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State Conservation Commission
10th and Mulberry Sts.
Des Moines 8, Iowa

IOWA CONSERVATIONIST

VOLUME 5

APRIL 15, 1946

NUMBER 4

Iowa Trappers Net Two and One-Half Million Dollars

IOWA HAD A COAT OF MANY COLORS

By Ada Hayden

A HUNDRED years ago Iowa had a coat of many colors. The coat was mainly a grassy one; for Iowa is a part of the great Grassland which reaches in North America far into Canada on the north, to the Mexican highlands on the south, and to the broad-leaved forest of the east, and beyond the Rocky Mountains on the west. Yet in this vast domain, Iowa is itself a topographical unit. The northern boundary is defined by a watershed in which the headwaters of both Minnesota and Iowa streams arise. Near the southern border, a less pronounced watershed separates the source waters of Missouri streams from the chief Iowa watercourses. A major highland, sometimes referred to farther north as the Couteau de Prairies, runs diagonally across the west third of the state separating the waters of the Mississippi from the waters of the Missouri rivers.

Forests border the main river valleys in broad zones, but diminish to fringes along the minor streams and lake borders. The remaining area, which comprises five-sixths of the state, was prairie. The somber browns and grays of the haze-shrouded forest contrast during the winter with the white expanse of snow-covered grassland, or in spring and autumn with the reddish-brown bluestem grasses. The traveller in the forest sees the sky through its thatch of branches; but the traveller on the prairie beholds the arching sky—blue, gray, or cloud-flecked—as it merges at the horizon with the endless grassland. The prairie is, in part, an expression of the climate. The sweeping winds, the blinding bliz-

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1945-'46 Trapping Season Produces Second Most Valuable Fur Crop

IOWA TRAPPERS harvested the second most valuable fur crop in the history of the state during the 1945-46 trapping season. During the 30 day muskrat and mink, and 60 day open season on other protected fur bearing animals, a total of 624,565 furs valued at \$2,630,655.71 were taken.

There were 13,537 licensed trappers during the season, plus approximately an equal number who trapped on their own land, where no license is required.

Mink, for the first time, exceeded in total value the muskrat, which in the past has been the number one fur bearing animal. Mink com-

manded the highest average price ever recorded (\$28.16) with individual pelts reaching the almost unbelievable maximum of \$40.00 each. Only two fur bearers, red fox and coyote, decreased in value in 1946, the rest increased. Except for beaver which increased from \$22.00 to \$35.73 and mink which increased from \$16.15 to \$28.16, the price raises were slight. The total number of animals trapped decreased during the current season some 30,477 individuals. Decreases were recorded for opossum, muskrat, skunk and badger; increases for raccoon, mink, civet, red fox, weasel, coyote and beaver.

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Iowa's policy of live trapping beaver in "nuisance locations" and transplanting them to areas where there is no danger of crop damage, has begun to pay off, and although only 600 were trapped for pelts during the past season, this valuable fur-bearer is now firmly re-established in all watersheds of the state.

WILDLIFE NURSERIES

By Ellis A. Hicks
Cooperative Research Unit

WHERE and how do fledgling birds and baby mammals live? We say that birds live in nests and mammals in dens, but where are these homes to be found and how are they prepared? It is fairly easy for one to answer these questions for himself as far as birds are concerned by using a little patient observation. But getting similar information about mammals is more difficult because they are usually secretive in preparing their dens. They do not offer such good observation targets as do birds.

There are many other interesting aspects of a wildlife nursery. What and how do the parents feed their young? Do the parents share family cares? What means of protection do they have? Do the young receive any training from their parents? Anything can happen from murder and fratricide to a well-ordered gracious family life.

Fledgling birds when they first emerge from the shell may be one of two general types. If they are naked, weak, blind or generally helpless they are known as an altricial type of bird. On the other hand, if a fledgling upon emerging from its shell has a coat of down and is able to run about after becoming dry, it is a precocial bird.

Good examples of precocial birds are the ducks, geese, shore and upland game birds. Young quail, newly-hatched, are able to run about after their down becomes dry. How fortunate they are, for if they were helpless and had to remain in the nest for several days or weeks, many of them would be caught and killed by snakes, weasels and other enemies. When a brood of young is disturbed, they scatter in all directions to hide.

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Iowa Conservationist

Published Monthly by

THE IOWA STATE CONSERVATION
COMMISSION

10th and Mulberry—Des Moines, Iowa

JAMES R. HARLAN, Editor

F. T. SCHWOB, Director
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CIRCULATION THIS ISSUE.....25,750
Subscription Rate.....40c per year
3 years for \$1.00

Subscriptions received at Conservation
Commission, 10th and Mulberry, Des
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U. S. Forestry Service may train veterans for any position or types of work for which the service is responsible, according to an agreement between the Department of Agriculture and the Veterans Administration.

Under the agreement, regional VA managers are required to list the nature and location of all forestry training opportunities in their districts so that veterans may be processed for training in each district.

The program contemplates general training for non-disabled veterans and specialized training for disabled veterans in accordance with Public Laws 346 and 16.

"Veterans may learn of training opportunities in the Forestry Service by contacting the closest VA Regional Office to their homes," VA said.



Unless our people learn to play, fish, hunt, camp, hike and enjoy music and drama, labor saving devices and the forty-hour week may be disastrous to our development as a nation of culture and character.—Jim Sherman photo.

TRUE! HOW TRUE

SUDDENLY our nation has had thrust upon it a wealth of leisure time never before dreamed of. As a result of our mechanized era and technology has come one of the greatest opportunities our people have ever known, and paradoxically there has come one of the most critical problems of modern times. The now common forty-hour week and vacations with pay have given us an unprecedented amount of leisure.

This great leisure, if it is to be used constructively, must be planned for with much care. High speed, mechanization and urbanization call for wholesome leisure time pursuits. Unless our people, youth and older persons develop

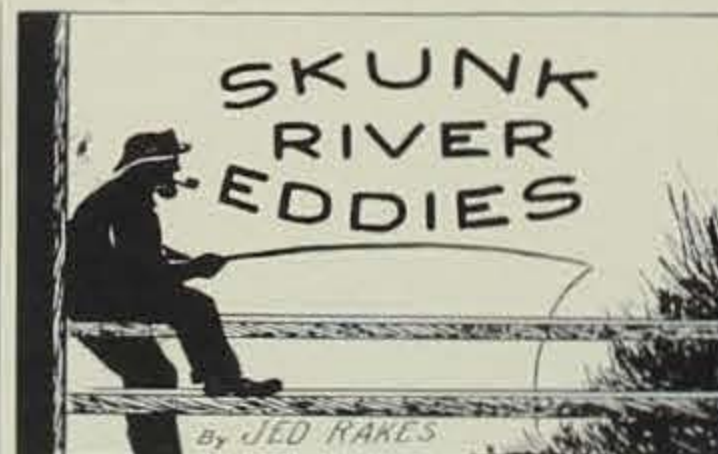
hobbies, learn to play, have an opportunity to fish, to hunt, to camp, to hike, to enjoy music and drama, to see our great scenic resources, to study nature, this great boon to mankind will be disastrous. We can, however, make it a great opportunity for the development of culture and character, of brains and brawn—of a better and stronger people.

