South Carolina	108,014	5,240	113,254	147,646
South Dakota	96,423	23,727	120,150	134,332
Tennessee	265,332	265,332	530,664	535,057
Texas	255,615	5,108	260,723	257,456
Utah	98,862	4,431	103,293	371,427
Vermont	71,660	26,960	98,620	247,425
Virginia	243,286	14,126	257,412	597,430
Washington	386,520	20,541	407,061	1,369,492
West Virginia	288,212	15,738	303,950	650,531
Wisconsin	597,904	245,993	843,897	1,449,745
Wyoming	87,855	27,318	115,173	626,942
<b>TOTALS</b>	<b>12,977,078</b>	<b>1,605,661</b>	<b>14,582,739</b>	<b>\$28,350,069</b>



For more than 75 years fish hatcheries have been operated by the State of Iowa. Research men are beginning to ask, "Is the hatchery program wasting time and money or has it a place in modern fish management?"

## DOES FRY STOCKING PAY?

By Kenneth D. Carlander  
Iowa State College

Logic alone will not always give the answers. The ideas behind fish propagation seemed perfectly logical when fry stocking was first started. The more fish that were planted in a lake, the more fish there should be to catch. Also, since a single female walleye pike will produce from 30,000 to 100,000 eggs and yet under natural conditions only two or three of these will survive to maintain the population, natural propagation must be very inefficient. It therefore seemed logical that a fish hatchery which could hatch from 50 to 70 per cent of the eggs would greatly improve fishing.

Fishery research has indicated that facts are needed as well as logic. During the last fifteen years, various fish stocking programs have been scientifically evaluated and some of the earlier conclusions which had seemed logical are now known to be erroneous.

On the Great Lakes, the U. S. Fish and Wildlife Service has discontinued stocking whitefish and walleye pike because research indicated that the results were not worth the expense. By comparing the numbers of fry stocked each year with the numbers of fish caught in later years when the planted fry should be large enough to catch, biologists were able to find no evidence that the stocking was improving the fishing. Years in which only small numbers of fry were planted resulted in as large subsequent catches as did years in which thirty to forty times as many fry were planted.

Similar studies on Lake of the Woods and other lakes have shown that the money used in stocking fry in large lakes is usually wasted and can be better used for other conservation measures.

Other fishery research, while

not directed toward an evaluation of artificial propagation, has given an understanding of fish populations which helps to explain the failure of fry planting in many lakes and streams.

For one thing, we now realize that the total weight of fish which a lake can produce is as definitely limited as the amount of corn which can be raised in a field. Adding more fish may merely mean that the average weight of the fish in the lake will be that much smaller. A one-acre pond can produce about 150 one-pound fish, or 300 half-pound fish, or 2,400 one-ounce fish. No one would fish in the pond that has only one-ounce fish, however.

In many lakes fishing is poor because there are too many fish and too few of them are large enough to give good fishing. Stocking more fish in these lakes will, at best, only provide an extra meal for the fish already present, and, at worst, will add to the overcrowded condition.

The early arguments that natural reproduction was very inefficient were based on the logic that if a population of fish maintained itself under natural conditions, each pair of fish would, on the average, produce only one pair of fish that would mature and reproduce in the next generation. If more than that number were produced, the population would increase until there would be no room. Since it was known that each female fish produced thousands of eggs to just maintain the population it seemed obvious that the reproduction was wasteful and inefficient (though sufficient under natural conditions).

In hatcheries, 50 to 70 per cent of the eggs taken are usually hatched and that seemed much better than could be expected under natural conditions. Various scientific studies have indicated, however, that the hatching of eggs under natural conditions may be

(Continued on page 112)



Fourteen and a half million licenses were sold to fish in the United States in 1948. Here an Iowa family meets the finny tribe more than half way. Jim Sherman Photo.

Connecticut was the first state to regulate game seasons and prohibit export in 1677. Iowa in 1878 first put a bag limit on game. Wisconsin in 1887 prohibited the sale of protected game.

Bobwhite quail surplus to a given habitat must move out or die during the winter from one cause or another.

Mud-dauber wasps build many-celled mud tube nests in which spiders, paralyzed by the sting of the female wasp, are stored. In each cell one wasp egg is laid, and after hatching the larvae feeds upon the paralyzed victim.

The female of the common yellow perch has only one ovary that produces eggs.



Fox populations rise and fall periodically. Even in Michigan where more than a million dollars has been paid since 1869 in bounties, Fox numbers rise and fall as Mother Nature dictates.

## MORE ABOUT BOUNTIES

By Ries Tuttle

"Is the bounty system approaching the status of a national farce? Will bounties become a thing of the past in the near future? Evidence exists to support this possibility."

That's how David Hellyer opens an article in Nature magazine on the bounty system as applied to predatory control.

