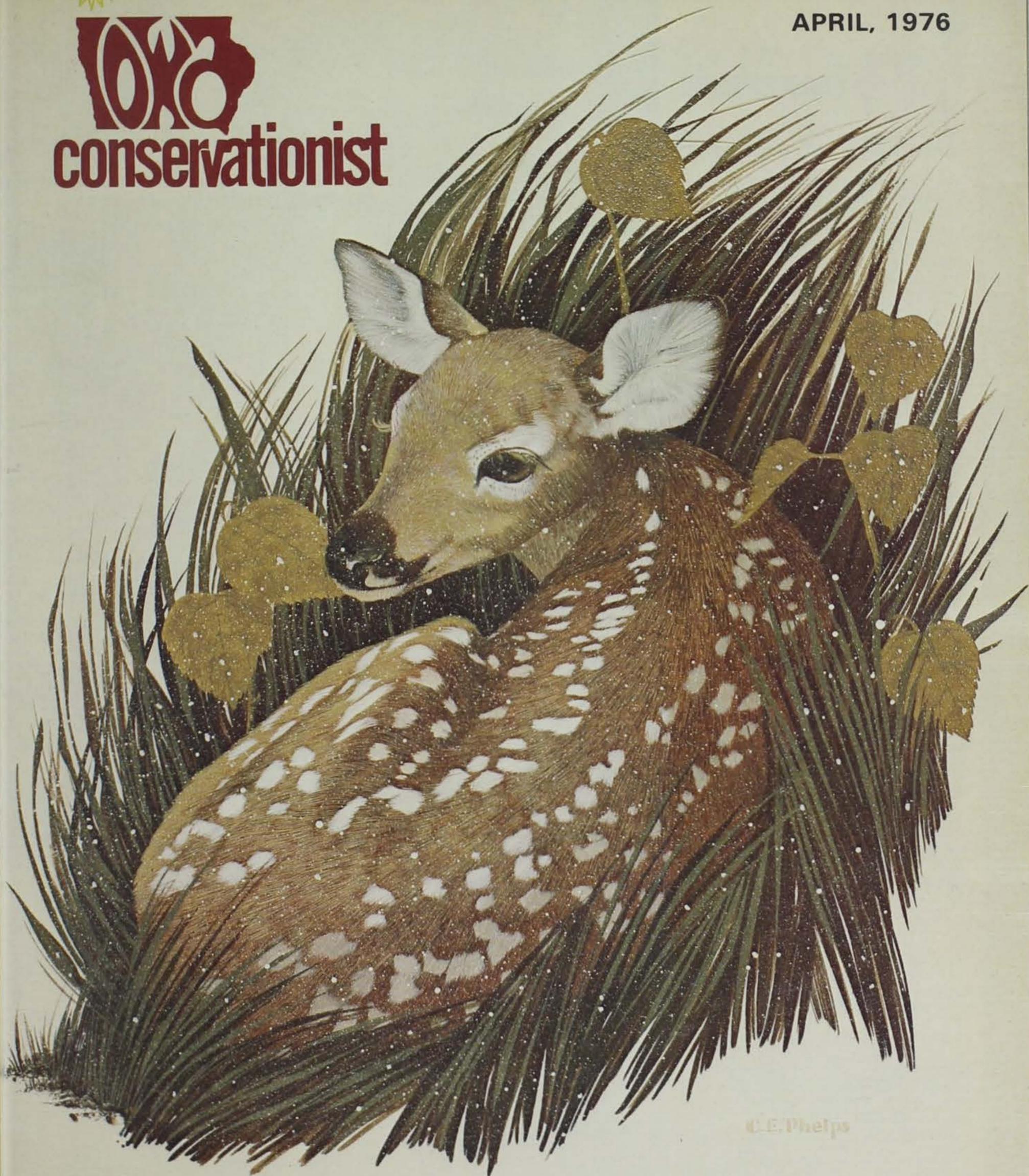




APRIL, 1976

**OKO**  
**conservationist**



C.E. Phelps



## conservationist

Volume 35, No. 4

April, 1976

### STAFF

Roger Sparks, *Editor*  
Robert Runge, *Managing Editor*  
Kenneth Formanek, *A-V Coordinator*  
Julius Satre, *Contributing Editor*  
Wayne Lonning, *Photographer*  
Jerry Leonard, *Photographer*

### CONTENTS

- 3 CONSERVATION PROBLEMS -  
MORE TO COME
- 5 PHEASANT COVER
- 6 HUNTING THE WILD TURKEY -  
IOWA'S PREMIER HUNTING  
EXPERIENCE?
- 8 BUGS WITH WET FEET
- 10 1975 FISH PRODUCTION FROM  
IOWA HATCHERIES
- 13 CLASSROOM CORNER
- 14 HELP FOR SURVIVORS
- 15 1976 IOWA FISHING SEASONS  
AND LIMITS
- 15 FROM THE WARDEN'S DIARY

### FRONT COVER

*Fawning Season In Iowa occurs from May through June. The white-tailed deer fawn on the cover was painted by Iowa artist Carl Phelps. Prints are available from his address: Carl Phelps, 1323 B Ave. N.E., Cedar Rapids, Iowa 52402.*

### COMMISSIONERS

John Link, *Chairman, Burlington*; Thomas Bates, *Bellevue*;  
Carolyn T. Lumbar, *Des Moines*; Herbert T. Reed, *Winterset*;  
John C. Thompson, *Forest City*; John Brophy, *Lansing*;  
Marian Pike, *Whiting*

### DIRECTOR

Fred A. Prewert  
William C. Brabham, *Deputy Director*

### DIVISION CHIEFS

Harry M. Harrison, *Fish and Game*; Stanley C. Kuhn, *Division of Administration*; Gerry F. Schnepf, *Resource and Program Planning*; John M. Stokes, *Chief, Lands and Waters*

### SECTION SUPERINTENDENTS

Tom Albright, *Engineering*; Joe W. Brill, *Parks*; Robert Barratt, *Wildlife*; Jerry M. Conley, *Fisheries*; Roy Downing, *Waters*; Robert Fagerland, *Land Acquisition*; Lester Fleming, *Grants-In-Aid*; Gene Hertel, *State Forester*; Kenneth Kakac, *Law Enforcement*; Caryl Carstens, *License*; Larry Davis, *Information & Education*; Gene Geissinger, *Accounting*; Doyle Adams, *County Conservation Boards*.

Published monthly by the Iowa Conservation Commission, State Office Building, 300 4th Street, Des Moines, Iowa 50319. Address all mail (subscriptions, change of address, Form 3579, manuscripts, mail items) to the above address. Subscription price: one year at \$2.00; two years at \$3.00; four years at \$5.00. Second class postage paid at Des Moines, Iowa and other points. (No rights reserved).