The opportunities for constructive recreational and leisure time pursuits are abundant in our state and in our communities. Some steps have been taken to utilize these opportunities. To realize the needed results it is necessary to multiply these efforts many, many times. It is toward this objective that the Tennessee State Park Program is constantly directed.

—Tennessee Conservationist.

TRY IT AND SEE

Although earthworms may be marketed or used freshly dug from the ground, they are much more desirable, will live longer on the hook, and will take more fish if well "scoured" before use. This fact is well known to all skilled bait fishermen, and it is probable the knowing ones would be willing to pay a premium for such worms. This scouring process has been known for hundreds of years and was well described by Izaak Walton in 1653. To carry out this "scouring" process a quantity of sphagnum moss such as used by nurserymen in packing plants for shipment is put into a stoneware crock or tight wooden box. This moss, which grows in shady, swampy woods, should be well moistened, but the excess water should be wrung out before the moss is placed in the container. The worms should be placed in the moss for at least two days, and preferably three or four, and kept in a cool place. At the end of this period, they should be almost transparent, tough and lively.



I guess about the only privilege I ain't never seen abused is the privilege to go home when the fish ain't bitin'.

It's a sign o' nearly perfec' self control when a feller kin keep from battin' a turtles head back under water with the tip o' his fish pole, er from kickin' over a bunch o' toad stools.

Andy Gillam says if them big white cranes over there ain't havin' no better luck than I am, it's no wonder they ain't got no meat on their legs.

HUNTING AND FISHING
LICENSES EXPIRED MARCH 31

All licenses issued by the State Conservation Commission, fishing, hunting, trapping, and twelve other kinds of miscellaneous licenses, including game breeders, bait dealers, fur dealers, etc., expired March 31. The Conservation Commission has purchased some 600,000 licenses for 1946, and they were in the hands of about a thousand agencies authorized to sell them April 1. The licenses themselves will be the same type as used in 1945.

—BUY YOUR LICENSE FIRST!—

EVERYONE DOES

I always get a big bang out of these advertisements of fishing tackle where they show a good-looking dame with a slick pair of gams all togged out in a very abbreviated swim suit. She is usually holding a fishing rod somewhat in the same way her grandfather held a crank on the old coffee mill and she probably knows nothing at all about catching fish unless it is the two-legged Homo sapiens. And too, I have often wondered what the deer flies, black flies, no-see-ums and mosquitoes would think to see such an enticing banquet right in their front yard.

—Frank Powers.

—BUY YOUR LICENSE FIRST!—

FARM DUCKS HIT CEILING

The Sportsmen's Service Bureau relays this one from Wisconsin's Department of Conservation. When Mrs. Bell, who dispenses information for the Division of Game and Fish, answered her furiously ringing phone one day, during the duck season, an obviously agitated man asked, "If a fellow shoots a farmer's duck by mistake, does he have to pay the ceiling price?"

Mrs. Bell informed the anxious one that this was out of the Division's jurisdiction, but she believed that his worst fears would be realized.

—BUY YOUR LICENSE FIRST!—

SCARED HENS

The "Fox Hunt" organized at the County Seat, has nothing on our little community. We have "Coon Hunters." It seems, one night last week, there was a commotion in Nellie's chicken house. So brave Nellie and Pink armed with a flashlight proceeded to the hen house, and in walking into it, one of the ladies stepped on the coon's tail. Mr. Coon, in protest, hissed at them. It was a tie as to which one (lady) got to the house first. The night watch was called and a search was made, only to find that the pet coon of Dale Varner was pulling the tail feathers from a few hens. There were a flock of chickens and two hens quite badly frightened.

—Washta Journal.

—BUY YOUR LICENSE FIRST!—

The "call" of the tree toad is generally considered as a prophecy of rain. Some truth in this, but not the whole truth. Warm, moist air, which usually precedes rain, releases the male toad's mating urge, so he "sings."



"Bottoms up" is a favorite pastime for waterfowl all over the million acres of marsh developed by the Manitoba Government as a fur production project.

FURS PAY FOR DUCKS PLAY

DURING the past ten years the Manitoba Government's fur rehabilitation projects have won the commendation of conservationists throughout the North American continent. The romantic story of that rehabilitation can be fittingly told at another time. The success of the effort can be summarized by pointing out that in 1934 records relating to the muskrat population of an area southeast of The Pas disclosed that these animals were "almost depleted due to drought and over-trapping."

By 1945 the same area was sustaining almost one thousand trappers. This year they harvested a crop of 242,157 pelts, from which the proceeds were more than half a million dollars.

Going back to 1934 again, the startling news was presented that only 30 million ducks migrated southward from Canada to their winter habitats in the United States. Contrasted with figures showing that in 1900, 200 million ducks had made that same migration, it was not surprising that game officials should view the decrease in duck population with alarm.

The story of the muskrats, then, in many ways has been the story

of the waterfowl. Just how clearly that has been the case can be gathered from a closer look at Manitoba's experiences.

By the mid-thirties, depression had swept over Canada and the United States. Money was scarce in provincial and state treasuries. Drought was prevalent and jobs were hard to find.

Based on recommendations of the officials of the Department of Mines and Natural Resources the Manitoba Government decided to tackle the problem. In January, 1935, money was obtained to enable surveyors to proceed to The Pas area.

Two survey parties with a naturalist attached to one party to explore feed conditions, were soon at work.

As a result of these surveys the Manitoba Government decided to develop the area. A tract of 134,000 acres was set aside as a fur rehabilitation area, declared a game sanctuary and closed to trapping.

Development commenced and the work accomplished in the summers of 1936 and 1937 included four miles of canals of various widths; sixteen earth-filled dams of various designs and widths (Little Fish Lake dam 470 feet long); three and one-half miles of earth-filled dikes; five control dams; five patrol cabins; clearing log jams; widening creeks; and other tasks too numerous to mention in detail.

Ninety thousand dollars was spent; but in 1940 when 400 trappers were placed in the area they netted a crop valued at \$161,903. Under government control the area is still producing large crops of muskrats.