Hellyer conducted a survey of the 48 states and his report should be thought-provoking here in Iowa where recurrent demands for bounty systems are heard.

He found that at least 33 states provide for payments of bounties but that the system, as such, is largely in disrepute among professional fish and game officials and wildlife technicians.

"Bounties are not effective in controlling coyotes," Kansas admitted. "We have more than ever, despite the bounty."

Missouri reported that although some counties pay bounties "the Commission does not contribute to the payment of bounties. We have been unable to find evidence that doing so is important to predator control. The coyote population has definitely increased."

"Our conclusion," asserted Michigan, "after studying the bounty system and its effects is that bounties cost a lot of money and produce no demonstrable effects on either the bountied predators or their natural prey."

Michigan should speak from experience, for since 1869 it has spent over \$1,120,000 in bounty payments!

During Michigan's 80 years of experience with bounties, "various predators have passed through the phases of their natural cycle, now up, now down, just about as they would have done had no bounties ever been paid."

Nebraska's experience with circle hunts, or drives, so popular in Iowa, has not been good.

"Mass drives have done a great deal of harm to the rabbit population," says our neighbor state, "and the destruction of coyotes has probably been more than offset by the wholesale slaughter of rabbits, which are the coyote's usual food."

"Rabbit scarcity, from both hunts and natural causes, has un-

doubtedly done much to focus the coyote's attention on domestic poultry."

"Memory tells us," the Nebraska report continues, "that a good rabbit crop or two will be much more effective than bounties in lowering the damage to domestic animals by coyotes."

The North Carolina Department of Conservation reported that one county in that state paid bounties on gray fox.

"Since the law was passed four years ago, authorizing the county commissioner to pay bounties, foxes have increased in that county just as rapidly as in other counties," the department added.

From the above statements it seems fair to conclude that while it might at times be necessary to control predators, the payment of bounties is not the economic or most effective manner of accomplishing it.—Des Moines Tribune.

## IT'S THE LAW

(Editor's Note: For the next few months, under the above head we will carry sections of the state law under which the State Conservation Commission operates. Readers who wish to have sections interpreted may write to the Conservation Commission, 914 Grand, Des Moines.)

**Section 107.1—Creation of commission—membership.** There is hereby created a state conservation commission which shall consist of seven citizens of the state who are interested in and have substantial knowledge of the subjects embraced in this chapter. Not more than four of said members shall, when appointed, belong to the same political party. No person appointed to said commission shall during his term hold any other state or federal office. (Code of 1946)

**Section 107.2 — Appointment.** Said members shall be appointed by the governor with the approval of two-thirds of the members of the senate. (Code of 1946)

**Section 107.3 — Full-time appointments.** During the session of the general assembly in 1937 and at a corresponding time each two years thereafter, the governor shall appoint two or three members, as the case may be, for a full term of six years. (Code of 1946)

**Section 107.4 — Vacancies.** In case of vacancies, the governor shall appoint for the unexpired portion of the term, and if the general assembly be not then in session the governor shall, upon the convening of the general assembly, promptly report said appointment to the Senate for its approval. (Code of 1946.)

**Section 107.5 — Compensation.** Each member of the commission shall receive the sum of ten dollars for each day actually and necessarily employed in the discharge of official duties, provided said compensation shall not exceed six hundred dollars for each fiscal year. (Code of 1946.)

## NUMBER OF HUNTING LICENSES SOLD GOES DOWN

Hunting licenses sold in the 48 states during the fiscal year ending June 30, 1948, were down in number but the revenue was up.

Hunters paid \$29,814,327 in fees for 11,391,810 licenses during the 1947-48 shooting season. Compared with the preceding year, license sales declined 674,953 from a high of 12,066,763, but fees jumped \$1,255,880 from the previous total of \$28,558,447.

The revenue received for 1947-48—the largest ever recorded—was the result of increased hunting pressure in a number of states plus increased fees. The gross total included such items as big game permits, special area permits, and deer tags, which may be required in addition to the regular license fees.