# CONSERVATION PROBLEMS — *More to Come*

by Fred A. Prewert

The problems facing conservation professionals today are many and varied. It is important that Iowans realize that these problems concerning outdoor recreation exist and just as important that they realize there are seldom any easy solutions. It may very well be that there are no solutions that are satisfactory in every respect to the broad spectrum of the public we serve. Very few things in this business are black and white — there are many viewpoints to every issue. In fact, most of it lies in the gray area.

For Americans the relationship between man and his surroundings has generally been characterized by unchecked exploitation. But we must remember the early settlers were really innocent in that they didn't realize there were limits on what game populations and other natural resources could absorb. At the same time, however, there were a few voices that were raised against this early assault on nature. Such persons as John Muir, John Audubon and a writer named Henry William Herbert were first to see that something was wrong. The impact Herbert had on American hunting was as important in his time as any man who lived. Writing under the name of Frank Forester he was the first to introduce a code of ethics to hunting in this country. He was an unrelenting enemy of the poacher and pot-hunter and shortly gathered many followers. Soon, these men were joined in the conservation effort by a powerful politician — Teddy Roosevelt. It is interesting to note here that all of these men, with the exception of Muir, were hunters and fishermen. The preponderance of the opposition to unethical hunting was generated by hunters and fishermen. Although these men really had little scientific knowledge with which to work, they did have a concept of the European hunting ethic. With this the conservation movement became one of the strongest political forces in the nation by the turn of the century. The birth of real scientific game management came in the thirties and its father was, of course, Aldo Leopold. For those of you who are interested in the history of conservation, I recommend *American Sportsmen and The Origins of Conservation* by John Reiger. It is the finest book on the subject that I have ever read.

Then came an economic depression and three wars which led this country on a joy ride of indifference and, as far as the political system was concerned, all initiative might be said to have existed in a handful of congressmen and senators as late as the nineteen sixties. A few major advances were made during the mid sixties, and a fairly steady reorganization of the federal structure for dealing with conservation affairs did occur. This development has been as significant as the programs, policies and decisions that have flowed or failed to flow from the government agencies. The main reason for certain failures has been this haphazard fashion in which conservation policy has come into being.

One study disclosed that federal responsibility for 19 environmental factors was distributed among 99 permanent or independent agencies, committees, boards, commissions and organizations. Another found that 150 environmental programs were being administered by 63 separate federal agencies. Understandably, then, the government as a whole, whatever its political will, can not effectively gather information about conservation, make policy and administer effectively.

Conservation groups are not, however, closed out entirely — they have strong allies in congress and throughout the bureaucracy. We as conservation professionals are, unfortunately, at a severe disadvantage in our attempts to break into the system to gain the power to define issues and values. Nowhere is this more obvious than the process of setting the waterfowl seasons. After all the scientific data is gathered and submitted it is considered only advisory information and the Secretary of the Interior can do anything he pleases.

Although it is true that the crisis nature of the environmental recreation situation will continue to produce government action and although the American public will become increasingly alarmed, the possibilities for meaningful conservation politics, especially for the hunting sports, hardly seem to exist at all.

If it were not enough that we have acres of political swamp through which to wade, there is also trouble brewing in our big cities.

For many years now there has been a shift of population from rural areas to urban centers. Gone forever are the days when most of us are raised to recognize our ties with the earth. In the book, *Ecclesiastes*, we learn that "Men go and come but earth abides." This is hard to see for someone who grows up in the concrete desert. We all know that energy comes from grass and milk comes from a cow. But the urban dweller figures that milk comes from a bottle. It's this lack of earthly knowledge that leads the urban dweller to wrong conclusions. How can we expect him to see that the deer are rooted to the soil the same as corn. I will again call your attention to the ever increasing number of groups dedicated to ending your right to bear arms, enjoy hunting and recently even fishing. Yes, there are now groups pressuring to end the use of the fishing hook because of its alleged cruelty. For a moment let us try to understand their nature. Someone who is sickened by the sight of a dead raccoon held tightly in the jaws of a trap is not necessarily bad. It is only when he says, "I don't like that, so you can't do it" that he becomes a problem in our business. It is true right down the line. "I don't like handguns, so you can't have one." "I don't like to shoot wild animals, so you can't do this." Does this simplification seem somewhat ridiculous? Let me tell you that it is the most serious threat to some of your rights that exist today. For those of you who think that the world ends at the Iowa state line, gun control in New York City might not sound bad. But know, too, that Iowa is only standing in line and it's just a function of time. Uninformed people can also deny the sportsmen certain opportunities. In Iowa, despite several years of effort the likelihood of a dove season is as remote now as ever. The issue is based on emotion. Scientific data is hardly even considered.

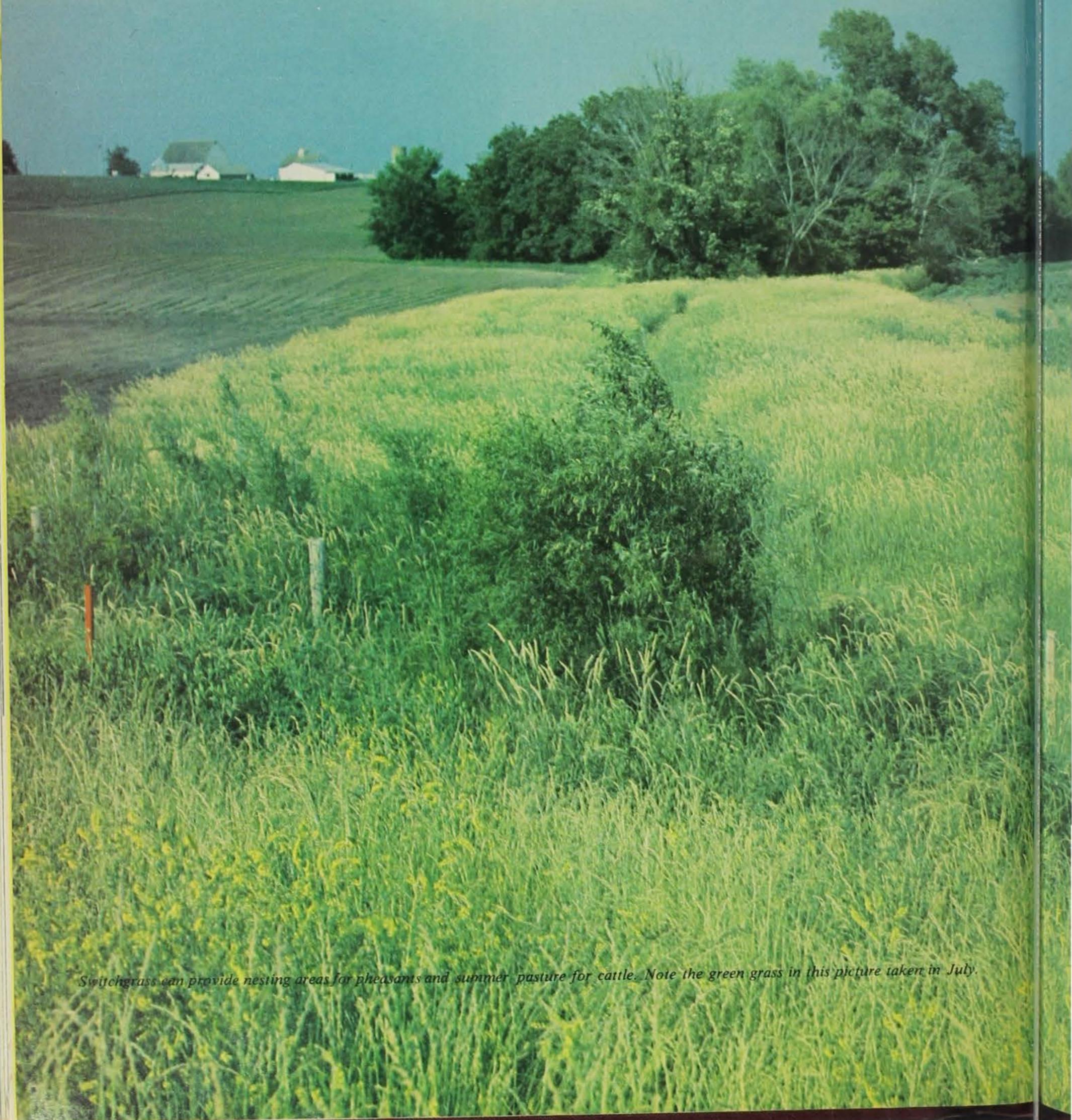
But the problems are not always local. In fact more and more the problems facing the conservationist in one part of the nation will surely someday affect the conservationist in another. A prime example of this is the Mississippi flyway with some states pulling out of the organization. Admittedly, the flyway system is poor but it's the only game in town. The whole system is controlled by international treaty, the highest type of agreement into which our country can enter. If we don't work to save the Mississippi flyway, it will probably collapse. But this problem is not limited to duck hunting. Public outcry against a certain conservation management practice in one state, where it may have been mishandled, can prevent the use of the same practice in another state where it might prove necessary and desirable. Large clearcuts in Montana and West Virginia resulted in nationwide criticism of the U. S. Forest Service. The results of this local misapplication of a technically acceptable practice has thus resulted in adverse public opinion. Where public lands are involved, the land manager may be right biologically speaking but if the public says he is wrong then he loses. We are, after all, charged with protecting our natural resources for the public not for ourselves.