Now the original area of 134,000 acres has been increased to include Connolly, Two Island and Corridor areas, all in production.

Three other blocks comprising approximately 600,000 acres have been developed in other parts of the Province. These include the Fisher River fur rehabilitation block which came into production

TIMBER and GAME...Twin Crops

By Harold Titus

THE MACKINAC ISLAND traders lived largely on the country, but until well toward the western extremity of this great inland sea they ate fish almost exclusively. The pineries, swamps and hardwood stands which cloaked the shore were silent places. Repeatedly in accounts of those treks we find notations of daily fish catches and then, indicating the unusual, comes the entry stating that deer or moose were seen.

An occasional moose and a stray deer, then, was found in that wilderness in 1800. But since the 1890's that same Lake Superior shore has been a stamping ground for thousands of deer hunters annually. Without interruption it has yielded its tons of venison each autumn, some seasons more, some less, but always enough to entice hunters back.

It was not happenstance that deer moved into this region when they did. It is happenstance, however, that they have persisted. The deer appeared when loggers made openings in those virgin timber stands and deer have continued in more or less abundance because the timber harvest followed a distinctive pattern.

The variety of forest types has been mentioned. The pineries were the first to fall, and considerably later than those to the south because they were remote from markets. As a forty or a section was

logged, edge appeared where no edge had been; in time the few deer in the vicinity found those edges, established themselves and began to multiply, no doubt far faster than they had in the scattered natural openings.

Next, the great pines which grew in hardwood stands were taken. This made innumerable smaller openings, which spread the deer far in small nodules of seed stocking. Following this came need for hemlock and the number of clearings increased. Lastly, uses were found for the birch, maple and beech but it was not so steady a demand. It fluctuated with the fortunes of the industries using those woods. The pine and hemlock had built homes, barns, factories; the hardwoods went into equipment and implements, were not used in such bulk and were subject to a more variable need. An operator might cut a dozen forties one winter, twice or thrice as many the next and thereafter be down to small or no production whatever for several years. The harvest of swamp timber followed similar ups and downs.

As a result, the region was in timber production far longer than most others. It is still producing. Demand for the land for agricultural or other intensive uses was not uniform. Some of it is excellent for specialty crops but large outlets never were near, the season



Studies of the ruffed grouse in Iowa revealed that mature unpastured forest with 120 to 130 large trees per acre with its accompanying dense undercover is seldom used by grouse. This fine game bird prefers margins and second growth clearings.

in the spring of 1944, and the Netley and Delta blocks also in production.

All are proven duck and fur raising projects—a million acres for waterfowl and fur!

—Keystone.

is short and consequently clearing for plows was spotty and relatively limited.

Because of these circumstances what, in 1900, say, was a pine chopping bordered by virgin hard-

(Continued on page 30)



Realistically many Canadian provinces have constructed fur producing marshes on waste land where thousands of Canadian Nationals share in the profit from the furs produced.

Iowa Trappers . . .

(Continued from page 25)

NUMBER AND VALUE OF FURS TAKEN IN IOWA
1945-46 SEASON

(Season Nov. 10-Jan. 10) (Except Muskrat and Mink Nov. 10-Dec. 10)

Kind of Fur	Number Taken	Average Value	Total Value
Raccoon	41,084	\$ 2.89	\$ 118,732.76
Opossum	22,501	.65	14,625.65
Muskrat	418,417	2.18	912,149.06
Mink	48,145	28.16	1,355,763.20
Skunk	30,755	2.24	68,891.20
Civet	44,827	1.77	79,343.79
Red Fox	11,554	3.95	45,638.30
Gray Fox	2,350	2.18	5,123.00
Weasel	3,607	1.74	6,276.18
Wolf Coyote	388	3.10	1,202.80
Beaver	623	35.73	22,259.79
Badger	314	2.07	649.98
TOTAL	624,565	\$ 4.22	\$ 2,630,655.71



The muskrat, for the first time in history, relinquished first place in value to the high priced mink during the 1945-46 trapping season.

The accompanying tables have been compiled from records kept

in the Commission Offices since 1931. The records are taken from the reports of fur dealers who are required, under the statute, to report at the end of the season all furs purchased. Where a fur buyer purchases fur from a second dealer, the second transfer of furs is not included. Furs that are sold by trappers to dealers outside of the state are included in the total. The statute requires a special permit and report of number and kind of furs in each out of state transaction.

It is believed by the Conservation Commission that the table figures represent at least a 95 percent correct total for the past fifteen years:

NUMBER AND VALUE OF FURS TAKEN IN IOWA DURING
FIFTEEN-YEAR PERIOD

RACCOON

Date	Number Taken	Average Value	Total Value
1930-31	11,740	\$ 4.50	\$ 52,830.00
1931-32	12,951	4.40	56,984.40
1932-33	10,468	2.60	27,216.80
1933-34	15,447	3.45	53,292.15
1934-35	14,719	3.50	51,516.50
1935-36	19,353	3.95	76,444.35
1936-37	15,037	4.00	60,148.00
1937-38	13,287	3.65	48,497.55
1938-39	15,014	2.80	42,039.20
1939-40	16,465	2.45	40,339.25
1940-41	19,756	3.71	73,294.76
1941-42	22,512	4.90	110,308.80
1942-43	20,128	3.65	73,467.20
1943-44	38,303	7.25	277,696.75
1944-45	36,803	2.75	101,208.25
1945-46	41,084	2.89	118,732.76
TOTAL	323,067	\$ 3.56	\$ 1,264,016.72

OPOSSUM

Date	Number Taken	Average Value	Total Value
1930-31	26,230	\$.47	\$ 12,328.10
1931-32	37,558	.41	15,398.78
1932-33	42,415	.36	15,269.40
1933-34	83,625	.45	37,631.25
1934-35	54,025	.45	24,311.25
1935-36	39,961	.32	12,787.52
1936-37	20,985	.40	8,394.00
1937-38	11,755	.30	3,526.50
1938-39	23,303	.30	6,990.90
1939-40	39,050	.25	9,762.50
1940-41	30,131	.28	8,436.68
1941-42	33,839	.27	9,136.53
1942-43	29,691	.42	12,470.22
1943-44	35,579	.65	23,126.35
1944-45	27,513	.50	13,756.50
1945-46	22,501	.65	14,625.65
TOTAL	558,161	\$.41	\$ 227,952.13

MUSKRAT

Date	Number Taken	Average Value	Total Value
1930-31	381,651	\$.42	\$ 160,293.42
1931-32	293,294	.52	152,512.88
1932-33	181,038	.30	54,311.40
1933-34	380,275	.52	197,743.00
1934-35	113,889	.70	79,722.30
1935-36	351,968	.98	344,928.64
1936-37	212,352	1.25	265,440.00
1937-38	176,759	.60	106,055.40
1938-39	308,015	.75	231,011.25
1939-40	46,003	1.05	48,303.15
1940-41	350,700	1.21	424,347.00
1941-42	262,007	1.32	345,849.24
1942-43	262,562	1.47	385,966.14
1943-44	722,360	2.25	1,625,310.00
1944-45	457,573	2.03	928,873.19
1945-46**	418,417	2.18	912,149.06
TOTAL	4,918,863	\$ 1.04	\$ 6,262,816.07

*Open season only on Mississippi River.
**30 day season only.

