

IOWA CONSERVATIONIST

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Mr. Otter, Nature's Playboy--but Don't Get Him Riled

Iowans are becoming accustomed to the announcement that some bird or animal long considered extinct in the state has returned to its native haunts and, within the sight of waving corn, has established a home and has begun seriously the task of repopulating our fields and streams with members of its kind.

Deer, at one time virtually extinct, have been reported in almost every county in the past few years and large herds exist in some areas. Egrets, 40 years ago considered certain to follow the passenger pigeon into worldwide extinction, have recently established an Iowa nesting colony and have raised large families of young. Beaver, for many years extinct in the Hawkeye State, have returned and have increased to such numbers as to make limited trapping advisable. During the past quail season a hunter killed a wildcat, and after positively identifying the slain cat as *Lynx rufus*, Commission officials were heard to say, "Anything can happen."

Now it has. Conservation Officer George Kaufman of Lansing has reported the discovery of a den of otter along the Mississippi River in Allamakee County.

This animal, considered by most naturalists extinct in Iowa as early as 1880 (almost 65 years ago), is eulogized by Ernest Thompson Seton in "Lives of Game Animals" as follows:

"Of all the beasts whose lives I have tried to tell, there is one that stands forth as the Chevalier Bayard of the wilds — without fear and without reproach. That is the otter, the joyful, keen and fearless otter; mild and loving to his own kind, and gentle with his neighbours of the stream; full of play and gladness in his life, full

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IOWA'S FROGS AND TOADS*



A spring peeper is caught in the act of uttering his high, shrill song. The expanded throat pouch serves as a resonating chamber. As seen by flashlight photograph, this specimen is slightly greater than natural size.—Photo by Max E. Davis.

Annual Flight of Blue and Snow Geese Through Iowa On Now

One of the most spectacular concentrations of waterfowl in the United States is the flight of blue and snow geese that occurs along the Missouri River each spring. The geese, after leaving their southern wintering grounds in Louisiana and Texas, stop briefly in small bunches at various points south of Iowa, but beginning the first week in March they literally pile into the Missouri River along the west boundary of Iowa in tremendous numbers.

The principal concentrations are in Monona County, where

they spend some 30 days feeding on waste corn and browsing in the large winter wheat fields. The peak of the concentration is generally between March 15 and 25. After that date they begin to move north, ultimately arriving on Baffin Island in the Arctic, where they nest.

Although spring shooting is not as serious a problem as it has been in the past, both federal and state officers follow the goose flight through Iowa, and each year some prosecutions are

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Life Story of Frogs And Toads Told From Tadpole to Adulthood

By REEVE M. BAILEY

PART I

Most of us have had casual experiences with toads and frogs. We disturb an occasional toad while working in our garden, and our backyard pool may be alive with tadpoles; in walks along streams or lake shores frogs jump into the water from beneath our feet; in search of fish bait we may seek small frogs in a marsh or other likely area; the glare of our car headlights may reveal numbers of leaping frogs on warm rainy evenings; and some of us have indulged in the sport of frogging to secure a mess of frog's legs. But it is the clamorous din of the mating choruses from ponds and marshes in the warm spring and early summer nights that makes us acutely aware of the existence of an extensive toad and frog fauna composed of many species and literally millions of individuals.

Nevertheless, few people know of the occurrence of 13 kinds of frogs and toads in Iowa, or are familiar with identification characters, the distinctive song of each species, their habits, habitats, life histories, and geographic distributions.

Frogs and toads, like other cold-blooded animals, hibernate during the winter. They retire in late fall to holes in the ground or into the mud of stream or lake bottoms. For those under water the skin serves as an auxiliary

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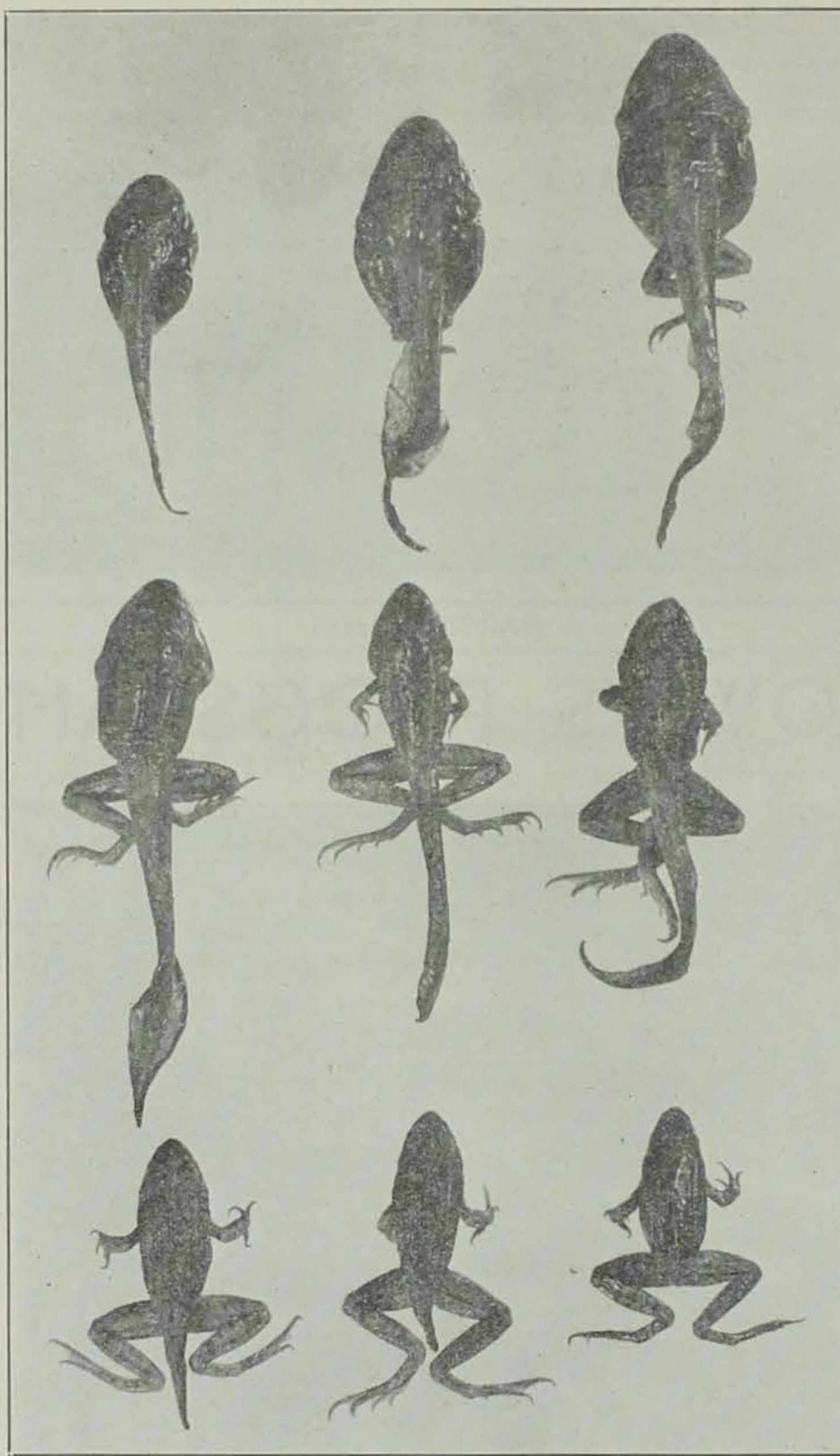
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From tadpole to transformed young. Nine stages in the metamorphosis of the leopard frog show the development of legs and the loss of the tadpole tail.—Iowa State College Photo.