We must also work to avoid being trapped into federally sponsored programs, usually political in nature, which are unsound or unreal in practicality. It is entirely possible that some of our endangered species programs are prime examples of having priorities in questionable order.

If, for example, an endangered species occurs in a national forest, strict adherence to protection could prevent the forest service from using all their management tools for providing multiple land use. Soon the area falling under these restrictions loses its usefulness for other pastimes and benefits.

Our goal is total ethical land use and the path to that goal is hard and long. We must look beyond our own little problems and be ready for the problems coming in the future.

Land like people has abilities and limitations. It is so important that we recognize them. We must work the land, we must help the land to work for the mutual benefit of all.



*Switchgrass can provide nesting areas for pheasants and summer pasture for cattle. Note the green grass in this picture taken in July.*



# Pheasant Cover

**By Al Farris**

**Wildlife Research Supervisor**

**P**ROPER HABITAT is the key to abundant wildlife populations. That simple statement encompasses a great deal of the knowledge of the science of wildlife management. Habitat is composed of the living and non-living components of an animal's environment. One of the most important parts of the animal's habitat is cover. Cover is the vegetation that provides shelter for necessary life requirements of the animal. The different types of cover required by the pheasant are generally referred to by the activity the pheasant carries on in that specific cover, for example brooding cover, winter cover, nesting cover, etc. Proper nesting and winter cover are currently considered to be the most critical needs of Iowa's pheasants. "Proper cover" includes both a qualitative and quantitative connotation. The cover must be of sufficient quality and quantity before it can support a desired number of pheasants.

## *Nesting Cover*

Many studies conducted in Iowa on the nesting requirements of the pheasant have shown that pheasants will establish nests in a wide variety of vegetation. This variety includes oats, alfalfa, brome grass, corn stalks, soybeans, "weeds", bluegrass and many others. However, these studies have also shown that even though pheasants will nest in a variety of plant species all plants are not as equally desirable where a nesting hen pheasant is concerned.

The selection by the hen pheasant of one kind of vegetation over another is somewhat of a mystery but certain factors seem to be common among the most frequently utilized plant species. Dense leafy stemmed, tall, erect herbaceous vegetation offering an overhead canopy is preferred. Species with early spring growth are most often utilized but this can be offset by standing residual cover of later growing species. Fields of grasses, legumes or grass-legume combinations are preferred. However, even among the grasses and legumes not all are as good as some. Alfalfa and red clover are the only two hay producing legumes planted to any significant extent in Iowa today. Pheasant nesting densities (acres per nest) are relatively high in both of these legumes but alfalfa is preferred by pheasant hens. Clover is not commonly grown anymore but is a desirable nesting cover particularly if it is grown in combination with alfalfa, red clover or brome grass.

Wildlife biologists generally divide the grasses into cool season and warm season categories. The cool season grasses - brome grass, orchard grass, timothy, bluegrass, fescue and Reed's canary grass - are species introduced to this country from other parts of the world. These grasses start their growth relatively early in the spring when the weather is still cool and become dormant in the hot part of the summer. Among these grasses brome grass is preferred by pheasants for nesting. Canary grass when grown on a well drained upland site where the grass does not lodge is also heavily used by nesting hens. Timothy and orchard grass are best described as mediocre nesting cover. Because of its tolerance to moist soil conditions timothy is perhaps the best nesting cover to be planted in wet soil sites. Fescue and bluegrass are generally poor nesting cover and not preferred by pheasants.

The warm season grasses—switchgrass, Indian grass and big bluestem—do not begin growth until late spring but continue to grow and are green in the hot part of the summer. Because of the deep extensive root system of these native grasses, they are extremely drought resistant. Although only preliminary data are currently available, it appears that switch grass is the best of these warm season grasses for pheasant nesting cover.

# HUNTING THE WILD TURKEY

## - Iowa's Premier Hunting Experience?

By Terry Little

Wildlife Research Biologist

WHAT IS IOWA'S MOST CHALLENGING hunting experience? Wing shooting bobwhite quail, Hungarian partridge or ruffed grouse, small, swift and elusive fliers, are all exciting and difficult sports. Woodcock, snipe and rails add erratic flight patterns to swift flight and may be more difficult to hit, although these species are hunted only occasionally in this state. Waterfowling adds another dimension: attracting flights of ducks or geese by properly setting a blind and decoys and calling those sweet notes that only they understand requires a great deal of experience and knowledge of local flight patterns and feeding areas. And then, of course, one still has to shoot and successfully retrieve any birds that do come in to look the situation over. And for the hunter with a dog, the days spent developing a good pointer or retriever add much satisfaction to every type of bird hunting.