### STATE HUNTING LICENSE AND FEDERAL DUCK STAMP SALES JULY 1, 1947 TO JUNE 30, 1948

State	Resident	Non-Resident	Total	Fees Paid by Hunters	Federal Duck Stamps
Alabama	219,135	1,844	220,979	\$ 418,297.00	11,210
Arizona	55,507	1,769	57,276	266,193.50	7,427
Arkansas	174,261	3,316	177,577	316,381.50	44,788
California	502,583	1,170	503,753	1,315,587.00	137,279
Colorado	345,391	9,397	354,788	1,658,055.50	28,217
Connecticut	47,403	517	47,920	198,435.00	6,692
Delaware	20,313	389	20,702	26,819.40	3,284
Florida	99,287	1,504	100,791	459,332.50	19,369
Georgia	136,993	1,933	138,926	305,465.75	4,143
Idaho	151,076	2,347	153,423	548,922.00	39,470
Illinois	414,900	2,764	417,664	871,260.00	81,753
Indiana	390,727	1,083	391,810	584,528.38	17,038
Iowa	268,579	633	269,212	559,247.25	52,719
Kansas	178,962	1,906	180,868	297,605.10	39,754
Kentucky	187,204	1,824	189,028	379,827.00	5,502
Louisiana	175,482	1,233	176,715	381,789.00	62,998
Maine	93,859	11,580	105,439	350,587.90	10,905
Maryland	109,223	3,132	112,355	318,444.75	12,195
Massachusetts	119,214	1,531	120,745	328,747.00	15,780
Michigan	808,360	11,046	819,406	2,688,572.50	91,334
Minnesota	344,710	1,441	346,151	610,207.75	145,926
Mississippi	192,730	1,769	194,499	388,915.00	17,322
Missouri	300,520	2,444	302,964	1,051,447.50	50,733
Montana	137,356	1,092	138,448	676,549.00	31,460
Nebraska	184,922	1,578	186,500	265,202.45	49,604
Nevada	19,255	2,402	21,657	147,904.00	8,586
New Hampshire	90,918	10,437	101,355	423,632.00	3,428
New Jersey	138,747	1,907	140,654	316,254.00	16,948
New Mexico	51,436	2,428	53,864	306,273.25	6,357
New York	777,208	7,104	784,312	1,434,023.20	48,029
North Carolina	240,813	2,685	243,498	638,295.30	12,741
North Dakota	87,448	1,949	89,397	274,675.50	47,750
Ohio	627,108	694	627,802	685,838.00	27,087
Oklahoma	158,418	1,036	159,454	205,877.75	33,935
Oregon	203,102	5,518	208,620	950,740.50	60,390
Pennsylvania	819,547	28,012	847,559	2,039,274.00	32,841
Rhode Island	11,869	149	12,018	27,246.50	2,595
South Carolina	131,741	2,957	134,698	273,155.35	6,959
South Dakota	136,315	12,852	149,167	477,205.00	53,513
Tennessee	265,332	1,232	266,564	549,829.00	19,830
Texas	250,724	1,241	251,965	536,175.50	121,156
Utah	122,780	5,670	128,450	726,639.30	25,522
Vermont	63,321	6,924	70,245	226,656.25	3,161
Virginia	253,117	5,449	258,566	682,221.50	11,418
Washington	386,520	632	387,152	1,556,291.00	74,937
West Virginia	287,413	2,652	290,065	614,606.00	2,243
Wisconsin	378,363	2,789	381,152	923,603.30	91,326
Wyoming	60,666	4,991	65,657	531,491.00	8,658
Alaska					4,113
Dist. of Col.					11,896
Hawaii					104
Puerto Rico					252
<b>TOTALS</b>	<b>11,210,858</b>	<b>180,952</b>	<b>11,391,810</b>	<b>\$29,814,326.93</b>	<b>1,722,677</b>



Nationally, hunting licenses dropped 675,000 in the year ending June 30, 1948. In Iowa the decrease was 55,000. These figures, however, do not reflect the tremendous upsurge in licenses sold during the 1948 hunting season. Jim Sherman Photo.

### GAME FINES BEAT ALL-TIME RECORD

Forty-five thousand sixty-eight dollars was paid into school funds in 1948 as a result of convictions for violating hunting, fishing, and other conservation laws. The total was greater by almost \$15,000 than in any other previous year. During the year 1,606 cases

were prosecuted with convictions secured in all but five.

In addition to the \$45,000 in fines assessed by justice courts, the violators were sentenced to a total of 445 days in jail. Fishing violations accounted for 541 prosecutions, hunting 905, trapping 59, the remainder miscellaneous conservation law violations.



Almost reversing the rabbit hunters' success, squirrel shooters found better shooting in 53 counties, poorer in 28. Jim Sherman Photo.

to feed inland as in the previous year.

**Geese:**  
 Good Season—14 counties  
 Fair Season—28 counties  
 Poor Season—57 counties

In comparison to the previous season:  
 Better than last year—23 counties  
 Poorer than last year—66 counties  
 Same as last year—10 counties

**Comments of conservation officers on 1948 season:**

**W. W. Trusell, Woodbury County:** "More hunters in this county than ever before."

**Ralph Lemke, Sioux and Plymouth:** "The rabbit, squirrel and pheasant seasons were successful. There was a good supply left for the seed stock. There were more hunters than last year."

**Lloyd Huff, Polk:** "The overall hunting success was about the same as last year, except for quail which was poorer."

**Dwight Morse, Dickinson:** "Duck hunting in Dickinson County opened with mild weather and mixed species of ducks with average population. Hunters who were able to get out numerous times managed to bag ducks. The first week of pheasant season hunters found birds comparatively easy to bag. Later the hunters who worked for the birds did have success, while the less ambitious gave up after the first two week ends. The last ten days found many roadside shooters. All in all, this season rated good over the 1947 season."