Frogs and Toads

(Continued from Page 17)

respiratory mechanism, and the low oxygen demand of winter is satisfied without the use of lungs. In warm weather a frog cannot remain submerged indefinitely because of increased oxygen demand. Emergence from hibernation usually occurs soon after the ice leaves.

Breeding takes place during spring or early summer, and is accompanied by the tumultuous frog choruses which are one of the striking features of spring in this region. Although all frogs are able to utter distress or alarm cries, only the males engage in the choruses and are provided with the distensible vocal pouches or sacs. These may be on the throat, as in the toads and tree frogs; on either side above the forelimbs, as in the crayfish frog, leopard frog, and pickerel frog;

or internal, as in the green frog and bullfrog. The species vary markedly in time of breeding, some starting in March whereas others do not commence egg laying until late May or June.

The chorus frog, spring peeper, leopard frog, pickerel frog, and crayfish frog appear with the first warm weather, usually during the first half of March. Singing begins then or shortly thereafter, but egg laying is usually delayed for from a few days to three weeks. By May 1 these species have largely completed their reproductive activities, but sporadic singing may continue even into mid-summer, usually at times of rainy weather. The American and Rocky Mountain toads commence singing during the latter half of April, and their breeding is at its height in May. Unlike other Iowa species, the breeding season of the Great

Plains toad is dependent on heavy rains, whether these occur early or late. Breeding occurs during May and June during most years. Bullfrogs begin to sing by mid-April, the cricket frog, common tree frog, and Fowler's toad usually during the first half of May, and the green frog about June 1. However, these are late breeding species, and most of their egg-laying takes place in June or early July.

The eggs of all Iowa species are placed in the water, either singly (cricket frog and spring peeper), in strings (toads), in a thin surface film (bullfrog, green frog, and common tree frog), or in clusters of various shapes (chorus frog, leopard frog, pickerel frog, and crayfish frog). Each egg is surrounded by one or more transparent jelly-like layers. Fertilization is external; during egg laying the male firmly

clasps the female behind her forelimbs with his arms, and thus aids in the expulsion of the eggs from her body.

Within a few days the eggs hatch into free-swimming tadpoles. These are primarily herbivorous, clipping off bits of algae and vegetable debris with the horny jaws which surround the small mouth, but they not infrequently resort to scavenging on dead animals. The larval life persists for from as little as six weeks to two years. Bullfrogs spend two winters in the tadpole stage, crayfish and green frogs one winter; the rest of the frogs and toads in Iowa transform during their first summer of life.

Metamorphosis, or transformation from tadpole to adult form, constitutes the most remarkable change of body structure and function found in any vertebrate animal. The large tail of the tadpole is gradually absorbed and four legs develop; gills are discarded and lungs take over as the primary organs of respiration; the small mouth increases tremendously in size and the horny cutting jaws are replaced by teeth; and the long, coiled intestine of the herbivorous tadpole is reduced to the short tube of the carnivorous adult. The lateral line structures of the tadpole, reminiscent of those in fishes, are lost, and profound changes occur in the eye and other sensory organs.

During transformation the "tadfrogs" resort to shallow water and often come to the surface to gulp air. Gradually they lose their complete dependence for water and emerge into a partially terrestrial life. At such times young toads or frogs may occur near the edges of ponds or marshes in almost unbelievable numbers, and provide grounds for the often heard myth of the rains of toads or frogs. Following transformation growth is rapid; most species attain maturity the next spring or a year later.

Differences in choice of habitat are soon apparent. The toads leave the environs of the breeding pond and become widely dispersed. Temporary rain pools which dry up by late summer are commonly utilized as breeding ponds, but since the brief tadpole life is complete by this time the young have safely emerged. Their dry skins offer them considerable resistance to desiccation, but they secure further protection by adoption of nocturnal foraging activities. During the daytime they hide from the sun's heat by burrowing into soft soil, beneath stones, boards, mats of grass or leaves, or other cover.

Bullfrogs and green frogs are the most aquatic of our tailless amphibians. They seldom stray far from streams or ponds, and because of the long larval life

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This wooded lowland pond in southern Iowa is typical of the breeding habitat of the common tree frog and spring peeper.—Photo by R. E. Sloan.

Frogs and Toads

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occur only in or adjacent to sluggish or quiet permanent water which provides a suitable habitat for the overwintering tadpoles. Their toes are well webbed, a material aid in swimming.

Crayfish frogs are far more terrestrial in habits, although the larvae are dependent upon permanent standing water for development. The adults leave the breeding ponds after egg laying and resort to burrows of crayfish or other animals, usually in low meadows or bottom lands. The burrows contain water during wet months, and even in dry spells are humid enough to meet moisture requirements for the inhabitants. At night the frogs emerge, usually remaining at the mouth of the burrow where they catch insects. Their toe webs are less well developed than in related species.

The widely distributed and abundant leopard frog is found in a variety of habitats, but seems to prefer permanent or semi-permanent ponds, marshes, or streams; small temporary prairie pools and shallow roadside

ditches which attract large numbers of chorus frogs are inhabited sparingly or not at all by the leopard frog. During rainy weather or at night when the dew is on the grass it commonly ranges afield for as much as a fourth of a mile from water.

The superficially similar pickerel frog is confined to the environs of springs and cold streams. It occurs along most of the trout streams in northeastern Iowa.

Of our four members of the tree frog family only two, common tree frog and spring peeper, are normally arboreal in habits. As would be expected, they are found only in originally forested areas of eastern Iowa and along stream valleys. Because of their arboreal propensities they are infrequently found except during the breeding season when they visit the ponds. Occasionally one is found in an open well, hopping about in the rain, or under the moist bark of a log. The enlarged toe disks well equip them for climbing; they can even ascend a vertical window-glass with ease.

The two other "tree frogs" have much reduced toe disks, and do not normally ascend trees. The cricket frog has taken to a largely aquatic life, and the chorus frog to a terrestrial one. Cricket frogs are found in great numbers along the margins of streams, marshes, and lakes. Greatly lengthened legs and well-webbed feet beautifully adapt them for jumping and swimming. The careful observer will notice that they often leap into the water when disturbed near shore, but return quickly to within a foot or two of their point of entry.

Almost miraculously, chorus frogs appear in the spring at most bodies of standing water except some deep woodland pools. Even ephemeral snow-water ponds half a foot deep and garden ponds in cities may attract them. On mild April evenings almost deafening choruses issue from farm ponds, roadside ditches, and upland or

bottomland swamps and marshes. But strangely, although certainly outnumbering any other Iowa frog in numbers of individuals, they are collected only with difficulty following the breeding congresses. Presumably they feed at night and spend the daytime underground or hidden in vegetation, where their small size and inactivity render them inconspicuous. The toe webs are much reduced and the legs short, so they are less adept at swimming and jumping than the cricket frog; hence, their secretive habits provide their most effective means of protection.