Stalking the white-tail deer with a shotgun is not a high-success sport, judging by the relatively few hunters who bag a deer in any given year, but party hunting and large drives detract somewhat from the esthetic values of an Iowa deer hunt and some of the deer bagged can be attributed to luck on the part of the individual hunter. Archers, however, will claim that taking a deer with bow and arrow is the ultimate big game hunt in Iowa. The long hours spent scouting an area and learning the movements of a deer herd, the practice necessary to become an accurate shot, and then the many mornings and evenings spent standing in a blind waiting for just one good opportunity certainly lend weight to their claims.

Predator hunting by an individual can also be difficult, requiring the ability to call in a wily fox or coyote to a carefully concealed hunter. The use of 4-wheel drive vehicles and CB units by large hunting parties reduces the challenge and appeal of this sport for many avid hunters.

Proponents of each of these types of hunting can be found in nearly every sportsman's club, each willing to expound at length that his favorite type of hunt is the most difficult and rewarding. But a few Iowans are beginning to discover a new sport that is probably the most exciting and challenging big game hunt Iowa has to offer. The eastern wild turkey gobbler may be the most elusive and magnificent game animal in the eastern half of the United States, and is certainly one of the trophies most highly prized by those hunters skillful enough to bag one. Although this is a lofty claim, and sure to be disputed by some who have never hunted this largest of all game birds, those who have participated in the sport claim it combines all of the most challenging aspects of waterfowling, bow hunting and predator calling. Plus it gives the hunter the opportunity to interact with his prey, and thus an even greater opportunity to make the one slight mistake that will spook a bird far out of shotgun range.

Turkey hunting in Iowa is currently limited to a spring "gobblers only" season to protect nesting hens and allow recently introduced populations to grow and expand into uninhabited range. During the gobbling season (roughly April and May), older socially dominant males establish territories which they defend by gobbling and strutting which warns other males of their presence and attracts sexually responsive hens for breeding purposes. Dominant gobblers are often accompanied by flocks of sub-dominant adults which do not gobble unless the dominant bird is lost, while yearling males (usually sexually immature) form flocks that move independently of older birds. Thus only a small proportion of all the males in a population participate in breeding and a ready reserve exists for gobblers taken by hunters or predators.

Most successful hunters exploit the gobbling behavior and sexual arousal of the older males. Because experienced birds are extremely suspicious of the slightest unusual sound or movement, very few birds are killed by hunters who walk randomly through the woods or attempt to stalk a bird they have located. The most successful technique is to locate the general area occupied by turkeys during a pre-season scouting trip to listen for gobbling activity. Once a male is located, he must be tempted into approaching the hunter by imitating the yelp of a hen turkey using a box, slate, or mouth call. Several types are available commercially. Camouflaged clothing and hours of practice calling are essential, since the slightest distortion or squeal of the call, or movement in the brush, will spook even an aroused gobbler. And once a bird has been lured within shotgun range, the hunter must ignore his pounding heart and racing nerves long enough to make an accurate head shot. Adult turkeys are heavily feathered and anything less than a well-placed shot in the head or neck often results in the loss of a crippled bird. But for the successful hunter, few thrills will match the feeling of enticing a gobbler into range and talking turkey with this magnificent game bird.

Perhaps you are one of many Iowans who are unaware that the opportunity for turkey hunting exists in our state. As recently as 5 years ago, few Conservation Commission personnel even dreamed turkey hunting would become a reality in a state as extensively cleared of forests as Iowa. Turkeys are native to the state and were abundant prior to settlement by the white man, but as forests disappeared in the face of expanding agriculture, so did turkey populations. The last hunting season was held in 1900 and the last verified sighting was reported in 1910 in Lucas County. The Conservation Commission and sportsmen's clubs released birds intermittently for the next 55 years without much success, but an intensive program begun in 1966 finally paid dividends. The details of these re-introductions are another story, but releases into Stephens State Forest (Lucas County), Shimek State Forest (Lee County) and Yellow River State Forest (Allamakee County) were so successful that by 1974 the first modern turkey season was held. Hunting was limited to zones including and surrounding these 3 state forests and was tightly controlled to prevent over-harvest of the new populations. Only 150 licenses were issued in each zone, equally divided between two seasons in early May. One hundred and thirteen turkeys were killed and 29 percent of the hunters bagged a turkey. Both figures compare favorably with other northern states in their first year of turkey hunting, and the 2 southern zones (Shimek and Stephens) were especially productive. Success rates there averaged 41 percent and 33 percent, respectively, compared to 10-15 percent found in states with large turkey populations. A lower success rate of 10 percent for northeast Iowa was thought to reflect smaller turkey populations in that area. Because of the successful first year of hunting, a second season was held in 1975. The number of licenses issued nearly doubled from 450 to 825 in 1975, with 300 licenses per zone divided among 3 seasons in the south, while the quota for northeast Iowa remained at 75 per season. As in 1974, the 2 southern zones continued to be the best hunting areas, accounting for 137 of 141 turkeys killed, with success rates remaining high at 26 percent in spite of the increase in the license quota. Most of the birds taken have been adults (89 percent in 1974, 85 percent in 1975), indicating hunters have not yet made serious inroads on the excess adult males.