**Frank Porter, Black Hawk and Bremer:** "Better than average."

**E. A. Saxton, Franklin and Butler:** "Had more hunters in the field than ever before. Rabbits seemed to be widely scattered, no early weather to drive them to heavy cover. Pheasant population was not hurt by hunters' take; with good winter survival and good hatching season the 1949 season should be very good."

**W. E. Ayres, Benton and Tama:** "Seem to have a high ratio of cock pheasants left in this area in spite of the terrific hunting pressure. I personally feel that there is ample game in this area and it is well balanced, with the exception of waterfowl."

**E. F. Newel, Guthrie, Adair and Union:** "Hunting success down about ten per cent. Many reports of wolf and fox in this territory."



Quail shooters took a bump with shooting reported better in five counties, poorer in 27, and the same as the previous year in 14. Jim Sherman Photo.

## Hunting ...

(Continued from page 105)

### Ducks:

Good Season—26 counties  
 Fair Season—23 counties  
 Poor Season—50 counties

In comparison to the previous season:  
 Better than last year—41 counties  
 Poorer than last year—50 counties  
 Same as last year—8 counties

Goose hunting dropped back to normal after the unusually good season in 1947. Short, heavy flight of blue geese on the Missouri River. Comparatively few blues remained

**A. E. McMahon, Carroll and Greene:** "Hunting success which would be considered an average successful season. There were many hunters and most of them reported good hunting."

**Eugene Goeders, Webster and Calhoun:** "Hunting success better than last year but hardly up to par to what we have had and could have in this area."

**L. F. Tellier, Dubuque:** "Good overall picture of hunting success. Rabbits were hard to find. The fox hunting is just getting started but indicates that the fox are not as plentiful as they were last year."

**T. K. Johnston, Keokuk and Mahaska:** "Squirrel season only fair. Rabbit hunting was very poor except in the northern part of each county. The quail season was good to poor because of nice weather. The birds were widely scattered. Duck and goose hunting were very poor."

**Frank Tucker, Cass and Audubon:** "Cass and Audubon counties had unusually large numbers of hunters during the pheasant season."

**Wendell Simonson, Kossuth:** "This county seemed to be well supplied with hunters and they seemed to be well satisfied. If they went hunting and returned with small bag of game, it was either 'Couldn't hit 'em' or 'The birds were too smart.' There didn't seem to be much complaining about lack of game this year."

**Carl Warren, Dallas and Madison:** "Fairly good hunting in general. The number of returning hunters indicated they thought it was. Most hunters had some game in the bag. I think it all adds up to about an average season, some hunting being good and some being poor."

**Joe Hopkins, Mitchell, Floyd and Howard:** "We had few people who drove over 25 miles to hunt. There were very few out-of-county hunters. Road hunting was on the increase during the hunting season."

**Dave Fisher, Des Moines and Henry:** "A fair season considering the hunting pressure that was in the field. I can say it was a fair season. Our game population held up well. With the increased hunting pressure, perhaps (new) hunters became careless. More farmers were complaining of damage by hunters. We may have reached a peak of hunting pressure, depending on our economic status."

**Maurice Jensen, Clinton and Cedar:** "Hunters expressed satisfaction with all hunting except rabbit season. Hunters blame night hunting for the shortage of rabbits."

**W. E. Wilson, Boone and Story:** "With the exception of squirrel the

hunting in this area was somewhat below average."

**T. L. Berkley, Winneshiek, Fayette and Chickasaw:** "A fair season this year."

**Floyd Rokenbrodt, Humboldt, Pocahontas and Wright:** "Had mild fall weather making duck and goose hunting slow. Rabbits were scarce. Large fox populations may be the cause. Pheasant and squirrel produced the best hunting."

**Lloyd Kiefer, Linn:** "The take of game was good, taking into consideration the large number of hunters in the field. Prospects are good at present for a good breeding stock of quail, pheasant and squirrel for next year."

**George Kaufman, Allamakee and Clayton:** "A very good season. Everyone was satisfied."

**Frank Starr, Buena Vista and Cherokee:** "A very good overall hunting season. The pheasant take would have been much higher had the hunters taken to the fields instead of hunting the roads. There were many more duck hunters this season than last season. Long range shooting tactics cut down the kill and made the birds wary. Squirrel hunters had good success. A good seed stock of squirrels are left. The rabbit hunter was forced to hunt longer this year and had little success."

**Waldo Johnson, Poweshiek and Jasper:** "Terrific hunting pressure during the pheasant season. Hunters were careless. Farmers were universally up in arms and many control measures were discussed. Some very unwarranted action by the hunters of cutting fences, shooting chickens, etc. Otherwise, the season was normal."