Frogs and toads are carnivorous, feeding on a wide variety of animal foods, but insects constitute the staple food of all species. Frogs found in or near water may consume many aquatic insects, but most species, including the toads, tree frogs, and the semi-terrestrial crayfish and leopard frogs, eat more terrestrial forms, such as beetles, flies, ants, grasshoppers, true bugs, and spiders. Bullfrogs often add crayfish, other frogs, small birds, mice, young snakes, and even turtles to the insect diet.

Frogs and toads fill an important role in the balanced economy of nature and, while not of great significance, play their part in human welfare. Where abundant, either as tadpoles or adults, they compose an integral portion of the diet of many animals, including some invertebrates, fish, larger frogs, turtles, snakes, birds—especially herons, and certain mammals. The large frogs have long been famous for their contribution to the table of the epicure. Where sold by bait dealers or collected for the market, frogs represent a source of revenue to the exploiter.

The proper management and conservation of our tailless amphibians is a problem which has received little attention. There can be no doubt that extensive drainage activities have greatly curtailed their abundance, and at least the bullfrog has suffered from over-exploitation by frog hunters. Present Iowa law limits the capture of frogs to the period from May 12 to November 30; the daily catch limit is four dozen, possession limit eight dozen, and bait dealers are permitted 20 dozen. For all species except the bullfrog these restrictions provide adequate protection



This youngster is supplementing the family meat ration by collecting a mess of bullfrog legs and, incidentally, a general education in wildlife. Frog legs have long been considered an epicure's delight. Experimental plantings of bullfrogs are planned in the two-thirds of the state that are not now occupied by the big bass singers.

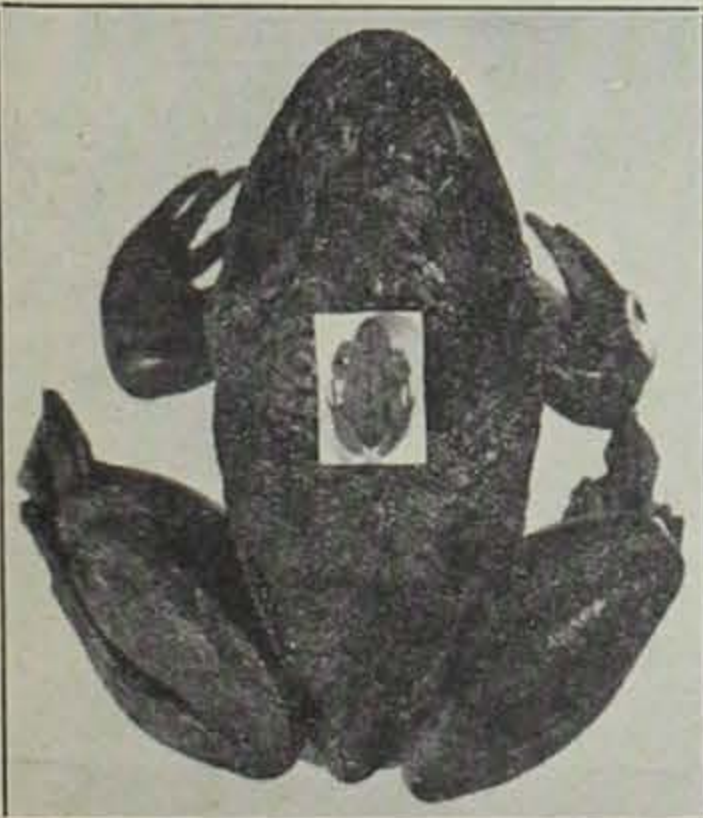
at present. Bullfrogs are captured with facility by an experienced hunter, and are not infrequently seriously depleted locally. Modification of the present law to permit no more than one dozen bullfrogs in the daily bag and two dozen in possession, with no dispensation to bait dealers for this species would appear to provide the increased protection which the bullfrog needs.

Bullfrogs range over only about one-third of the state. Plans have been formulated to make a number of experimental plantings in areas where they are not now found. If these succeed the introductions can be increased to encompass the entire state.

Where toads are numerous they provide one of the best natural controls for destructive insects, such as potato bugs, grasshoppers, cutworms, and chinch bugs. In areas where insect damage is a problem and in which few ponds exist, toads may be fostered by the construction of additional breeding ponds.

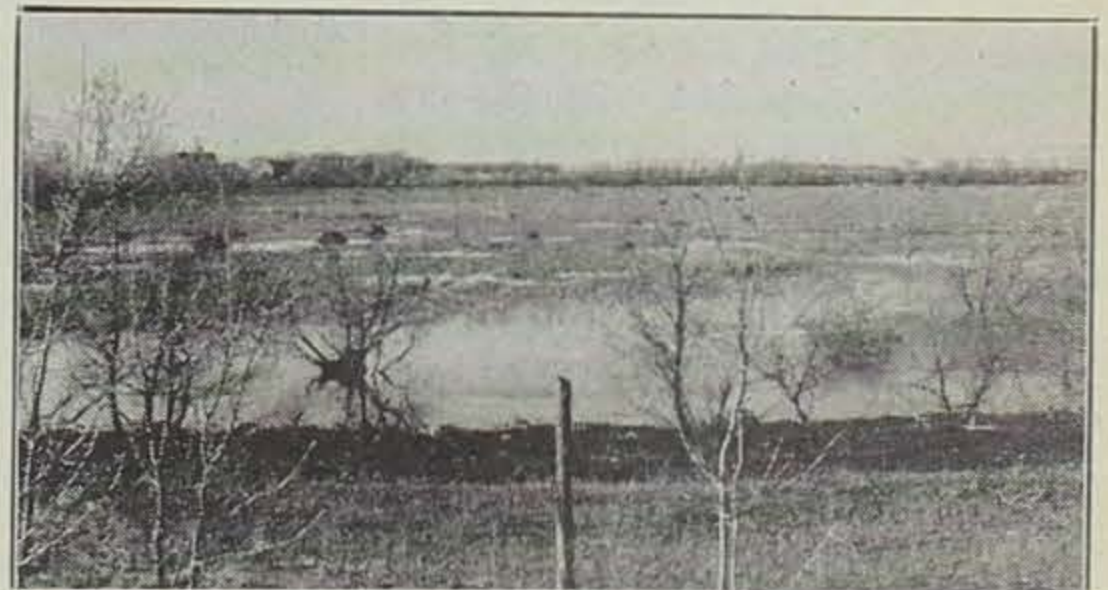
Frogs make attractive pets, and are easily maintained in home or school terraria. Studying frogs

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The Mutt and Jeff of Iowa frogs, an adult chorus frog, scarcely an inch long, perched on the back of a six and one-half inch bullfrog.—Iowa State College Photo.

A typical prairie muskrat marsh. Here leopard frogs, chorus frogs, and cricket frogs occur in great numbers. American toads commonly breed in this marsh.