MINK

Date	Number Taken	Average Value	Total Value
1930-31	36,842	\$ 3.50	\$ 128,947.00
1931-32	33,780	3.60	121,608.00
1932-33	25,303	3.00	75,909.00
1933-34	47,119	4.40	207,323.60
1934-35	21,775	4.40	95,810.00
1935-36	31,613	5.93	187,465.09
1936-37	32,337	9.00	291,033.00
1937-38	21,438	5.60	120,052.80
1938-39	27,783	7.25	201,426.75
1939-40*	2,877	6.25	17,981.25
1940-41	38,817	7.30	283,364.10
1941-42	33,650	6.75	227,137.50
1942-43	23,297	6.15	143,276.55
1943-44	52,760	12.50	659,500.00
1944-45	47,040	16.50	776,160.00
1945-46**	48,145	28.16	1,355,763.00
TOTAL	524,576	\$ 8.14	\$ 4,892,757.84

*Open season only on Mississippi River.
**30 day season only.

SKUNK

Date	Number Taken	Average Value	Total Value
1930-31	99,321	\$ 1.40	\$ 139,049.40
1931-32	87,701	1.35	118,396.35
1932-33	41,511	.70	29,057.70
1933-34	108,776	.88	95,722.88
1934-35	75,900	.80	60,720.00
1935-36	68,231	.91	62,090.21
1936-37	153,497	1.10	168,846.70
1937-38	102,212	.95	97,101.40
1938-39	124,322	1.50	186,483.00
1939-40	91,838	1.35	123,981.30
1940-41	74,251	1.70	126,226.70
1941-42	68,840	1.80	123,912.00
1942-43	32,437	1.60	51,899.20
1943-44	53,199	3.15	167,576.55
1944-45	35,737	2.13	76,119.81
1945-46	30,755	2.24	68,891.20
TOTAL	1,248,528	\$ 1.47	\$ 1,696,074.70

CIVET

Date	Number Taken	Average Value	Total Value
1930-31	55,938	\$.42	\$ 23,493.96
1931-32	52,022	.30	15,606.60
1932-33	29,505	.13	3,835.65
1933-34	88,532	.32	28,330.24
1934-35	46,676	.30	14,002.80
1935-36	35,767	.31	11,087.77
1936-37	38,724	.35	13,553.40
1937-38	26,928	.35	9,424.80
1938-39	43,971	.50	21,985.50
1939-40	56,708	.30	17,012.40
1940-41	63,256	.60	37,953.60
1941-42	60,944	.83	50,583.52
1942-43	38,508	.87	33,501.96
1943-44	60,238	1.50	90,357.00
1944-45	41,235	1.20	49,482.00
1945-46	44,827	1.77	79,343.79
TOTAL	783,779	\$.63	\$ 499,554.99

RED FOX

Date	Number Taken	Average Value	Total Value
1930-31	2,550	\$ 6.85	\$ 17,467.50
1931-32	3,723	4.50	16,753.50
1932-33	2,755	3.25	8,953.75
1933-34	6,807	4.50	30,631.50
1934-35	5,065	4.00	20,260.00
1935-36	6,218	2.95	18,343.10
1936-37	9,133	3.00	27,399.00
1937-38	7,111	3.00	21,333.00
1938-39	7,403	3.50	25,910.50
1939-40	5,706	2.50	14,265.00
1940-41	6,505	2.70	17,563.50
1941-42	6,137	4.50	27,616.50
1942-43	6,560	5.40	35,424.00
1943-44	8,695	10.00	86,950.00
1944-45	9,785	4.75	46,478.75
1945-46	11,554	3.95	45,638.30
TOTAL	105,707	\$ 4.33	\$ 460,987.90

GRAY FOX

Date	Number Taken	Average Value	Total Value
1930-31	182		
1931-32	208		
1932-33	35	\$ 2.00	\$ 70.00
1933-34	486	2.20	1,069.20
1934-35	417	2.00	834.00
1935-36			
1936-37	170	2.00	340.00
1937-38	1,846	1.50	2,769.00
1938-39	1,900	2.00	3,800.00
1939-40	1,413	1.85	2,614.05
1940-41	1,730	2.25	3,892.50
1941-42	1,967	2.50	4,917.50
1942-43	1,823	1.75	3,190.25
1943-44	2,516	3.00	7,548.00
1944-45	2,332	2.00	4,664.00
1945-46	2,350	2.18	5,123.00
TOTAL	19,375	\$ 2.09	\$ 40,831.50

WEASEL

Date	Number Taken	Average Value	Total Value
1930-31	2,018		
1931-32	801		
1932-33	256	\$.45	\$ 115.20
1933-34	1,468	.48	704.64
1934-35	1,149	.45	517.05
1935-36	3,602	.55	1,981.10
1936-37	7,190	.50	3,595.00
1937-38	4,159	.35	1,455.65
1938-39	4,529	.40	1,811.60



The opossum has declined in numbers taken from a high of 80,000 in 1932-33 to 20,000 during the current trapping season.

Date	Number Taken	Average Value	Total Value
1939-40	6,692	.30	2,007.60
1940-41	6,290	.40	2,516.00
1941-42	4,440	.45	1,998.00
1942-43	2,982	.40	1,192.80
1943-44	3,966	1.60	6,345.60
1944-45	2,905	1.40	4,067.00
1945-46	3,607	1.74	6,276.18
TOTAL	56,054	\$.68	\$ 34,583.42

WOLF COYOTE

Date	Number Taken	Average Value	Total Value
1930-31	3	\$ 3.00	\$ 9.00
1931-32	1	2.75	2.75
1932-33			
1933-34			
1934-35	28	2.65	74.20
1935-36	22	3.50	77.00
1936-37	146	3.00	438.00
1937-38	162	2.50	405.00
1938-39	183	2.60	475.80
1939-40	259	2.75	712.25
1940-41	202	3.25	656.50
1941-42	209	4.25	886.25
1942-43	926	10.00	9,260.00
1943-44	388	4.87	1,889.56
1944-45	388	3.10	1,202.80
1945-46			
TOTAL	2,917	\$ 3.71	\$ 16,089.11