**E. D. Benson, Lee and Van Buren:** "More hunters went out than ever before. Good hunters seemed to have good success."

**Don Kriebler, Marion and Warren:** "More hunters in the field than ever before. The season was fair and there were plenty of quail left for 1949."

**James Becker, Buchanan and Delaware:** "A good hunting season."

**J. C. Graham, Appanoose and Monroe:** "Season better than last year with the exception of ducks and geese. We have a good crop of quail, squirrel and rabbits left."

**Dan Nichols, Muscatine and Louisa:** "Hunting season fair to poor. Hunting pressure was much greater this year which may account for the smaller individual bags of all kinds of game."

(Continued on page 110)



The pheasant population continued the upward swing during 1948, with 52 counties reporting better hunting than the previous year. Jim Sherman Photo.

**Hunting . . .**

(Continued from page 109)

**Walter Harvey, Marshall and Grundy:** "Generally good but spotty rabbit season. There was an increase of rabbit hunters. Squirrel hunting was good; also there was an increase in squirrel hunters. Pheasant hunting was good the first week, after that just fair. Good duck and goose hunting but the hunting pressure heavy during pheasant season."

**Kay L. Setchell, Hardin and Hamilton:** "A good season. Generally hunters were well satisfied. Sportsman-farmer relationships showed much improvement. There were more out-of-county hunters this year. There was much less violating of game laws. The gun safety program must be paying dividends as there was not an accident reported all season."

**James Gregory, Lyon, O'Brien and Osceola:** "Better hunting than last year. More hunters were in the field this year than ever with far less violations than in the past years."

**Garfield Harker, Jackson and Jones:** "A good season. There were many satisfied hunters, more than I have seen for several years. Duck hunting was the best in years. Pheasant hunting was very good, plenty of birds."

**Gerald Jauron, Shelby and Harrison:** "More game than last year and hunting was better. There were more hunters in the field than last year."

**Elden Stempel, Adams, Page and Taylor:** "A fair hunting season. Quail hunters who knew the quail territory had good luck."

**William Ellerbrock, Fremont, Mills and Montgomery:** "A poor quail season. There was a shortage of birds."

**F. E. Morley, Winnebago and Worth:** "A good season with the exception of ducks."

**Charlie Adamson, Scott:** "An overall hunting season better than last year. There were more hunters in the field."

**C. J. Schomer, Wapello and Davis:** "Hunting season not as good as the previous year. Because of heavy

**14TH NORTH AMERICAN WILDLIFE CONFERENCE SCHEDULED MARCH 7-9, WASHINGTON, D. C.**

The fourteenth North American Wildlife Conference will be staged March 7, 8, and 9 in the Statler Hotel, Washington, D. C.

Officials of the Wildlife Management Institute, which sponsors the annual international conservation assembly, believe that the all-time attendance record for these gatherings will be shattered by this year's conference. The increased interest in the conservation, preservation, and increase of natural resources, the selection of the nation's capital as the meeting place, and other factors all point toward the largest and most important international conservation gathering ever assembled.

An experiment conducted by the U. S. Fish and Wildlife Service and the University of Maryland proved a diet of fish is equal to a diet of meat in providing red cell count and hemoglobin value of human blood.

Smallmouth and largemouth black bass belong to the sunfish family. The only true basses living in Iowa are the silver and yellow bass.

cover and mild weather, the season was very erratic. Game was too scattered for good hunting."

**Wes Ashby, Johnson and Iowa:** "An increase of hunting pressure for all types of game. It was a good season for ducks, quail, pheasant, and fair for rabbit and squirrel."

**J. Z. Stevens, Cerro Gordo and Hancock:** "Undoubtedly the poorest overall hunting season experienced in these two counties for the past 15 years."



Flying squirrels have large black eyes that enable them to see exceptionally well at night. Dick Trump Photo.

**Squirrels . . .**

(Continued from page 105)

pair of great black eyes which enable it to see exceptionally well at night and probably make daylight distasteful. Like all tree dwellers, it has hand-like feet with long flexible toes and sharp strong claws. Apparently, the only sound it utters is a faint squeak.

Flying squirrels usually live in hollow trees or abandoned woodpecker holes, but they will build summer nests of leaves, and they occasionally take over an empty bird house near a residence, or find their way into an attic where they become a nuisance because, after dark, a flying squirrel becomes a frolicsome bundle of energy.

In winter, 20 or 30 may band together in a single den. One forest ranger returned to his cabin to find the chimney plugged with nesting material of leaves and shredded bark, another nest in the stove, and four nests in his mattress.

They feed mostly on seeds, tree buds, nuts, fruits and insects. One pair, that came every night to capture moths and beetles at a lighted window, were finally tamed and had their young indoors, although they came and went as they pleased. These two would eat meat, just as in the wild they may eat the eggs or young of birds. Owls are their chief enemies, although foxes and weasels sometimes catch them on the ground. They have from two to six young in a litter but observers differ as to whether they may have two or only one litter per year.