WARDENS' TALES

SHOP TALK FROM THE FIELD

Conservation Officer Ken Madden of Council Bluffs, now in the armed service, tells the following pheasant hunting yarn which took place during the past season:

A group of Council Bluffs hunters in the northern pheasant territory flushed a large bunch of pheasants from a cornfield which fit in a brushy churchyard some distance away. The congregation was beginning to gather for morning worship, and the hunters decided to ask permission to hunt the birds in the churchyard. One of the nimrods was elected to ask permission at the parsonage, and to his request the pastor replied that it would be a matter for the trustees to decide upon. An extemporaneous board meeting was held on the steps of the church, permission granted, and under the eyes of the congregation the hunters got up the birds and blasted away. As you guessed every pheasant flew away unharmed.

—WT—

Conservation Officer Glen Yates tells this yarn:

A group of city hunters had asked permission to hunt pheasants on a sportsman-farmer's property in his territory. The farmer granted the permission and decided to go along. The amateur hunters fired any number of rounds at pheasants but failed to bring down a single bird. During a short pause for rest one of the hunters mentioned friends in a nearby community. The farmer, having friends in the same area, said, "Do you know Mr. ———?"

The hunter replied, "Yes, I've shot at his farm many times."

The farmer dryly questioned, "Did you ever hit it?"

—WT—

Conservation Officer Wogen of Estherville relates this anonymous duck story:

A tenderfoot had been installed in a duck blind on a small lake. A lone grebe, often called a "hell-diver", swam leisurely by the amateur's blind. The tyro, evidently unacquainted with the law protecting this bird, pointed his gun and fired. The grebe dived and reappeared a short distance away. Again the amateur fired, and again the grebe dived. After several repetitions of this procedure, the hell-diver came up in the rushes and was seen no more.

Later at the clubhouse the tenderfoot claimed he had killed a duck. When asked to produce

it, he confessed he couldn't do so.

"I filled him so darned full of lead he sank."

—WT—

More than 40 members of the department are on leave for military service and are scattered all over the globe. It is natural that these men would be particularly interested in fish and game matters in these faroff places.

A most interesting letter from Conservation Officer Sgt. Bernard Severson, who in civilian life was in charge of Clay, Palo Alto, and Pocahontas Counties, has been forwarded to the Conservation Commission office by Mrs. Severson. "Stubb" writes from one of the islands in the South Seas.

"... After we crossed the island, we stopped at a small U. S. O. on the beach and went swimming. The water was cool enough to feel fresh and as clear as any water I have ever seen. I got a pair of water goggles so that I could look at the coral and rock formations. I also wanted to see the fish and the aquatic vegetation. The goggles keep the water out of your eyes. It's like looking out of a glass-bottomed boat. I had more fun looking around under water than doing anything else. There were some beautiful coral and rock formations (maybe it was all coral, I don't know).

Not a great deal of vegetation, but hundreds of fish. All small, from an inch to a foot long. And colors—there were black ones, almost white ones, striped ones like a zebra, fish that were all colors, and one that was dark with a red saddle. They live in holes and caverns in the coral. Some of the smaller ones would let me get within a foot of them, when they would vanish into a hole. The larger ones were more shy, but I could get within three or four feet of them. I watched them feed and I watched them play. In fact, I was so interested that I almost forgot to come up for air.

"The water was not very deep where I spent most of my time. The deepest was about five feet. I would hang onto a coral formation, get a breath of air, duck my head and look over the edge of the coral. I looked around until I was getting pretty cold and the gang were waiting for me. All this was seventh heaven for an 'ex fish and game man'.

"Some of the boys found some very nice shells along the beach. From now on when I have a day off and can get there, I am going to spend my time looking around under water and picking up some of those choice shells.—With love, Stubb."

You can hunt the year around with a camera!—If you get any good pictures and feel generous, send us a print.

Where the Bass Concerts Are Held . . .



Bullfrogs live by preference along such large streams as this one in southeast Iowa. They lay their eggs in permanent overflow ponds near the stream, and prior to and during the mating season hold their famous bass concerts.

Frogs and Toads

(Continued from Page 19)

in the field provides a wholesome and instructive hobby, and observation of captive specimens and rearing of tadpoles through metamorphosis furnish fascinating examples of animal behavior and development.

In the field, frogs are studied to best advantage on spring or early summer evenings. The only equipment needed is a flashlight and a few cloth collecting bags; rubber boots are optional. Having located a chorus of frogs they may be traced down individually by sound. Sometimes frogs sing in the daytime, but they have keen eyesight and at the approach of an observer swim to



This watercress-choked cold-water trout stream in northeast Iowa is the home of pickerel and green frogs. When disturbed from their bankside perch, the frogs leap into the water and the safety of the tangled watercress.

the bottom and hide. But they show little or no fear in the light of a torch, and with a little patience can be observed singing. In order to find as many varieties as possible visit different types of habitat, listen carefully for strange calls, and collect at various times from early spring until summer.

Few precautions are needed to keep live material healthy and active. The temperature in the terrarium may get cold so long as it does not freeze, but high temperatures, such as are often produced if the sun falls on the glass, are quickly fatal. Water should always be available so that the skin may be kept moist, but the frogs should have freedom to emerge at will. Containers should be covered with screening or glass to prevent escape by jumping or climbing. Flies or other insects provide an excellent source of food.

Eggs may be collected in the field and brought into the home or laboratory to be hatched, or unspent pairs may be placed in water in an aquarium to deposit their eggs. In rearing tadpoles from eggs, care should be taken to prevent overcrowding, and aquatic plants, including some algae, should be provided for food. The water should not be changed unless it is fouled. When the tadpoles begin to transform provision for egress from the water should be made.

For study purposes frogs are easily preserved by dropping into a solution of one part commercial formaldehyde and 19 parts water. They may be killed by drowning in a closed mason jar of lukewarm water.

(To be concluded in the April issue. Part 2 will include a key for identification, and a description, notes on the song and range, and an illustration of each species.)



This strip of sand beach is called by Conservation Officer George Kaufman the "Otter Honky-Tonk". Here the otters engage in their frolics, playing tug-of-war, leap-frog, and endless games of tag, much in the manner of school boys.

Mr. Otter

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of courage in his stress; ideal in his home, steadfast in death; the noblest little soul that ever went four-footed through the woods."

If all of mankind had the love of wildlife that was the great Seton's, the water-loving otter would not have become one of the rarest North American fur bearers. But unfortunately most men's interest in this 40-inch, 20-pound playboy fisherman was in his beautiful, durable pelt, which has always commanded high prices on fur markets. In 1920 single skins brought more than \$100.

It is not as a fur-bearing animal that we should welcome the otter back to Iowa, but rather as we would welcome the full moon after an absence of many years, as we would a display of northern lights or a hummingbird, or any other of nature's finest creations, for of all our animals, none can compare with the otter in esthetic interest.

The domestic life of the otter is ideal. Both parents tend the young and carry food, and both are vicious fighters when the mate or young is molested. Many cases of otter killing dogs that were disturbing dens are mentioned by writers, and instances of savage fights with men bent on young-stealing have been recorded.

Yet they are probably the most affectionate and playful of all animals. It is believed by some that they mate for life and agreed by all that if one is shot or trapped its bereaved mate wanders over the hunting grounds wailing for days, searching for its companion. A most pathetic and moving description of animal devotion and sorrow is told in an early issue of "Field and Stream" by Mrs. Moore-Wilson, who writes of the habits of her pet otters. The author relates the death of one of the animals and tells of its mate actually crying tears for days.