BEAVER

Date	Number Taken	Average Value	Total Value
1930-31			
1931-32			
1932-33			
1933-34			
1934-35			
1935-36			
1936-37			
1937-38			
1938-39			
1939-40			
1940-41			
1941-42			
1942-43			
1943-44	235	\$24.00	\$ 5,640.00
1944-45	259	22.50	5,827.50
1945-46	623	35.73	22,259.79
TOTAL	1,117	\$27.41	\$ 33,727.29

BADGER

Date	Number Taken	Average Value	Total Value
1930-31	75		
1931-32	56		
1932-33	17	\$ 4.00	\$ 68.00
1933-34	227	3.75	851.25
1934-35	207	5.50	1,138.50
1935-36	611	5.12	3,128.32
1936-37	768	5.00	3,840.00
1937-38			
1938-39			
1939-40			
1940-41			
1941-42			
1942-43			
1943-44	538	4.00	2,152.00
1944-45	354	1.35	477.90
1945-46	314	2.07	649.98
TOTAL	5,947	\$ 3.23	\$ 19,306.50

TOTAL ALL FURS

Date	Number Taken	Total Value
1930-31	616,547	\$ 534,409.83
1931-32	522,097	497,269.51
1932-33	333,204	214,809.65
1933-34	732,762	653,299.71
1934-35	333,822	348,832.40
1935-36	557,352	718,330.30
1936-37	490,215	842,666.10
1937-38	366,210	412,361.10
1938-39	556,814	723,099.70
1939-40*	267,421	277,519.95
1940-41	592,165	979,482.09
1941-42	495,124	903,874.09
1942-43	418,454	741,621.52
1943-44	979,315	2,961,462.55
1944-45	661,924	2,009,004.46
1945-46**	624,565	2,630,655.71

TOTAL 8,547,991

\$15,448,698.17

*Muskrat and mink season only on Mississippi.
**Muskrat and mink season 30 days only.

—BUY YOUR LICENSE FIRST!

DUCK STAMPS REACH
NEW SALES HIGH

"Duck stamps," costing \$1 each, which migratory waterfowl hunters over 16 are required to buy each year, reached a new sales high of \$1,540,468 for the period from July 1 to December 1, 1945. This record-breaking total represents an increase of 257,002 over the corresponding period in 1944 when 1,283,466 stamps were purchased by waterfowl hunters, conservationists, and philatelists.



Brush wolves, or coyotes, were taken in exactly the same number in 1945-46 as the year previous, but declined almost two-thirds in number from the all-time high of 1943-44. —Harold Morgan photo.

HUNTING LICENSES SOLD IN UNITED STATES LAST YEAR

July 1, 1944 to June 30, 1945

State	Resident	Non-Resident	Total Licenses	Fees Paid by Hunters
Alabama	107,198	679	107,877	\$ 191,209
Arizona	39,128	967	40,095	104,729
Arkansas	61,546	2,999	64,545	139,644
California	316,863	2,547	319,410	913,307
Colorado	223,671	3,292	226,963	510,888
Connecticut	33,531	328	33,859	105,471
Delaware	15,017	239	15,256	20,492
Florida	67,614	752	68,366	230,681
Georgia	56,369	725	57,094	121,674
Idaho	125,586	1,223	126,809	169,826
Illinois	298,434	1,710	300,144	473,339
Indiana	398,066	837	398,903	309,640
Iowa	224,928	1,185	226,113	210,026
Kansas	101,525	327	101,852	105,978
Kentucky	76,191	594	76,785	139,553
Louisiana	121,767	2,718	124,485	139,427
Maine	107,379	8,442	115,821	246,073
Maryland	80,013	3,077	83,090	230,224
Massachusetts	83,767	1,308	85,075	160,967
Michigan	776,637	7,967	784,604	1,198,437
Minnesota	327,460	597	328,057	468,401
Mississippi	95,126	873	95,999	200,754
Missouri	228,069	1,027	229,096	348,796
Montana	99,472	822	100,294	182,003
Nebraska	138,468	2,620	141,088	161,405
Nevada	12,268	4,241	16,509	89,438
New Hampshire	59,713	5,433	65,146	135,219
New Jersey	124,098	1,768	125,866	250,357
New Mexico	32,327	2,843	35,170	176,640
New York	540,399	4,900	545,299	854,827
North Carolina	113,554	2,424	115,978	238,237
North Dakota	54,831	1,972	56,803	131,547
Ohio	521,951	1,089	523,040	669,256
Oklahoma	120,360	918	121,278	177,623
Oregon	137,012	1,952	138,964	455,970
Pennsylvania	593,123	13,973	607,096	1,395,841
Rhode Island	9,002	152	9,154	21,898
South Carolina	63,028	2,341	65,369	137,372
South Dakota	91,984	45,755	137,739	1,087,122
Tennessee	130,318	794	131,112	138,567
Texas	145,682	466	146,148	304,382
Utah	86,909	3,694	90,603	302,098
Vermont	44,295	3,502	47,797	92,679
Virginia	149,188	2,626	151,814	233,609
Washington	286,909	258	287,167	511,268
West Virginia	178,404	1,247	179,651	191,249
Wisconsin	297,309	1,169	298,478	617,857
Wyoming	40,049	2,991	43,040	216,252
UNITED STATES	8,036,538	154,363	8,190,901	15,512,254

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The Commission has authorized use of a plane owned by one of the conservation officers and walkie-talkies for special enforcement patrols. The combination has already proved highly effective on the spring goose flight patrol.—Council Bluffs Nonpareil Photo.

COMMISSION ACTION FEBRUARY, 1946

THE FEBRUARY meeting of the State Conservation Commission was held at the central office at Des Moines, February 26. Members present were: E. B. Gauntz, Lansing; James C. Jenson, Council Bluffs; F. W. Mattes, Odebolt; Mrs. Addison Parker, Des Moines; F. J. Poyneer, Cedar Rapids; R. E. Stewart, Ottumwa; and Ewald G. Trost of Fort Dodge.

The Commission:

By administrative order opened certain lakes to winter fishing because of oxygen deficiency. Ten shallow lakes in northwest Iowa were affected.

Approved contract for drilling three wells at Lake Manawa.

Approved contributing membership on upper Mississippi Conservation Committee and named committee members.

Named Commissioner Jenson to serve on drainage committee of the State Soil Conservation Advisory Committee.

Approved staff members attendance at meeting with Wisconsin Conservation department at La-Crosse, Wisconsin, to discuss Mississippi River problems.