Virginia Moe, in ANIMAL INN, her fascinating book about the many and various animals at Trailside Museum in the Forest Preserve District of Cook County Illinois, says that the young—born naked and blind—open their eyes

and are well furred all over when they are about three weeks old. They grow swiftly after that. Miss Moe says they seem to sleep harder than most animals and when roused in the daytime their drooping eyelids give them the sleepest look ever seen on an animal's face. They also play harder than other animals but never tussle or quarrel with each other, even when feeding. As pets they are unrivalled; soft and sleek; sociable and sweet-tempered; mischievous and tirelessly playful at night.

The flying squirrel is the cherub of the animal kingdom.

**RIVER POLLUTION TO BE ELIMINATED**

Pollution from Estherville's packing plants which has reportedly killed hundreds of fish in the Des Moines River here and elsewhere may be eliminated soon, according to Editor Allen of the Estherville Enterprise who writes as follows in his newspapers:

"It will not be long before those residing down the Des Moines River will have no kick about our sewage. The Conservation Commission can begin to restock the river.

"The city council at a meeting last Thursday night settled all that when they entered into a contract with the Lippert Bros., Inc., of Boone to build a new and enlarged disposal plant for the sum of \$360,102.00. This is a high price but some twenty thousand dollars under other bids.

"The plans had to be somewhat altered to get this price, but the change will not affect to any great extent the efficiency of the disposal plant.

"The plant will be large enough for a city of 30,000 people. However, most of the disposal plant will be used by the Tobin Company and the Davis plant and some uptown plants.

"It has been arranged to assess these plants for their complete share of their use of the disposal plant. They have already laid away money for this plan. In the end these companies will have paid into the city sufficient cash to take care of their use of the plant.

"It is said during the time the plant is being paid for it will cost the taxpayers about five thousand dollars a year for the plant erection. The cost of operation will be greatly increased and this will to a great extent be taken care of by those who use the plant.

"We were compelled to do something about the sewage here or we would be in bad with those downstream and with the Conservation Commission who would force our hand if some movement were not made. It's settled now and all should be happy."—Emmetsburg Reporter.

The commercial catch of fish and shellfish in the United States and Alaska amounted to 2,200,000 short tons in 1947 and was valued at 2.6 billion dollars.



Fifty of 99 Iowa counties had poorer duck shooting, 41 better, and eight reported the same as in 1947. Jim Sherman Photo.



The Iowa Poll revealed that almost 600,000 Iowans went hunting in 1948. Jim Sherman Photo.



We all agree we would like better hunting. There is only one magic key to this goal, more and better wildlife cover adjacent to year around food. Jim Sherman Photo.

**Outdoors...**

(Continued from page 105)  
*children from your home went hunting or fishing at least once?"*

Hunting	
Men	445,000
Women	53,000
Children	82,000
<b>Total</b>	<b>580,000</b>
Fishing	
Men	470,000
Women	315,000
Children	205,000
<b>Total</b>	<b>990,000*</b>

(\*The figures in this table were computed by projecting the percentages from the survey on the number of Iowa families estimated at 715,000.)

The Iowa State Conservation Commission reported that 175,184 hunting licenses and 339,823 fishing licenses had been sold by October 30, 1948, including combination hunting and fishing licenses.

According to the poll, about one million more persons said they went hunting or fishing than the number of licenses issued. This

difference can be accounted for partly because (1) Farmers hunting on their own property are not required to purchase hunting licenses; (2) Women are not required to purchase fishing licenses as long as they do not fish in state-owned lakes; (3) Children under 16 years of age are not required to purchase fishing licenses; and (4) Many hunters and anglers traveled outside of Iowa to hunt and fish and did not purchase licenses in this state.

Iowa hunters and anglers were asked:

*"Do you remember about how many miles away from home you (or your family) traveled on your longest hunting and fishing trip?"*

Hunting Trip	Total City Town Farm			
	Total	City	Town	Farm
1-50 miles	24%	29%	18%	21%
51-100 miles	11	20	11	4
101-200 miles	7	14	3	3
201-300 miles	3	3	3	3
301-400 miles	1	2	0	0
401-500 miles	1	1	0	0
501 miles and up	2	3	2	2
All near home	49	26	59	67
Don't remember	2	2	4	1

**INCREASE COVER—  
INCREASE GAME**

We will all agree that we would like better hunting. Even if Iowa hunting was twice as good as any

Fishing Trip	Total City Town Farm			
	Total	City	Town	Farm
1-50 miles	21%	22%	25%	18%
51-100 miles	10	10	8	12
101-200 miles	9	10	7	7
201-300 miles	5	3	6	7
301-400 miles	2	4	1	1
401-500 miles	4	6	5	2
501 miles and up	10	16	6	4
All near home	38	27	42	48
Don't remember	1	2	0	1