Iowa has many expert wildlife fishermen, the osprey, kingfisher, heron, watersnake, raccoon, and mink. Lump their efforts all together, add old "Ike" Walton's

help, and the otter will have the limit first. His will all be "keepers", too.

It is said the otter can catch and kill in fair chase trout, salmon, or muskellunge up to 20 pounds; however, scales in the droppings of the Iowa colony show a preference for smaller fish. Nevertheless our otters are epicures, and pike and sunfish predominate in their winter diet.

Great speed and power is shown in swimming. When playing in the water they dart, turn, dive, and roll, apparently playing water tag much like a group of small boys. The animals often stay under water three or four minutes. When fishing or traveling under the ice this rare creature, like the muskrat and beaver, can go long distances by expelling used air which rises up against the ice and forms in white bubbles which are quickly re-oxygenated and breathed back in again.

Otter of all ages are the most playful of our animals. They are seldom alone and never still except when asleep. Much of their time is spent in endless games of tag, tug-of-war, and leap frog. They engage in races and diving contests in the water and jumping contests on land. Conservation Officer Kaufman writes:

"While tracking three otter I found where they were making long jumps in the snow, apparently just for fun. I stepped off the distances of the leaps. One could jump five full steps and the other two four."

Most famous of the otters' diversions is their great delight in sliding "belly-booster" in the snow or mud. The otter slides are generally constructed down a long, sloping bank ending in the water. During freezing weather the slide is soon coated with ice. On mud banks the oily surface becomes as smooth as a greased track. Sometimes the toboggans are as long as from 20 to 30 feet. Here a company of otter, young and old, gather to play. They climb up the bank and, starting from the top with legs bent backward, slip with considerable speed into the water below. These sliding parties continue until the

animals are disturbed or become hungry or tired.

Otter slides are found near the den of the Iowa colony, and although Conservation Officer Kaufman has observed his charges numerous times during daylight hours, he has not had the good fortune to catch them at play. He has, however, seen them fishing. He says:

"I began making regular observation trips and doing a lot of tracking. I finally found the den and where they were going in through one air hole in the ice and out another. One morning I watched one go down through the ice and come up with a fish. It was a pretty good-sized sunfish. I was tracking a company of three one day and found where they had dug two snapping turtles out of the mud. The turtles weighed about six pounds each, and they were brought out on the ice, where the otters cleaned the flesh out of the shell, legs, and neck as clean as a whistle, leaving the skin almost intact."

It is from tracking that George has learned most about his otters. On a long sand slope he has found an otter playground that he has nicknamed "The Honky-Tonk". Here the otters engage in their frolics, and their tracks have told him many interesting stories of their play. Sometimes he can tell which game was played and even which individual won. The best thing about the playground, says Kaufman, is that "each time the wind blows, the tracks are erased, and the next day the obliging otters have written new track tales in the sand."

The home of the otter family is under the roots of an overhanging tree on the shore of one of the permanent overflow lakes on the Mississippi bottom. The den has an under water entrance and a long sloping tunnel opening into a dry burrow in the high ground. The exact location is known to only a few people but is within a mile of their favorite



Under this tree stump is the only known otter den in Iowa. The lake was lowered this past winter to provide navigation waters on the Mississippi River. The ice has dropped down and exposed the normally under-water den opening.

National Wildlife Week Set Mar. 19-25

National Wildlife Week will be observed this year with the week beginning March 19. Proclaimed by President Roosevelt in 1938, the week has been each year sponsored by the National Wildlife Federation from its Washington, D. C., headquarters.

During the week the story of wildlife—its decline, its restoration and its conservation—will be told through the press, from the public platform and over the radio to the 15,000,000 conservationists in the United States. How the conservation of wildlife ties in with pure water, standing forests, less erosion, with more productive lands and fewer dust bowls, will be the theme that presents the drama of American life.

The National Wildlife Federation each year issues a sheet of wildlife poster stamps which are reproduced from paintings by famous American nature artists. This year 38 species are represented in the 64 stamps on the sheet.

Clubs, societies and individuals interested in securing further information about the activities should write the Federation at 1212 Sixteenth St., N. W., Washington, D. C.

fishing grounds, the mighty Mississippi River.

Although otter were believed extinct in Iowa by many observers in 1880, it is possible that there have been some present at various times. Unverified reports and local legends concerning the presence of this fine animal are not uncommon. Conservation Officer Cecil Benson, Fort Madison, writes, "My old hunters say the last otter reported around here was in about 1890, and at that time they wondered where it came from."

A 1913 newspaper clipping reports that an otter was trapped on the Des Moines River near Harvey. Conservation Officer Walt Trusell, Sioux City, reports a trapper having taken two as late as 1929 near Smithland. Conservation Officer Dan Nichols, Muscatine, tells of rumors of otter near the mouth of the Iowa River in 1932 or 1933. Conservation Officer Charlie Adamson of Davenport is sure that he has found tracks of this animal in his territory during the past year. George Kaufman believes his territory has contained otter for several years.

Regardless of the pros and cons as to whether the otter was ever an extinct animal in this state, we welcome Kaufman's colony with open arms and hope that "the noblest little soul that ever went four-footed through the woods" will continue to find the Hawkeye State to his liking.

Blue Geese

(Continued from Page 17)

made for violation of the migratory bird laws.