*Continued on Page 14*

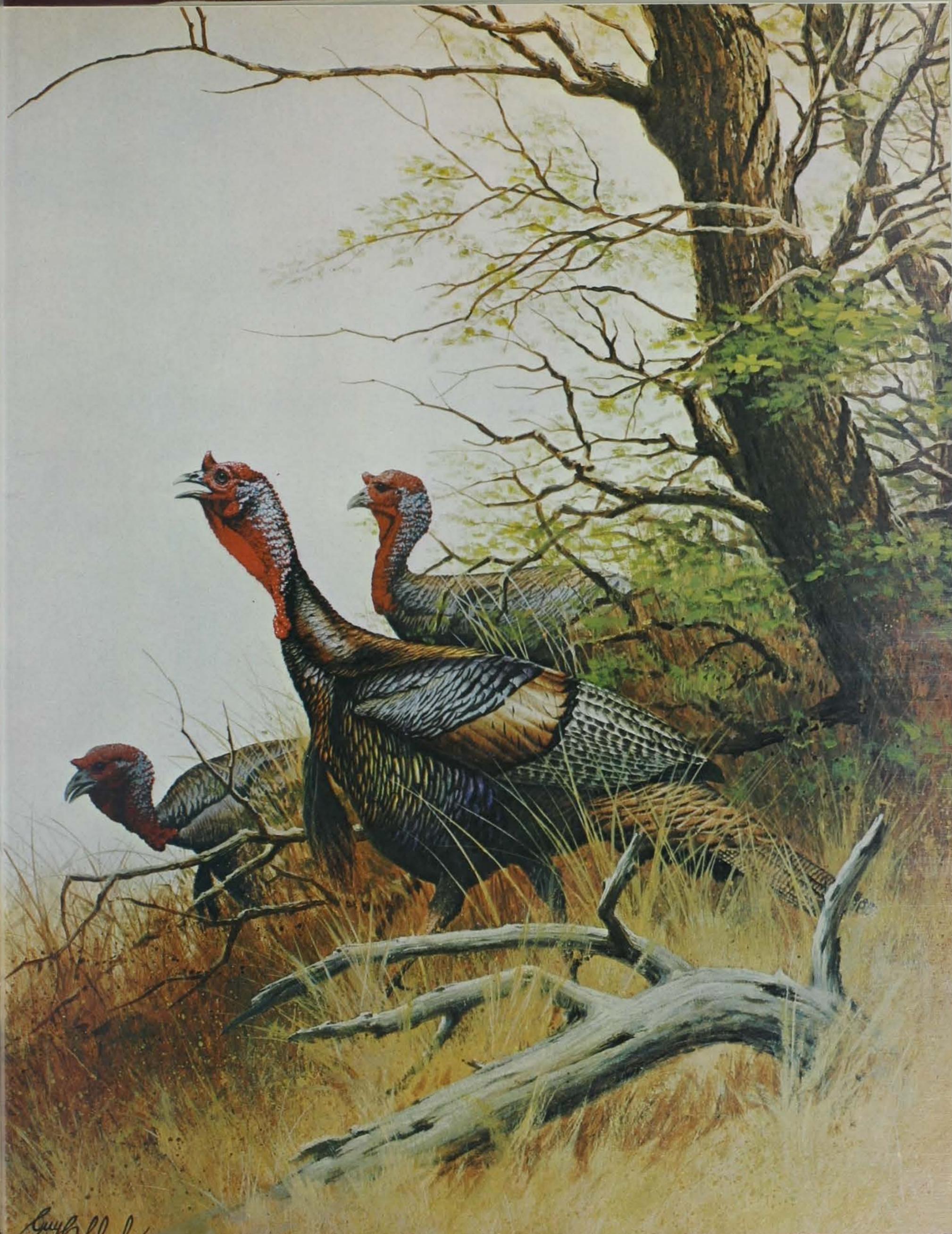
*Illustration By Guy Coheleach (See Help For Survivors, Page 14)*

EY

and  
are  
ent,  
ugh  
most  
by  
ling  
nto  
sing  
ble  
tice  
the  
used  
the  
ong  
vily  
d of  
the  
ng a  
me

the  
as 5  
ven  
e as  
the  
but  
did  
and  
nty.  
used  
ess,  
nds.  
but  
tate  
kee  
key  
and  
l to  
uses  
s in  
d 29  
pare  
key  
vere  
and  
d in  
f 10  
key  
r of  
uses  
uses  
for  
e 2  
ting  
h at  
the  
t in  
the

e 14



Guy B. 11

1976

**By Larry Mitzner**  
**Fisheries Research Biologist**

*Photos by Don Degan and Russ Gent*

**I**NSECTS ARE THE MOST NUMEROUS and diverse group in the animal kingdom. Approximately one million species of insects have been described. One out of 25 species occur in water where they form part of the ecology in lakes, ponds and streams. Most aquatic insect species are beneficial to man with only a few nuisance or harmful varieties.

The relationship between fish and insects is vitally important because most fish species at some time during their life cycle depend almost entirely on aquatic insects for food. Many panfish species such as bluegill, when they are larger than 3 inches, derive 95% of their food from insects. The bluegill is to the fish family as the swallow is to the bird family. A single 6-7 inch bluegill will consume approximately 30,000 aquatic insects during the summer.

Last time you were fishing you may have been completely unaware of the numerous insect species below the water surface or the intricate relationship involved between fish and insect. By examining vegetation, rocks, branches and bottom ooze the diversity and abundance of insect life is readily apparent.

Insect size and shape are almost as diverse as terrestrial animal life. Size will range from small tube-shaped gnat larvae about 1/4 inch in length to gangling 2 1/2 inch water scorpions which resemble walking sticks. Body shape and anatomy are equally diverse. Beetles are elliptical with hard body covering, while mayflies are delicate with many large leaf-like external gills.

Some insects are adapted to live in cold, fast flowing streams, while others require little oxygen and can survive in stagnate bogs. Some insects require sand and gravel substrate, while others inhabit dense vegetation. Many mayfly species construct burrows in the lake bottom much like a mole does on dry land. One group of insects, the water striders, are adapted to walk on the water surface. Caddisflies build tube-shaped cases around their bodies. Each species uses specific material for construction; sand, twigs, and leaf fragments are commonly used. Some aquatic insects are even parasitic by laying their eggs in the body cavities of other insects.

The great diversity of insect life is helpful to water quality investigators who determine where chronic areas of pollution occur. Investigators systematically sample the insects where suspected pollution occurs. The insects are identified and counted; then the samples are compared. Areas of intense pollution provide habitat for a limited number of species which can tolerate pollution, while less polluted water provides habitat for a greater variety of species.

# Bugs with Wet Feet



**Dragon Fly Nymph**

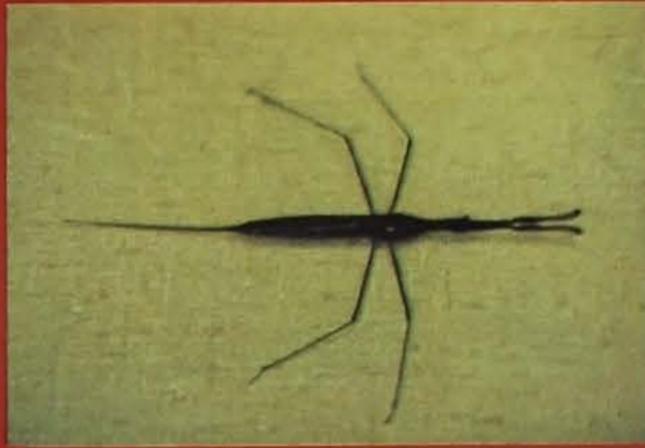
Each insect species is adapted to specific feeding habits. Dragonfly larvae and some diving beetles are predacious. Their preferred habitat is in dense vegetation where they are concealed by protective coloration. Prey are captured by large piercing mouth parts. Some insect species are so adept at predation they can capture newly hatched fish fry. Dragonfly larvae emerge from the water as adults and even then continue to consume insects, mainly mosquitoes and midges, which they capture in mid-air.

Other groups of insects feed wholly on plant material. The more sophisticated are adapted to spin web filters allowing the stream or lake currents to carry microscopic plants to the filter. Others feed on plants by chewing the plant tissue, while some have piercing mouth parts to extract plant juices.

Another important group of insects are scavengers which feed on the detritus and ooze on the lake bottom. Dead plant and animal material sinks to the bottom where many insects feed on the decaying material.