All Iowans were asked the following:

*"Early in the pheasant season this year, many farmers posted 'No Hunting' signs. Have you read or heard anything about this going on?"*

	Total	Men	Women
Yes	60%	72%	49%
No	35	25	44
Don't remember	5	3	7

Those who were acquainted with this situation were asked this question:

*"What would you say are some of the main reasons why farmers posted 'no hunting' signs?"*

	Total*
Shoot livestock, destroy property	52%
Hunters careless, leave gates open, etc.	26
Farmers want game themselves	9
Know who is on their property	8
Want privacy	4
Previous trouble	3
Want to be paid	1
Miscellaneous answers	1
Indefinite	7

This same group was also asked:

*"Do you have any ideas on what might be done to make farmers more willing to allow hunters on their land?"*

	Total*
Educate hunters in cooperating	38%
Get farmer's permission first	29
Educate farmers in cooperating	3
Share game with farmer	2
Hunters pay damages	1
Stricter state laws	1
Miscellaneous answers	5
No opinion	31

(\*The above tables add up to more than 100 per cent because some respondents gave more than one answer.)

other state, we would want it to be better. The problem of what to do isn't any spur-of-the-moment job. Too many mistakes have been made in the past in response to some apparently good idea.

About 75 years ago someone thought the European carp would be a good fish for our water. Today we see this same carp destroy other fish nests, tear up vegetation, muddy up our waters, and in general make a nuisance of himself.

A few years later a man from Holland decided that our muskrat would thrive in their miles of canals. The results were undesirable in that they dug dens and holes that caused leaks and washouts.

Another man thought the beautiful green underwater vegetation in the Minnesota lakes would, if transplanted to Europe, prevent erosion and help clear up their rivers. Instead it grew rapidly and clogged up rivers until boats could not navigate and expensive weed cutters had to be employed to keep the channels of their slow moving streams open.

Another man thought our rainbow trout would do well in a cold water lake high in the mountains in Ecuador. Now the same trout are a large soft fish and are definitely undesirable.

Honolulu was troubled with rats, so someone suggested the mongoose from India. The mongoose started after the rat, but under nature's oldest law, "the survival of the fittest," the few remaining rats took to the trees where the mongoose could not catch them. For food they ate bird eggs. Soon there weren't enough birds left to control the hordes of insects that thrive in that warm climate.

Hundreds of other examples have caused modern conservation commissions to think twice and they experiment first in small controlled areas. In the meantime, the one

(Continued on page 112)



Fishing is "Big Medicine" in Iowa. Nine hundred and ninety thousand citizens found rest and relaxation along our lakes and streams in 1948. Jim Sherman Photo.

## Fry Stocking . . .

(Continued from page 107)

equally successful. The most critical factor is the survival of the fry and young fish. Most of the young fish go to feed the larger fish. Planting of hatchery fry usually has not helped increase the number of adult fish.

With this background, we can see the fallacies in the logic behind early fish propagation programs. It now seems logical to suspect that fry planting will fail to bring results in many lakes.

Fry planting has been very successful in some waters, however. In lakes which did not have fish in them before stocking, the survival of hatchery fry has often been extremely high and the growth rate of the young fish very good. This has been demonstrated in several Iowa lakes when fish had previously winter killed.

The value of fry planting cannot be determined by applying logic alone—nor even by applying facts which have been determined on a different lake or stream. The need for evaluating stocking programs for each situation is now recognized. Continuation of a stocking program without any idea of its success may be an unnecessary expenditure. On the other hand, widespread cutbacks in propagation might result in declining fish populations in certain lakes or streams.

For several years the Conservation Commission has operated a fish hatchery at Clear Lake, stocking several million walleye fry each year. It is difficult to determine the value of this stocking program, but the Commission, through the Iowa Cooperative Fishery Research Unit at Ames, is starting an investigation which in time should give the answers. This year and each odd-numbered year, the hatchery at Clear Lake will be closed and eggs will not be taken nor will fry be planted in Clear Lake. On the even numbered years, the hatchery will be run as in the past.

If the hatchery is contributing to the maintenance of the walleye population in Clear Lake, the fish hatched out in the even-numbered years should be more numerous than those hatched out in the odd-numbered years when the populations will be dependent upon natural reproduction.

For the next several years, scales will be collected from walleyes caught by anglers and from fish taken in experimental nets. From these scales the year of birth of the fish can be determined so that the results from each year's spawning can be evaluated. During 1941 to 1943 and 1947 to 1948, scales have been collected in this same manner so that the conditions under the regular operation of the hatchery are known for comparison with the new experiment.

It is believed that this research



One skunk may look different to another skunk, but they all look alike to Conservation Officer Partridge, much to his chagrin.