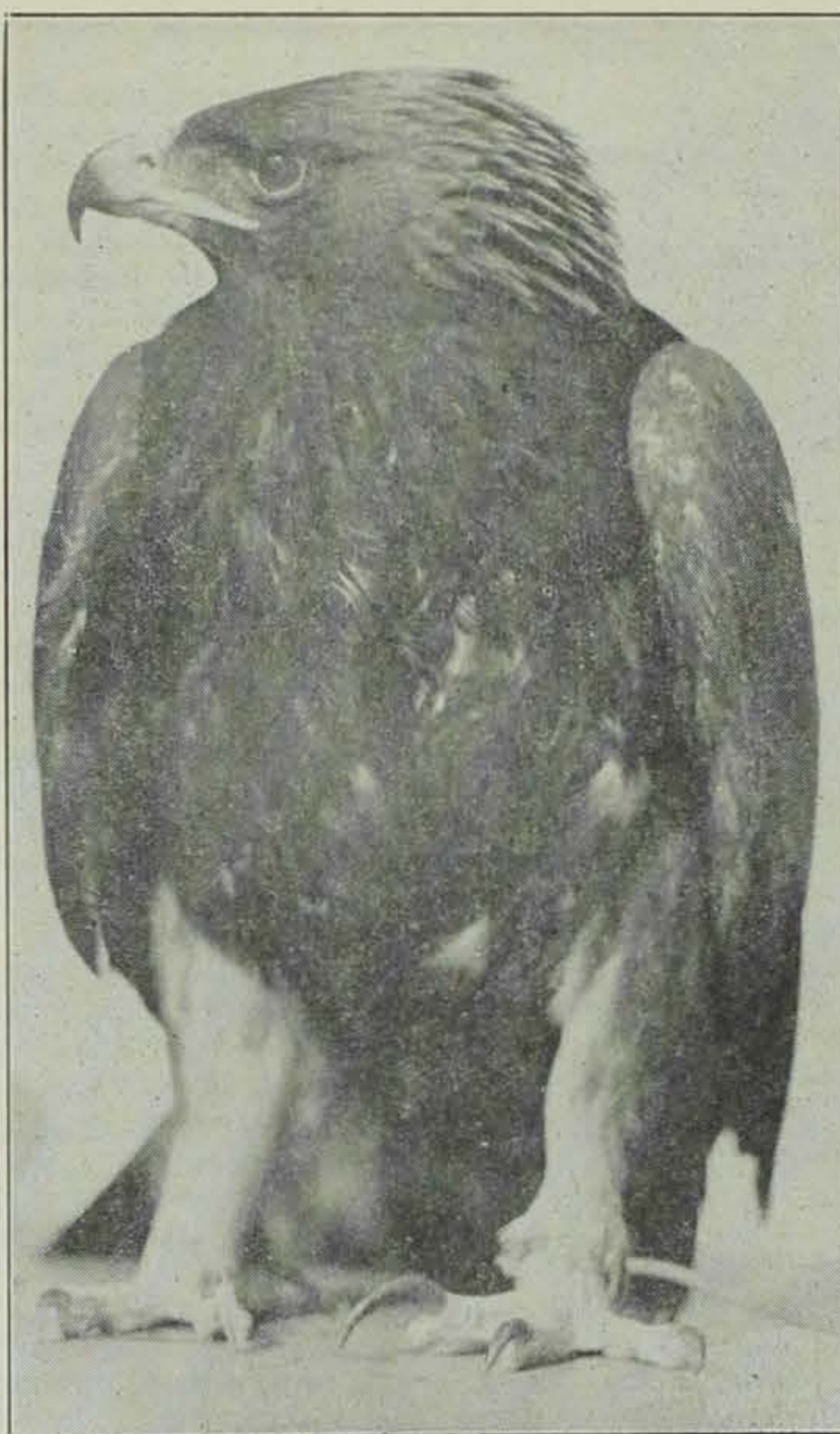
The 1943 migration presented one of the heaviest concentrations in many years, and hundreds of spectators visited the concentration areas and watched almost unbelievably this unique wildlife spectacle. The comment of first-time visitors as they see and hear the hundreds of thousands of geese is, "Tain't so!"

Each spring the clamor of confused geese at night causes the officials in the various river towns to turn out their street lights to allow the geese to get their bearings and return to the river so that the citizenry may get some sleep.

Until within the last three or four years blue geese have not been of any importance as a game bird in Iowa, in spite of their teeming numbers, because of the fact that they did not stop in Iowa during the fall hunting season, but continued non-stop through to their southern wintering grounds. The past two or three years large numbers of blue geese have been stopping in Iowa in the fall to feed on waste shelled corn. Neighboring states report the same change in the habits of this fine goose, and some game officials are convinced that in future years the majority of the south-bound birds will stop in the Middle West instead of flying straight through.

To the question "Are we to expect the flight to stop on its southern migration each year in the future?" one of the game officials, who is an authority on blue geese and has followed their flight from north to south for many years, replied, "I hope so. There is a surplus. We can afford to harvest more of these birds in proportion to the numbers we have been taking, since in the past they have not stopped until they reached the coast of Louisiana on their way south, and they are not hunted very heavily there. It does not seem to me that they have increased as they should in the last few years. Unless more are taken in the area in which they breed than we know about, it is possible their breeding grounds are crowded and they have reached their maximum, or of course there may be predators on the breeding grounds that are retarding their multiplication.

"For the past 10 years each year they seem to have developed more of a taste for corn on their spring migration, where 10 years ago they used the wheat fields altogether. They feed almost entirely in the cornfields now and use the wheat fields for rest and observation. This is explained by the fact that 10 years ago the cornfields were mostly standing stalks, hand-picked, and now



Stories of animals with life spans of a hundred or more years are usually flights of someone's imagination. The beautiful golden eagle is more likely to live to be 18 or 20 than 100 years as commonly believed.—Photo by A. S. Workman.

Centenarians Rare Among Wild Animals And Feathered Friends

Stories about animals with average lifespans of 100, 150, or even 200 years are usually flights of someone's imagination, declare officials of the Fish and Wildlife Service, United States Department of the Interior. "As a matter of fact," one scientist said, "man probably has a higher life expectancy rate than any other animal known, with the possible exception of the tortoise."

Available information is inadequate for establishing definite averages, the scientists pointed out, because little work has been done on the life span of animals, but conservative observers make estimates far below the popular idea.

In some instances, it is suspected, long-lived animals like the elephants are credited with being much older than they actually are because of errors in records handed down from one owner to another. It is thought that animals probably live longer in captivity than in the wild.

The elephant's life span has been set at 100 or more years, but

they are mostly machine-picked, stalks down and much shelled waste grain scattered. Let us hope, and I believe, that the last fall was the beginning of a fall stop each year for this species of geese."

records show that it is between 40 and 50 on the average. The oldest record for an elephant in captivity is 78 years, as reported in the Journal of the Bombay Natural History Society in 1933.

Most tortoises, it is believed, go to their happy hunting grounds between their 50th and 60th birthdays, although cases of extreme old age have been reported.

Among other animals whose average life span is debunked are the following:

Falcons, credited with living as long as 162 years, are believed to live only seven to 10. A vulture 118 years old is far older than most of its brothers and sisters, who according to some observers, die between the ages of 15 and 20. Golden eagles more likely live to be 18 or 20, not 100; swans 15, instead of 100; and geese 16 to 20, instead of 200 years. The parrot's reputed life span of 200 years dwindles to about 17, while a 40-year-old crocodile can be said to have lived four times longer than the average member of the clan.—Virginia Wildlife.

Tie Your Own Flies

For increasing the joy and personal satisfaction you obtain from fishing or hunting try these two extra-curricular hobbies: tie your own flies and baits or reload your own ammunition. The sense of personal achievement alone will increase the fun a thousand-fold!

One Buck For One Apple

Mrs. Muir Waller of Nova Scotia is one buck ahead because she reached for an apple instead of a gun—and the buck is alive, too. On the final day of the deer season, according to Hunting and Fishing in Canada, a young male deer strolled unconcernedly into her shooting camp and approached her without fear. Not having the heart to shoot it, she produced an apple which the deer ate with relish. When she broke camp, the animal climbed into the car and curled up on the back seat. Arriving at her farm at McClure's Mills, the buck made itself at home and has remained there ever since. Mrs. Waller believes the deer to be a tame one that had wandered back to the woods.

Rabbit Hunting On The Isle of Wight

A Mr. Armitage, of Kent House, East Cowes, Isle of Wight, has severely damaged the British reputation for avoiding the things that "just aren't done". According to the Fishing Gazette (England), Mr. Armitage, while fishing along a sea wall, noticed a "stoat" (weasel to you) chasing a rabbit. The angler dropped his rod and chased the stoat back into the "copse" (brush to us Yanks), but the terrified rabbit leaped over the sea wall and into the water eight feet below. The rabbit floated, so Mr. Armitage seized his rod, made a perfect cast, and one of the hooks on his "trace" (vulgarly referred to as leader in America) caught in the rabbit's skin. The rabbit was finally landed, unconscious, but still breathing, and was taken home, revived and imprisoned in a hutch with a tame rabbit. Is that cricket, Mr. Armitage?