**Dragon Fly Nymph**



**Water Scorpion**



**Caddis Fly Larvae**



**Eluid Beetle Larvae**



**Water Strider**



**Caddis Fly Larvae (In Case)**



**Phantom Crane Fly Larvae**



**Damsel Fly Nymph**



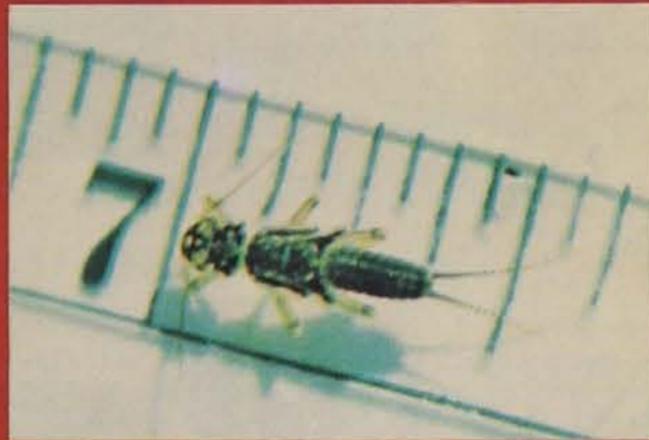
**Caddis Fly Larvae (In Case)**



**Predacious Diving Beetle**



**May Fly Nymph**



**Stone Fly Nymph**

Regardless of the foods which insects eat they multiply, grow and form a vast reservoir of food for fish populations. In most lakes and streams there are about 5 pounds of insects produced each year for each pound of fish. Applying this to a farm pond which normally contains 300 pounds per acre of fish, then the annual production of insects will be 1,500 pounds per acre.

There are two reasons for such great insect production. Foremost is the millions of eggs laid, and second, insect species have up to six life cycles each year. Mosquitoes

are notoriously known to expand populations in a very short time span.

Many fly fishermen take advantage of the vast production of insects and the feeding habits of fish. Trout feed voraciously on insects as they emerge from the streams as adults. The strategy is simple; "match the hatch". When insects are emerging at the surface they are most vulnerable as prey to fish and the smart angler ties on a fly which closely resembles the emerging insect, greatly increasing his chances of a limit.

Bluegill fishermen also use wet flies which resemble aquatic insects. "Poppers" are intended to mimic insects on the surface. Man-made imitations are deadly when used correctly and when fish are actively seeking insect food.

So the lowly, seemingly insignificant and sometimes pesky aquatic insect plays a vital role in lake and stream ecology. We cuss'em, slap'em and spray'em, but fishing as we know it simply wouldn't exist without'em.



# 1975 Fish Production from Iowa Hatcheries

By Terry Jennings  
Supervisor of Fish Hatcheries

**M**ANY ANGLERS DO NOT REALIZE that Iowa has an excellent fishery resource. Good fishing can be found in every region of the state. Iowa anglers can choose from an abundance of species including most of the major freshwater sportfish—bass, bluegill, catfish, crappie, northern pike, trout and walleye.

In many instances good fishing is a product of man's manipulation rather than a natural occurrence. In Iowa there are numerous examples where fishing for a particular species would not occur if hatchery reared fish had not been stocked. Research conducted at Spirit Lake indicates the fine walleye fishing in that lake is the result of massive annual plants of hatchery produced fry and not natural reproduction. The excellent channel catfishing in most of Iowa's lakes results from stocking hatchery reared fish.

## *Iowa's Fish Hatchery System*

It is apparent that Iowa fish hatcheries can produce better fishing. Cold water hatcheries are responsible for producing the rainbow and brown trout that will be stocked into the clear, cold, spring-fed streams of northeast Iowa. Warm water hatcheries are responsible for producing species such as channel catfish and

largemouth bass that thrive in Iowa's many lakes, rivers and streams.

Clear Lake and Guttenberg are classified as part-time hatcheries because their fish production responsibilities occur mainly during the spring. The remainder of the year they serve as fish management stations. Decorah is the only station in Iowa that produces both cold and warm water fish.

## 1975 Fish Production

Fish production for 1975 from Iowa hatcheries is revealed in the following table:

Cold Water Species	Number	Weight (Lbs.)
Rainbow Trout	159,339	90,916
Albino Rainbow Trout	21,195	10,623
Brown Trout	73,387	35,685
Warm Water Species	Number	Weight (Lbs.)
Bluegill	766,282	457
Channel Catfish	649,255	13,772
Crappie (Black)	3,720	21
Largemouth Bass	748,450	180
Largemouth Bass	3,768	258
Muskellunge	4,673	461
Northern Pike	3,367,000	Unknown
Northern Pike	2,787	42
Striped Bass	80,000	228
Walleye	86,785,932	Unknown
Walleye	398,106	9,760

Approximately 237,000 channel catfish have been placed into hatchery ponds and will be grown to a larger size before being stocked in 1976. Iowa has also negotiated trades involving species we have in abundance for those we want to release in Iowa. These trades are as follows:

Five hundred thousand northern pike fry to the state of Virginia for 500,000 striped bass fry.

One million walleye fry to the state of Arkansas for 1,000 ten-inch white amur.

One million walleye fry to the state of Mississippi for wild turkeys.

The remainder of Iowa's hatchery products have been stocked into Iowa waters and are awaiting your lure.

Trout fishermen may recall that trout stocking was terminated earlier than normal in 1975. This was necessary because trout production was about 46,000 fish less than the 300,000 stocking quota. The trout shortage began in October, 1973, when brood fish failed to produce the required number of eggs. This fact coupled with abnormally high mortality of eggs and fry caused the stocking shortage.

Trout stream stocking in 1976 should be at or slightly above quota.

## Goal of Iowa Fish Hatcheries

After thorough study of scientifically collected data, fisheries management and research biologists tell hatcheries where, when, how many, what species and what size fish should be stocked to best utilize the environment and maximize returns to anglers. It is hatcheries responsibility to fill the requests with fish that are in the best possible condition. This sounds like a simple goal and it has nearly been obtained in trout production. But production techniques for warm water species such as walleye, northern pike and musky have not advanced to the point where predictable results can always be obtained. Considerable effort is being expended by this state and other organizations involved in fish culture to make warm water fish production more predictable. In the future, rearing techniques will be refined; but, until then, anglers and biologists will have to be patient when occasionally a hatchery does not supply the desired number or size of fish. Remember, Iowa fish hatcheries are dedicated to insuring you good fishing now and better fishing tomorrow.

## Conservation Officer Dies



DES MOINES— Marlowe Ray of Guthrie Center, a Conservation Officer for the Iowa Conservation Commission, died January 24, in University Hospital, Iowa City, at the age of 48.

A native of Ames, Ray was with the Commission for 22 years while serving as a fish and game officer in Adair, Audubon and Guthrie Counties.

Active in all facets of the department's fish and wildlife programs, Ray worked extensively with youths. He was constantly involved in hunter safety education courses. He served all 22 years as a director of the McMahon Wildlife school, a conservation training camp for school age groups. He was active in the Commission's teacher's camp and Education Center programs.

Ray is survived by his wife, Joyce, and two daughters, Marlys and Jewel.

## Protect Your Timber From Grazing and Save on Taxes

By Robert H. Hibbs District Forester

Woodland grazing is probably the largest threat to Iowa's forest resource (see Iowa Conservationist, Dec. 1975). Livestock will trample or eat young seedlings, compact the soil causing root destruction and erosion, and reduce the growth and vigor of established trees.