## Wardens Tales

Shop Talk From the Field

Lloyd Kiefer, conservation officer in charge of Benton and Tama counties, writes:

"I was standing on the road checking three fox hunters near Whittier one Sunday afternoon when a pickup truck drove up and stopped. A farmer opened the door and asked, 'What luck are you having? Are you getting any pheasants?' I answered, 'We aren't having very good luck.' 'How many did you get?' the farmer insisted. I replied, 'Oh, I'm not hunting.' The truck driver volunteered, 'You wanta look out for that game warden. He's around here all the time. Some days he flies over and other days he has a car. You wanta watch out because he may jump out from anywhere and grab you.' By this time the fox hunters were having a big laugh and the farmer turned to them and said, 'All right, you can laugh if you want to, but if he catches you, just remember, I told you so.' And he drove off."

Conservation Officer Gene Goeders, in charge of Calhoun and Webster counties, writes:

"Two fellows from Fort Dodge, Iowa, will think twice before they spend New Year's Day around Manson again. I caught them several miles from town with three illegal pheasants. I took them in to the J. P. office and they were fined \$100 and costs each. As they

will bring the answers as to the value of walleye pike fry planting on Clear Lake more quickly and more definitely than they can be secured in any other way. We know that we need more facts.

drove away they pulled out in front of the town marshal and as he drove along behind them they ran through two stop signals. They received another summons and appeared before the same J. P. As they paid up again, one of them said, 'We sure got out of bed on the wrong side this morning.'"

Floyd Morley, conservation officer in charge of Winnebago and Worth counties, writes:

"The day before the pheasant season closed, I saw a dead rooster pheasant in the fence along the road. Thinking I would get the right foot for the biologists I stopped, and as I approached the bird a house cat walked away. I picked up the bird, still limp and hot, and picked it on the spot. You know that if you pick a bird as soon as it is killed the feathers come off easily. This one did not have so much as a bruise under the skin, just claw marks on the back. The cat had bitten through the neck about an inch below the head. There was not very much grass along the fence but it was on the sunny side of the road and I am sure that the cat was just sunning herself and as the pheasant came through the fence, the cat killed her. I had not been hunting very much so I gave the head to the cat and took the rest home. While I was picking the bird, the cat just stood and glared at me."

Wayne Partridge, conservation officer in charge of Lake Keomah State Park, writes:

"I had one of the pet skunks that were deodorized for the State Fair exhibit and it was a very nice pet. One night it got out of its pen and for two months I did not see it. One evening I was down at the lake and a big old broad-stripe walked down the road. It looked like my pet, but I thought

I'd better make sure before I got too brave. I went over to the skunk, who didn't pay any attention to me but went nonchalantly on about his business. I walked along side of it for twenty yards, and when it turned off the road toward the lakeshore I turned off too, staying right along beside it, more convinced all the time that it was the right skunk. When it got to the lake, it turned around and looked at me for a moment and walked straight up to me. By this time I was sure it was my old pet, so I reached over and picked it up. Boy, did that skunk cut loose, right in my face. And as usual I had my mouth open. It seemed my mouth was full and did I ever spit and slobber. Got in my eyes and I couldn't see. I don't know what became of the skunk but he's probably still chuckling to himself and I guess I can't blame him much. As for me, I did live, even though I doubted that I would for quite a while."

Garfield Harker, in charge of Jones and Jackson counties, writes:

"I'm not in a position to swear to the truth of the following, but a Clinton County farmer told me that during the last pheasant season his hired hand was picking corn with a picker, and while he was making some minor adjustments on the tractor, a pheasant flew up and lit on the wagon. A hunter, whose presence until then had been unnoticed, promptly shot the pheasant off the wagon, putting the operator a little further under the tractor until hostilities ceased. Another case of a city hunter, Davenport this time."

## Increase Cover . . .

(Continued from page 111)

thing all of us can do to improve hunting and fishing is to plant willows, multiflora rose, walnuts, and almost any kind of game cover in every possible place.

Talk it up with all your land owner friends. Such planting will catch leaves, water run-off after rains, prevent soil erosion, and insure a longer prosperity for Iowa. Join a sportsmen's group or organize one in your community and write the Conservation Commission in Des Moines for help in planning your spring planting.—*Cedar Rapids Gazette.*

The neck is absent or unimportant in fishes and other aquatic vertebrates, but in most land forms it is of great importance inasmuch as it is the flexible body region which gives the head the wide range of movement necessary to it in a rapidly moving terrestrial animal.

Sharks differ from most fish in that they either lay a few large eggs protected by a horny egg-case, or, as with the majority of present day sharks, the eggs develop within the body cavity of the mother and the young are born good sized and fully developed.

The eel is remarkably prolific, a single female 32 inches long having been estimated to produce 10,700,000 eggs.