Approved renewal of Memorandum of Understanding with Iowa State College, Fish and Wildlife Service and Wildlife Institute for wildlife research and approved allocation of \$6,000 toward the project.

Approved renewal of fisheries research memorandum with Iowa State College with allocation of \$6,000 toward financing the project.

Approved five year extension of Pittman Robertson program cooperation.

Approved repairs on dwelling at Humboldt Hatchery.

Approved use of plane owned by conservation officer Kay Setchell on special law enforcement patrols.

Authorized purchase of six surplus army walkie-talkies for special enforcement work.

Authorized publication of resume of Commission action in the "Iowa Conservationist."

Authorized construction of new residence at the Game Farm near Ledges State Park.

Authorized study of possibility of diverting trout run to diminish silt in Siewers Spring trout hatchery.

Allocated \$2,000 for completion of riprap work on Lake Wapello.

Authorized construction of fishway in the Des Moines River dam at Fort Dodge.

Authorized state-wide spring pheasant census.

Authorized exchange of .69 acres of land adjacent to Wall Lake in Wright county for .69 acres of land contiguous, to facilitate restoration work at that lake.

Authorized investigation of proposed drainage ditch adjacent to Wall Lake in Wright county.

Denied request of Boy Scouts to build cabin on Rice Lake Reserve.

Accepted the gift of an inboard patrol boat from the city of Storm Lake, and authorized appointment of lake custodian for Storm Lake.

Denied request of city of Storm Lake for permission to erect temporary housing facilities on state land along the shore of Storm Lake.

Approved "Plum Grove" as official name of the Governor Lucas monument area.

Approved bid for printing 40,000 copies of "Iowa Outdoor Map."

Accepted resignation of Assistant State Forester Harold Bjornson.

Authorized repair on the two state owned hydraulic dredges and resumption of dredging at Storm Lake and Lake Cornelia.

Authorized approval of soil conservation service agreements on state owned forest lands in Allamakee county.

Adjourned.

Timber and Game . . .

(Continued from page 27)

wood could, if it escaped fire, be a thrifty young pinery in 1925 when the hardwood was coming down. At no time since logging began has the area been without many stands of timber sufficiently dense and extensive to afford retreat from deer and also adjacent to those openings where their other demands may be met.

Deer population has changed and shifted as this combination of edge and forest crept from here to there. In periods, local deer abundance has dwindled but they've always been somewhere in the vicinity, with changes in numbers, true, but never so low that they failed to lure hunters.

Deer, then, followed the axe in the Lake Superior country but the story doesn't end there. Perhaps nowhere else is there an area of comparable size and with such a range of forest species where the pace of lumbering has shown so many changes. We'll be coming back to it when we get to this matter of managing forests so that yield may be perpetual, and the effects such practice can have on game supplies.

Quail Prefers Open Spaces

It was not only big game and not mammals alone that were spread about and increased in numbers by the clearing of forests. Take the case of the biggest yielder of all our native game birds—the bobwhite quail.

Today, on the northern portions of his range, we rightly class this bird as a farm-type rather than a forest-type species. Originally, he was a woods inhabitant but the edge he required consisted of many and very definite types. Some old records seem to indicate that the more rigorous the climate, the more exacting he was about his edge specifications. So, in what are now the central and northern states, those combinations were relatively rare until the white man took over. Pioneer agriculture was right up bobwhite's street to a happy home. Its grains fitted his diet list nicely. Tangles of low growth along rail fences made exactly just the hiding and nesting places he liked best. Brushy pastures with closely grazed grass plots between clumps of bushes were another made-to-order part of his environment.

So when great-grandfather hacked out his homestead near an established quail population, that population swelled because the habitat could carry more individuals. And when other settlers came to set up more farms the coveys spread over the land and the years until they seemed to be everywhere.

The change came when agriculture became more efficient and took on the first manifestations of streamlining. The rail fence gave way to wire and the broad band of rank vegetation which had bordered earlier fields shrank to a

thin ribbon. Bushes were ripped from pastures so more forage plants could grow. Woodlots were eliminated or else the ground cover in them was reduced by pasturing. The grains and bugs man had brought to the wilderness were there in ever increasing quantities, but without other necessary factors quail passed the peak of their abundance in many sections and dwindled as the last square yards of neglected acres were put to man's rather than the bird's uses. There will be more to say about quail in the deep South a little farther on.

Is it clear, then, that the manner, in which man handles his forests has much to do with the quantity and distribution of those game species which depend, in part, on forests? Their populations can be stepped up and given wider range if forests are managed with at least part of an eye to game values.

(Continued next month)

—BUY YOUR LICENSE FIRST!—

FOX DECLINE IN MICHIGAN REPORTED

News from Michigan indicates the possibility that the fox cycle has passed its peak, at least in that state, the Sportsmen's Service Bureau asserts. Word from Conservation Department personnel in the Mio-Gaylord District and in Oscoda county is that foxes, in some areas untrapped last fall, are 50 per cent under recent high levels, and that in other areas, where trappers have operated, animals taken have been in poor condition.

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The best kind of fish propagation administration, in our opinion, is one which remains open-minded and never comes to the conclusion that it knows all the answers. The subject is relatively new in the scientific field, and ten years from now we may know a lot more about it. It is important that we keep public opinion as free from forming premature conclusions as we do our paid conservationists—that the latter may be free from public pressure to pursue their research and experimental work.

—Storm Lake Pilot Tribune.

—BUY YOUR LICENSE FIRST!—

DUCK STAMPS TO BE AVAILABLE JULY 1ST

Design for the 1946 migratory bird hunting stamp, commonly called "Duck Stamp," was taken from a sketch executed by Robert W. Hines, artist for the Ohio Conservation Department. The original is a black and white wash drawing showing four redhead ducks; three males and a female. Thirteen in the series, the new duck stamp will be available to duck hunters in all first and second class post offices on July 1st.

The stamp series, which was started in 1934 with a J. N. "Ding" Darling design, has increased from a sale of 635,000 in that year to a new all time record in 1945 when 1,540,000 were sold.



Original Iowa prairie is exceedingly rare and its pristine beauty has almost become a legend. Here red-root, or New Jersey tea, the plow-breaker of the pioneer, brightens the landscape.—Ada Hayden photo.

Iowa Had . . .

(Continued from page 25)

zards, the torrential rains, the intermittent drouth, the ice-bound winters, the humid heat of summer, the long breezy sunlit days, the bland autumn, and the long-deferred spring—all leave their imprint on the life within the prairie.