The Code of Iowa provides favorable taxation for the landowner who will protect his woodlands from destructive grazing. A landowner who currently pastures his timber might pay three to six dollars tax per acre per year. Under the Forest Reserve, this figure can be reduced to between 30¢ and 50¢ per acre per year. The Code allows any forest area greater than two acres in size, not less than four rods in width, and containing not less than 200 trees per acre to be listed as a Forest Reserve. The Code does prohibit removal (harvest) of more than one-fifth of the total number of trees in any one year.

It is the duty of the County Assessor to secure the facts relative to forest reservations. Any landowner who feels his woodland may qualify can apply at his county courthouse. For further information, contact either your County Assessor or District Forester for the Iowa Conservation Commission.

Continued from Page 5

Oats and winter wheat among the cereal grains are also used for nesting cover by pheasants. Both of these crops support relatively low nesting densities but the success rate of nests in these crops is usually high. In the past, oats was the major producer of pheasants in Iowa. This was basically because of three things: (1) large acreages of oats available (2) high success rate of nests in oats and (3) *acceptable* but not preferred nesting cover. Today oats are not an important part of Iowa agriculture. The loss of this reliable pheasant nesting cover has hurt the state's pheasant population.

Combinations of preferred plant species sometimes result in nesting cover that is superior to single species stands. These combination types utilize the best attributes of each of the plant species involved. The best combination for nesting cover is alfalfa and brome grass. Sweet clover in combination with red clover, alfalfa or brome grass is also highly desirable. A three-way combination of alfalfa, brome grass and switchgrass provides the attributes of a desirable nesting cover. Timothy and red clover in combination result in higher nesting densities than either one alone. There are other possible combinations but these are the most highly preferred.

### Management

In addition to the influence of cover type preference there are other factors which influence pheasant nesting density and success. One of the most important factors affecting nesting cover suitability is the amount of vegetation remaining standing from the previous growing season. For example, a field of timothy red clover that was not harvested the previous summer will be more attractive to nesting hens in the spring than a brome-alfalfa field from which three cuttings of hay were taken the previous year. Oats, a potential nesting cover that must be replanted every spring, presents special management needs. Fields should be seeded with at least 2.5 bushels per acre and seeding should be



Undisturbed fields of nesting cover boost pheasant production.  
Brome-alfalfa is a preferred pheasant nesting cover.



Photos by Al Farris

completed by at least April 21. By following this minimum seeding rate and date the oats will offer a cover that is tall and dense enough to attract nesting hens in the spring.

Once a suitable nesting cover is established the most critical factor affecting pheasant nesting success in that field is the amount, extent and time of disturbance of that nesting cover. For example, a highly preferred nesting area such as alfalfa will produce few if any pheasant chicks if the field was mowed late the previous summer and then mowed for hay before June 15. If the field must be cut the mowing should be delayed until after July 15.

### Summary

Nesting cover use by and hatching success of pheasants depends on several factors; the most important of which are the kinds of plants available to the nesting hen and the way these fields are managed. The combination of brome grass and alfalfa is especially preferred by nesting hens. Residual cover, 12 inches or more in height, present in the field from the previous growing season attracts hens. Fields left undisturbed by mowing or grazing throughout the nesting season produce many times more chicks than those fields which are disturbed.

Now is the time to begin planning the establishment of suitable nesting cover on your land. For free technical assistance contact the Iowa Conservation Commission.

## Free For Your Farm

Ever wonder what you can do to improve the wildlife habitat on your farm?

The Iowa Conservation Commission is willing to send a wildlife biologist out to your farm to make recommendations regarding wildlife habitat development.

There is no obligation whatsoever. After you talk things over with our biologist you may decide to help the pheasants and other wildlife feel at home again - the choice is up to you. But we'll provide all the help we can.

### Application For Technical Assistance

I am interested in having a wildlife biologist from the Iowa Conservation Commission examine my farm to make suggestions for improving wildlife food and cover at no obligation to me.

PLEASE PRINT OR TYPE

LAST NAME FIRST MIDDLE

STREET, RFD OR BOX NO.

CITY STATE ZIP

COUNTY TELEPHONE

Size of land holding \_\_\_\_\_ acres.

Directions for locating farm  
(include county and county road number)

MAIL TO:

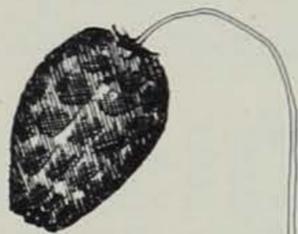
WILDLIFE SECTION  
IOWA CONSERVATION COMMISSION  
300 4TH STREET  
DES MOINES, IOWA 50319

# CLASSROOM CORNER

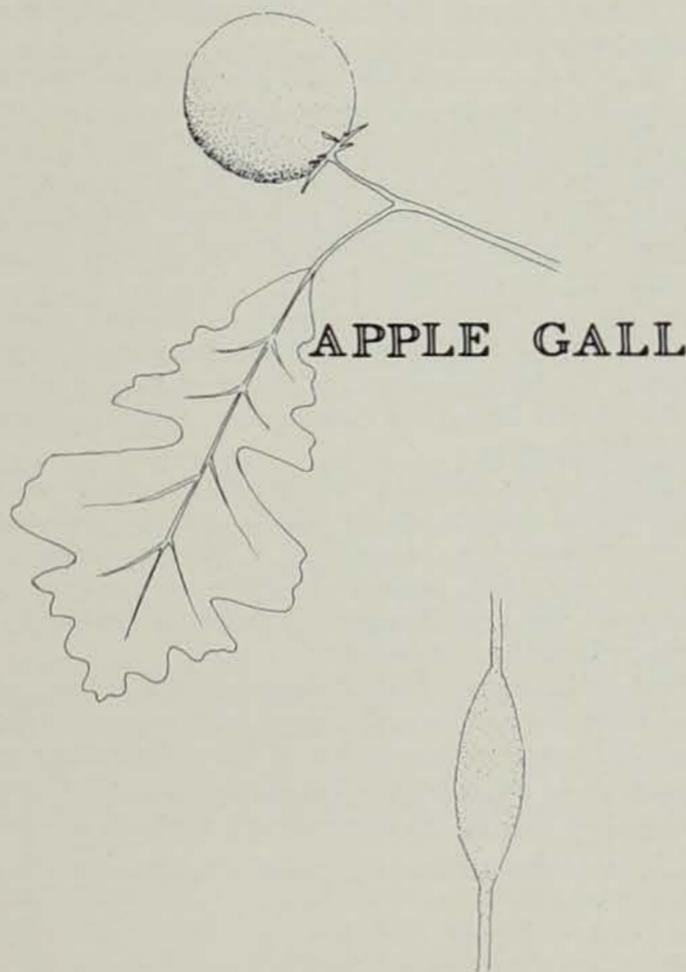
by Robert Rye  
Administrator, Conservation Education Center

NO MATTER WHAT, insects are with us throughout the year. There are some beneficial ones and some that really "bug" us.