Hitch-hiking Deer Rides Fender

A Minnesota motorist was driving through St. Croix State Park when a large doe leaped in front of his car, then jumped ahead as it saw the car bear down. It was "riding with the punch" when the car struck, and the momentum kept the animal sitting on the front right fender until the startled motorist reduced his speed. The animal retained its seat for nearly a quarter of a mile. Then it jumped off without a limp, flirted its tail in a "thank you" gesture, and disappeared into the brush.

Often Maligned Game Warden Is Sportsman's Best Friend

By ARCHIBALD RUTLEDGE

Every normal man has some kind of job. Even if he is very rich and has no need to do ordinary work, yet the wary care of his money is a task in itself. Of all the jobs known to me, one seems to rank above all others in difficulty and thanklessness. It is likewise work which entails hardship and considerable personal danger. And the holder of it, as things are now in many localities, often suffers from wholly undeserved unpopularity. The man I mean is the game warden. And if he is the right kind, he is the sportsman's best friend. If he is really worthy of his important office, he should be recognized everywhere for what he truly is.

In the first place, if we had no game laws, we would very soon have no game — even rabbits would be as scarce as dodos. These are wise and necessary laws. Such regulations are usually drawn up each year by state game commissions with the sanction of the state legislatures. In other words, the people, through their duly accredited representatives, make the laws.

There are also Federal regulations for migrating wildfowl. It seems understood that a state owns the game in it if it stays there; but if it migrates in season, the government owns it. And when it passes from one country to another, the two governments concerned try to come to an amicable agreement concerning regulations touching this game.

In all this there is nothing high-handed. It is decent and regular. The average man in America is left more free to hunt than is any other civilized man on the face of the globe. It is a sport that is enjoyed in varying degrees by rich and poor. It is in our free country truly a people's sport. And our people have made laws regulating that sport in order to perpetuate it.

As is proper, these laws vary in practically all the states. Local conditions determine their exact nature. Every state has its own game laws printed for each season, and every buyer of a hunting license is supplied with a copy. Moreover, complete seasons, bag limits and other pertinent matters are given wide publicity by newspapers and by sporting magazines. Any honest man who is a hunter would have a hard time not knowing the law.

But human nature is such that whenever we make a law, even though we ourselves make it, we have to hire someone to enforce



"The conservation officer is the best friend of the true sportsman and law-abiding hunter. I have rarely met a game warden who did not make me feel he was holding down the hardest kind of a job and doing so like a man."

it. This is true of practically all laws, and is especially so of game laws. In some states the governor has the power of appointing game wardens; in others, the power is delegated to the chief game warden. Sometimes organizations of sportsmen make recommendations of the men they wish appointed.

It makes little difference how such a man gets his position. When once he is sworn in, he immediately becomes a representative of the majesty of the law. He represents the people's will. And he is the best friend of the true sportsman, the law-abiding hunter. Just as the policeman and the highway patrolman protect our lives and property from thieves and other scoundrels, so the game warden protects our game, and in so doing protects our hunting. If it were not for him, all of us who love this hardy recreation might just as well hang our guns on the wall.

By day and night, in all kinds of weather, amid the lonely dangers of the wilderness, it is the warden's chief business to hunt down the violators of the people's laws. His work is full of real hardship, sometimes of great peril, of almost constant dealing with the kind of people that we like to avoid. We owe him a debt of gratitude that is unpaid. In a genuine sense, the whole outdoor sporting fraternity is dependent on him for its sport.

He is the active and accommodating friend of the hunter who makes it his business to do the right thing; and in dealing with the hunter who breaks the law, the game warden is never his enemy. He is only a just and fearless man doing his duty. I have rarely met a game warden who did not make me feel that he was holding down the hardest kind of job, and doing so like a man.

"Why, yes," you may agree, "these are good guys, but what are we supposed to do about it?"

The first thing to do, of course, is to obey the law, so that the warden can put you completely out of his mind as a violator. This is the primary way to cooperate with him. This in itself upholds his hands. I also believe that we should cease to regard him as just another man with a job. As a matter of fact, he is working for us.

He holds what should be considered one of the most honored, and certainly one of the most vital, positions in any community. He guards what we hold dear; he is the sleepless sentinel of our sport. Everything that he does is for our good. And not only does he put the fear of God into lawbreakers, but he studies the needs of game, he feeds it, he rescues it in time of drought, flood and blizzard. Throughout the year he is our game's best friend as well as ours.

I know that there are some rascally game wardens. With such men, the duty of good sportsmen is to see that they lose office. As in any field, there are trimmers and those who play to their favorites. But the vast majority of these men are altogether worthy of their positions.

Some of my happiest associations have been with game wardens. Most of them are deeply read in wood lore. In administering the law they are stern and unwavering, as they should be, for they are trusted public servants. Yet many hunters hate to see a warden. If they are honest, he is their best friend. And if he is a real one, he merits the highest degree of respect and friendship from the sportsmen.—Field & Stream.

Sportsmen's Club Serves Roast Bobcat

Latest to join the cavalcade of additions to America's meat supply—close on the heels of the muskrat, 'possum, woodchuck, raccoon, and others—is the bobcat. According to the Michigan Department of Conservation, roast bobcat was the piece de resistance of a dinner held in connection with a recent sportsmen's club meeting in that state. It was reported to be "good eating."

Izaak Walton League Meeting Set For Mar. 30-31-Apr. 1

The 22nd Annual Meeting of the Izaak Walton League of America will be held in the La-Salle Hotel, Chicago, March 30, 31, and April 1, 1944. Members and delegates from all over the United States will gather for this important meeting dedicated to the protection of America's out-of-doors and, specifically, to sane land and water management in the public interest in the post-war public works program.

Among recommendations of the League for the post-war program is one that top priority be given to sewage treatment for municipalities or public institutions having inadequate treatment. The League urges every such municipality and public institution to place the needed sewage treatment at the top of its list of post-war public works projects. Many municipalities have already made proper sewage treatment their No. 1 post-war project; and to take care of those recalcitrants who will not voluntarily take care of their sewage, the League is urging the Federal Government to take proper steps to provide the necessary incentive so this needed work for the benefit of the whole American public may not again be overlooked.

Instead of blindly embarking on grandiose engineering programs without adequate studies of the effects of these programs on the natural resources of America, and particularly its water resources, the League advocates that we take inventory of the many mistakes of the past in land and water management and give priority to those projects which will correct these mistakes in the broad public interest. Prominent among these are measures to arrest and correct soil erosion, reforestation and restoration of lakes and swamps unwisely drained.

The major theme of the meeting will be a constructive post-war public works program with consideration for all values, and the whole public's right to the proper use and enjoyment of its natural resources.

Inasmuch as a 20-pound female carp has been known to produce two million eggs or more, some idea of the damage they do to our native fishes can be found when we consider the competition for food set up by the progeny of a few carp, because all young fishes, regardless of species, consume the same food for the first few months of their lives.—Minnesota Department of Conservation.

A Philosophy of the Outdoors

By DR. T. GILBERT PEARSON

(Ed. Note: This, the last article of the late Dr. Pearson, nationally known conservationist, is reprinted from "Outdoor Georgia".)