With the greening of the hills and plains in springtime, hosts of native plants lend color to the prairie. Almost before a spear of green is seen, the downy-headed pasque flower pushes from the sod among the withered red-brown curling leaves of grass. Soon its hood-like floral sheath has burst and the wide-open bluish flowers are ready to serve the newly awakened bee a lunch of yellow pollen. Heralded by the pasque flower, red mats of ground palms brighten upon the gravelly hilltops, along with tawny sedge and pale yellow paintbrush. False dandelion in the mornings spreads its flowers and the prim thimbleflower with pearly buds and scarcely open flowers stands high above its spreading leaves.

Rising from the short green grass of May, the birdfoot violet, with myriads of pansy-like faces, mirrors the blue of sky on slopes and knolls. Nearby, pale yellow spikes of betony with feathery leaves appear in groups with slender, blue-eyed stargrass. In moister soil among the grasses, Canada anemone, its globular white buds poised on slender stems, is already bursting into flower. Spreading tufts of red phlox are scattered through the grasses with stiff clusters of lemon and orange-flowered puccoon. This low-growing hilltop community, thriving on the gravelly outwash left by the glacier so long ago, recurrently crowns the hilltops of the undulating ice-ridden plains.

Level or rolling stretches of wet prairie are laced in springtime

with shining ponds threaded together in a waterway of winding streamlets. When the grass grows taller, the waterways are shielded from the eye. It is then that they furnish sheltered avenues for the web-footed traveller. Encircling the ponds are masses of yellow-flowered, purple-stemmed, pungent-smelling marsh-marigolds with conspicuous ruffled green leaves. Cut-leaved buttercups and crisp, white-spiked cress stand upon the sedge-formed hummocks. Varying the pattern of the flat wet meadow, heart-leaved purple violets mingle with strawberry and golden squawwort, and here and there groups of white moccasin flower border the ponds. The floral pattern of the many-colored native cover, just described, is but one of the variations found in Iowa prairie. With the advancing season, the aspect changes. The tall, supple grasses, fanned by the ever-active wind, rise and fall in wave-like rhythm like a green inland sea beneath the expanse of gray or blue above it. The dazzling light reflected from the mass of leaves is sometimes softened by the floating clouds which progressively assemble in formation from the far horizon, or merely fleck the canopy with bars and patches which play a while in space, or lose their form in mounting haze.

In the eastern meadows the purplish or white shooting stars, the rose-flowered prairie smoke, the wild heliotrope and the saxifrage wave their banners. On the rough or sandy western borders, the great pentstemon gives the slope a pinkish glow and bayonet-leaved, white-spiked Yuccas stand upright on the loess cliffs and ridges, where fragile creamy flowers of the Plains *Mentzelia* open wide as the mid-day light grows dim.

Throughout the state at the height of the growing season or as the end draws near, the sunflowers, aster, goldenrod, roses,

blazing stars, and prairie clovers, and gentians enhance the grassland with their color, and dying down make their seasonal contribution to the soil as did their relatives for centuries.

But Iowa's coat is tattered now, remaining only in patches here and there where a few pioneer families have protected and guarded a cherished fragment of this magic cover. The breaking of the prairie is vividly portrayed by Herbert Quick.

"The plow itself was long, low, and yacht-like in form; a curved blade of polished steel. The plowman walked behind it in a clean new path, sheared as smooth as a concrete pavement, with not a lump of crumbled earth under his feet—a cool, moist, black path of richness. The furrow-slice was a long, almost unbroken ribbon of turf, each one laid smoothly against the former strand, and under it lay crumpled and crushed the layer of grass and flowers. The plowpoint was long and tapering, like the prow of a clipper, and ran far out under the beam, and above it was the rolling colter, a circular blade of steel, which cut the edge of the furrow as cleanly as cheese. The lay of the plow, filed sharp at every round lay flat, and clove the slice neatly from the bosom of the earth where it had lain from the beginning of time. As the team steadily pulled the machine along, I heard a curious thrilling sound as the knife went through the roots, a sort of murmuring as of protest at this violation—and once in a while, the whole engine, and the arms of the plowman also, felt a jar, like that of a ship striking a hidden rock, as the share cut through a red-root—a stout root of wood, like red cedar or mahogany, sometimes as large as one's arm, topped with a clump of rough twigs and with clusters of pretty white blossoms.

"As I looked back at the results of my day's work, my spirits rose; for in the east a man might have worked all summer long to clear as much land as I had prepared for a crop on that first day. This morning it had been wilderness; now it was a field—a field in which . . . one could plant . . . corn, by the simple process of cutting through the sods with an ax, and dropping in each opening thus made three kernels of corn."

In Iowa, man has steadily transformed the rich prairie soil, in the course of a hundred years, into farmland. Through his limited knowledge of conservation, much of the rich top soil has slipped away while he was not looking, and now lies in considerable quantity at the bottom of Iowa lakes or clogging the channels of formerly navigable streams. The priceless soil was formed through the centuries under grassland vegetation by the incorporation of parent materials (glacial till), plant and animal residues (organic material), and by weathering through periods

of time, under varying conditions of topography.

Type specimens of virgin soils in various Soil Associations of the state should be preserved for study and comparison with the same kinds of surrounding soils which have now been cultivated for many years.

The state of Iowa fortunately now owns one such preserve or type specimen of virgin soil and plant life, consisting of two hundred acres of grassland near Lime Springs in Howard county. The tract lies in the district where prairie chickens were formerly abundant in Iowa and was purchased for its significance as a game preserve.

Such areas have great value as type specimens of native flora, fauna, and soils. Selected areas representative of each virgin soil type should therefore be set aside to safeguard the future of agriculture as well as for other educational purposes. The Centennial of Iowa's entrance into statehood would be an appropriate time for any public-minded citizen to present for state protection gifts of prairie sod.

—BUY YOUR LICENSE FIRST!—

NEW FISH AND WILDLIFE SERVICE CHIEF

Here is a thumb-nail sketch of Albert M. Day, who will become director of the U. S. Fish and Wildlife Service on April 1.

Born in Humboldt, Nebraska in 1897, moving to Wyoming in 1900, where his family became ranchers. Graduate of University of Wyoming with B.S. degree, majoring in animal husbandry and biological sciences. Entered the government service in 1919 as temporary field assistant in Wyoming, following service with the signal corps during World War I. In 1920 took charge of rodent control in Wyoming, and in 1928 was placed in charge of staff of professional hunters to protect Wyoming livestock and game from wolves, coyotes and bobcats. Transferred to Washington in 1930, and in 1938, upon passage of Pittman-Robertson act, was placed in charge of the administration of this legislation. Since 1942 has been in general charge of all field administration for the U. S. Fish and Wildlife Service.

Day has a splendid background for the work which he will shortly undertake. If he can enlist the aid of sportsmen, who are prone to shy away from this particular governmental agency, much will be accomplished.

—Davenport Democrat.

—BUY YOUR LICENSE FIRST!—

What happens to the antlers which buck deer annually shed has long been a subject for debate among sportsmen. Some are eaten by mice, rabbits and porcupines for their mineral content. Others disintegrate and are absorbed into the ground.

—BUY YOUR LICENSE FIRST!—

Some thirty-odd years ago, when the wild bird's egg collectors were in their hey-day, the egg of the California condor had a market value of \$750 each.



The soft fibre lined nest of the Redstart is deftly concealed at a moderate height in some quiet thicket.

Wildlife . . .

(Continued from page 25)

Their color affords a natural protection, and when they remain perfectly still, as is usually true, they are most difficult to find. In instances where an accident has befallen the female, the male has been known to assume all the responsibilities of raising his family.

As soon as ducklings hatch they are able to leave the nest and follow the mother. The Mallard drake takes little interest in his family, so the problems of feeding and protecting the ducklings fall to the mother. She takes them into the water where they soon learn to puddle and forage for themselves.

Although most of our wild ducks build nests on the ground close to lakes and marshes, the wood duck prefers to build its nest in hollow trees that may be a surprising distance from water. Usually, however, the nest is located in a tree or stub overhanging water or situated close to it. How do the young get into the water? It is thought, where possible, that they drop in, or else they fall to the ground through encouragement of the mother and follow her to the water. A wood duck's nest has been found in a hay loft. How the mother planned to get her ducklings to the water is not known.

One of the most unusual bird nursery arrangements is that of the phalaropes, known also as "swimming sandpipers." The female is slightly larger and more gaudily colored than the male. Every year is leap year to her for she is the more aggressive during the courting season. The male prepares the nest which is a slight depression in the ground and lined with grasses. Unfortunately it is not too good a job, but it is the best he can do. The female does lay the eggs, but it is the male who patiently sits and incubates them. If he is flushed from the nest he may return shortly with a nasal, plaintive cry begging the intruder to leave before the wife discovers

his predicament. He is a perfect example of the hen-pecked male. When the young hatch it is he who leads them to the shallow-water feeding grounds and dutifully cares for them. What is the female doing all this time? Rarely does she help her mate with incubation and caring for the young. Most of the time she spends gadding about in the company of other females, puddling in the flats and shallows, and talking about the advantages of ladies' day.

The nest of the turkey vulture is located in a hollow tree, rock cavity or other natural receptacle



The egrets and herons nest in colonies, where they place their massive stick-like platforms in the crowns of tall trees, generally in non-accessible locations.

where the eggs can be deposited without having to use any nest building materials. When hatched, the young are naked and exceedingly ugly. However, they soon acquire a coat of down as well as a very bad odor. The parents feed them by regurgitating carrion, which makes the nesting cavity smell like a well-aged garbage can. To protect their young about all the adults can do is vomit, which is sometimes most effective for the odor is fatal to a weak stomach.

The location of a marsh hawk's nest depends largely upon the amount of good hunting range available for the parents. They are particular about their hunting territory and try to prevent other marsh hawks from courting over it. Sometimes the female lays the last

one or two of her eggs after a one day intermission. Since there may be as many as nine eggs in a nest there is naturally a lag in hatching of some of the eggs. Usually the first hatched hawks are large and strong enough when the last laid eggs hatch that they may devour the late comers. Even among those that hatched at the same time, one or two of them outstrip the others in size and weight because they are quicker in grabbing the food brought by the parents. When the fledglings are young they are fed on prepared meat. This is flesh minus bones, feathers or fur. As the young grow larger, however, they learn to swallow mice and other prey whole. The bones and other indigestible substances are formed into pellets and ejected by the young bird through its mouth. The parents keep the nest clean by carrying away these pellets and by relining the nest at intervals with grass. This practice of nest sanitation is fairly common among most of our birds. Notable exceptions are the turkey vulture and the screech owl. The nest of the latter becomes very filthy from an accumulation of pellets and excrement.

Some birds construct very substantial nests that withstand wind, rain and hail and afford good protection for the young. Others are very poor house builders and can produce only a flimsy nest that is easily demolished by a high wind or beating rain.

The mourning dove is in the latter group. Its nest is usually a saucered platform of sticks and rootlets sometimes so flimsily constructed that one can see through it. Maybe the bird does not have the proper tools, for its bill and feet are rather weak and not adapted for carrying and arranging nesting materials. It has a most peculiar way of feeding its young. By a series of muscular contractions of the crop and throat the parent regurgitates partially digested food known as "pigeon's milk." The young dove inserts its bill into the mouth of the parent and literally drinks the fluid. Unlike other birds, the dove does not have to tilt its head to allow liquid to trickle down its throat. Feeding action can be recognized easily, for the parent bird bobs its head and body and twitches its wings



Florida Gullinule, along with many of the other marsh birds, nest either on the ground, or at low elevations in well protected rush patches.—Tom Scott photo.

as the young birds feed. Spring and summer storms destroy nests, eggs and young by blowing them out of trees.

The cedar waxwing is another bird that feeds its young by regurgitating food. While the fledglings are only a few days old they are fed on fruit juices or soft-bodied insects which the parents collect and carry in their throats. After several days the young are fed whole berries and other fruits that include skins, pulp, seeds and juice. Few young birds are as well behaved as those of the waxwing. Compared with young robins, flickers and hawks they are quiet, reserved, and well-behaved. The adult waxwing is socially correct and has even been seen feeding the young of other species that were calling for food. The bird world does have its relief workers.

We do not ordinarily think of a bird's nest as being good to eat. Our common chimney swift has relatives in China whose nests are considered very good food by the



Young turkey vultures, when hatched, are naked and exceedingly ugly. They soon acquire a coat of white down and a very bad odor that may be traced to the fact that their parents when feeding them, regurgitate carrion in and around their gaping mouths.—Tom Scott Photo.

Chinese. The swift has well developed salivary glands which secrete a substance used as a mucilage in holding sticks together. It is this mucilage which permits the swift to attach its nest to chimney walls. Its sticking qualities are very good in order to support the nest, parent and from four to six young birds.

Another famous bird nest is that of the crested flycatcher. Part of the nesting material used is a piece of cast off snake skin. Sometimes the skin, if long enough, entirely encircles the nest or is mixed in with the grasses, rootlets and other materials. Why is this done? No one knows yet.

(Continued next month)

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We want to offer our handshake and pat on the back for Ira N. Gabrielson, recently retired chief of the U. S. Fish and Wildlife Service, for a good job well done by a faithful servant. Our best wishes to you, "Gabe."

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Naturalists have estimated that the primitive population of beavers in North America, in years of abundance, was 60,000,000.