I am one of those inconsistent ornithologists who thrills with esthetic joy at the whistle of a bob-white in the morning; could eagerly hunt him with dog and gun in the afternoon; and with great gastronomic rapture enjoy him on toast when the even shadows fall.

If I did not hold these views, I would be insensible to the avian music which kind Nature provides for everyone; would show unusual stupidity in not recognizing the value of wild game in providing opportunities for healthful field-sports; and, by implication, would confess that I did not appreciate exquisite food when good fortune brings it my way.

Of course, all people do not feel this way. I have known men who did not know the song of one bird from another, or to whom it never occurred that they were losing anything in life by not being able to discriminate in such matters. There are many excellent people who cry out against the killing of a deer or quail under any circumstances; and there are those who deal unwisely with food, as did William Jennings Bryan when, one hot day following the Scopes' Evolution Trial, in Tennessee, he so amply partook of the viands of his boarding house that the end came swiftly.

On a trans-Atlantic steamer, I met a gentleman and his charming wife, who invited me to dine with them. Shortly after the waiter began to function in our behalf, the lady suddenly emitted a gasp of dismay. Hastily I glanced at her soup plate expecting to find a drowning fly, or per-

haps a mouse. Then I saw she was staring aghast at the menu-card, whereon she had seen the word "partridge". When she had recovered sufficiently to permit her nerves and muscles to coordinate, she told me that she was a bird-lover and could not bear the thought of a partridge being killed. Before many minutes I saw her devouring lamb-chops with an unabashed eagerness that caused me to think she did not realize that the terror suffered by the frantically-struggling, mild-eyed, little lamb while its throat was being cut, was perhaps even greater than that experienced by the unlucky partridge when it took wing in front of the hunting dog.

Woman, lovely woman, shrinks from the thought of killing far more than does the average man, but we men have had long experience in bloodletting. Ever since the dim, red dawn of our species, we have been practicing the art of destroying life. We have done this ever since we used to hurry our mates into the cave or chase them up a tree when the roar of a hunting Saber-tooth came down the wind. We killed fish and in bands we used our flint-headed spears against the reindeer, the aurochs, and the mammoth, that we might have flesh to eat with the berries our women folk gathered. This is the history of man in every land.

In North America game birds and game mammals were of enormous advantage to the early settlers in furnishing a readily-acquired meat supply. But conditions have greatly changed. No longer is the flesh of game essential to our livelihood. Game's chief value today is the incentive it provides for millions of men to engage in health-giving, outdoor exercises.

Ranger Bill Has Only Two Worries--at a Time

From Ranger Bill up on the Beartrack District comes this bit of valuable information to use when things aren't going just right.

"I wonder why Rangers worry? Up here on my district there are only two things to worry about. The management of your district is either working or it is not working. If it is working there is nothing to worry about; if it is not working there are only two things to worry about. You are either doing your best or you are not doing your best. If you are doing your best there is nothing to worry about; if you are not doing your best there are only two things to worry about. Your health is either good or you are sick. If your health is good there

is nothing to worry about; if you are sick there are only two things to worry about. You are going to get well or you are going to die. If you are going to get well there is nothing to worry about and if you are going to die there are only two things to worry about. You are either going to heaven or you are not going to heaven. If you are going to heaven there is nothing to worry about, and if you're going to the other place you'll be so darn busy shaking hands with your old friends you won't have time to worry—so why worry?"

Pittman - Robertson state - aid funds are limited to game restoration. Under this act, passed in 1937, the federal excise tax on sporting arms and ammunition is divided among the states for wildlife improvement.

Officer Lists Headaches For the Game Warden

Frank Carroll, conservation officer in Jefferson County, let himself go in the Monticello News' "Sportsmen's Corner" the other day with the following list of "Headaches for The Game Warden That Aspirin Won't Cure":

1. The man who looks you in the eye and says, "Go to it, boy, we are with you," and then goes out and kills some wood ducks and pre-season doves and squirrels, or a turkey.

2. The party who leads you confidentially aside and whispers in your ear news of some violation at some unknown spot by undetermined parties at no specific time and then says, "Don't mention my name in it."

3. The one who tells and spreads rumors on the street and refuses to "give" when called on by an officer for the facts or such of them as happen to be in his possession. This one is usually a violator himself—watch him.

4. The man who really wants enforcement (for the other fellow) but reserves the right to be "out-of-line" himself and who spreads criticisms and rumors for the purpose of discrediting enforcement officers and efforts and for the purpose of justifying his own actions.—Florida Game and Fish.

Wildlife and Nature Study Pamphlets Now Available

The Agricultural Extension Service, Iowa State College, now has available for free distribution several pamphlets on wildlife and nature subjects.

Included in the list are two bulletins on songbirds, "Winter Birds Around My Home" and "Nesting Birds of Iowa". The bulletin "Upland Game Birds of Iowa" contains information on the ring-necked pheasant, European partridge, bob-white quail, eastern wild turkey, ruffed grouse, and prairie chicken.

Also to be distributed free of charge are "Native Ferns of Iowa", a bulletin on the ferns and fern-allies, and "Iowa Trees in Winter", a guide for the identification of trees during the time of year when leaf characters are not evident.

"Some Common Iowa Fishes" contains pictures and descriptions of some of the more common fish of this state, and "Fur-Bearers and Game Mammals of Iowa" contains chapters on 16 animals of the state, besides information on animal tracks, trapping, and handling of furs.

These bulletins, although designed primarily for student use, are also of interest to sportsmen and outdoor enthusiasts. They are interestingly written and pro-

fusely illustrated. Single copies may be obtained without cost by writing to the Agricultural Extension Service, Iowa State College, Ames, Iowa.

Conservationist Index Off the Press Shortly

In a recent issue of the "Conservationist" it was suggested that if sufficient requests for an index covering this magazine for the years 1942-1943 were received to warrant the time and effort necessary to prepare it, the Commission would distribute an index without cost to all making a request.

There have been a large number of requests received, and it has been decided to print the index for distribution. It will be sent, however, only to those making such a request. If you plan to bind your "Iowa Conservationist" and use the articles for future reference, please write the "Iowa Conservationist", 10th & Mulberry, Des Moines 8, Iowa, requesting an index. This index will be available within the next two or three weeks.

Pintail Banded In Utah Found In South Pacific

One of the longest and most puzzling duck migrations on record has been announced by the U. S. Fish and Wildlife Service, based on information received from Ensign Arthur R. Murphy of the U. S. Navy, who notified the Service of the arrival of a flock of pintail ducks at Palmyra, a tiny spot in the Pacific, 1,100 miles south of Honolulu.

The birds were so exhausted they could be caught by hand. One of them wore a tag, the number of which revealed that the duck wearing it had been banded 82 days previously at the Bear River Migratory Bird Sanctuary in northeast Utah, 3,600 miles away.

The Service reports that the pintail rarely flies far over water, and that it has never heard of a pintail so far south as Palmyra.

Scientific data, compiled by unbiased competent investigators, confirm the fact that nearly every important natural resource of our nation has been and is still being used or wasted more rapidly than it is being replenished.—American Nature Association.

The brook stickleback builds a nest of vegetation with a tubular room and a front and back entrance. The male cements the nest together with a sticky, thread-like body secretion that hardens to form the inside walls of the nursery.