Insect "signs" are often more apparent than the insects, but these signs usually don't include tracks as other animals. Some signs are damaged or diseased plants, secretions, fly specks, and nests. Insect homes are also clues to the presence of insects.



PINE CONE GALL



APPLE GALL

GOLDENROD GALL

Fishermen are familiar with galls, which are abnormal swellings or growths on plants. Galls are found on almost any part of a plant. They are distinctive and specific because only one organism causes a certain type of gall. Galls may be caused by bees, flies, mites, viruses or bacteria. Fishermen use their "wormy" contents as bait.

Galls may be collected and dried after placement in a killing jar. It is interesting to try and rear the insects. This can be done indoors or outdoors. A word of caution, however, for the insect coming out of the gall may not be the one causing it. Gall insects have parasites which lay eggs inside the gall and their young feed on the growing gall insect. Parasites may feed on the parasite, so you may be working with a surprise package.

Some galls that are available in Iowa are found on goldenrod, willows, and oaks.

There are two common galls that can be found on the stem of the goldenrod. One is round and one is spindle shaped. The round one is formed by a little fat grub. The spindle shaped is made by the caterpillar of a brown and white moth.

The willow-cone gall is found on the end bud of a willow twig. It is made by the grub of a small gnat. The grub stops the growth of the twig and the leaves become scale-like. These scales overlap in rows forming a cone-shaped house.

The oak apple is formed by a wasp which lays its egg on the leaf. The larva eats into the veins and secretes a substance. This causes plant material to grow in excess and makes a home for the larva.

Leafminers are insects that develop within a leaf. An egg is inserted between the top and bottom layers of a leaf. When it hatches, the young insect eats the spongy leaf tissue. Some produce blocks on the leaves. Others leave irregular twisting paths through the leaf. A careful observer can learn a great deal about the developing insect because it can often be seen when light is passed through the leaf. Leafminers are made by larval sawflies, wasps, beetles, moths and flies.

Leaf-rollers are insects or other animals that roll leaves into homes. Some use a cluster of leaves or individual leaves, but most use only part of a leaf. Most leaf-rollers are moths or butterflies and only use one kind of plant.

The paper nest of the bald-faced hornet is quite distinctive. These insects chew wood into a gray paper-like material. They construct a nest often the size of a basketball which is usually attached to a tree or to a bush. Ours at the Center has leaves clearly visible sticking out of the nest. These insects have a potent sting so if the nest is occupied stay away. If you take a nest indoors, care should be taken as it warms up — there may be some hornets still living inside.

Mud nests are made by some wasps. The nests of the "organ-pipe wasp" can be found on buildings — especially under the eaves or on the rafters of garages. They can also be found on rock out croppings. The adult wasps use these tubes as "nurseries" rather than homes. The tubes are chambered, with each compartment containing an egg and enough paralyzed insects to provide food for the developing larva.

Ground nests are used by yellow jackets and bumble bees. Many people have found these as they have mowed grass or plowed ground. Ants are also very familiar insects which use the ground as a home.

Often when bark is stripped from logs the tunnels made by bark beetles between bark and wood becomes apparent. The most fascinating of these consists of a long, usually vertical, channel in which the female lays her eggs. Radiating out from it are twisty channels gradually increasing in width. These were made by the developing larva. Dead elms can be found in large numbers and are an excellent place to study these.

Insects are an important part of our environment. Studying their signs is done at the Conservation Education Center. Many groups using the facilities believe this is a most enjoyable way to study insects.

## HUNTING WILD TURKEY

Continued from Page 6

Only two major problems have developed with turkey hunting in Iowa in what has otherwise been an extremely successful program. First, two consecutive years of extremely low hunter success in the northeast zone indicated turkeys in the Yellow River Forest area were not nearly as numerous as in southern Iowa, in spite of an abundance of apparently excellent habitat. These turkeys are offspring of birds imported from North Dakota and are now thought to be poorly adapted to Iowa forest conditions. Turkeys stocked in southern Iowa came from the oak-hickory hardwood forest type in Missouri, similar to that found throughout Iowa, and apparently had little trouble adapting after they were transplanted. For this reason, the hunting zone in northeast Iowa will be closed in 1976 and a series of 10 sites will be stocked with birds imported from Missouri. In 3 to 5 years several counties may be opened to hunting if these releases are successful, and should provide a much better opportunity for hunters to bag a turkey in northern Iowa.

The second problem that developed has been the tendency for hunters to congregate on state forest lands and ignore surrounding private lands, even though turkey numbers apparently are as high there. Calling a gobbler is a solitary type of hunt, and one which can be ruined by too many people wandering in the woods or calling the same bird. Yet nearly two-thirds of the hunters in the southern zones have attempted to hunt state forest lands, which comprise 20 percent or less of the total timber available. Crowding is especially severe in Stephens Forest, and success-rates have apparently declined as a result of hunters interfering with each other. Because it is impossible to zone state and private lands separately, the number of licenses issued has had to be held below the number that turkey populations could support to prevent massive interference problems. Preliminary scouting by hunters seeking permission to hunt on private land could alleviate the problem and may result in increased license quotas in the future, but the situation will have to be corrected by hunters themselves.

Looking ahead, a rosy future is expected for Iowa turkeys and turkey hunters. The stocking program is expected to be completed by next winter, and in a few years most of the southern, northeastern and western (loess hills) portions of the state could contain huntable turkey populations. And a few other areas which may not support enough turkeys to justify a hunting season could contain a few birds for sightseeing purposes. Hearing a turkey gobble on a wooded hillside in the spring or seeing a winter flock of these majestic birds crossing a field is a thrill that should be available to as much of the state as possible. Turkey hunters can look forward to increased license quotas and expanded hunting zones as turkey populations increase. Two new zones were added this year to take advantage of a natural movement of wild birds from northern Missouri into forested river bottoms in southern Iowa, and populations around several release sites should soon be capable of sustaining a restricted hunt. Hopefully many more Iowans will soon get a chance to try for what may be our premier game animal.



## Help For Survivors

*GUY COHELEACH, internationally famous wildlife artist, has donated a number of limited edition prints of his wild turkey painting to a national foundation designed to provide benefits to the families of wildlife officers who are killed or die in the line of duty.*

*The Coheleach prints (page 6) will be used to help raise funds for the recently-formed National Foundation for Conservation and Environmental Officers.*

*The idea for the Foundation was conceived after the shooting of two South Carolina conservation officers in October 1974. It is estimated that there are in excess of 100 families of state wildlife employees who have lost the head of the family through a service-connected death. When federal and private organizations are considered as well, it is estimated the number of families concerned may exceed 200.*

*Under the initial direction of Joseph W. Hudson, chairman of the South Carolina Wildlife and Marine Resources Commission, and James C. Rikhoff, former director of public relations of Olin's Winchester Group, the Foundation was incorporated in the District of Columbia.*

*The family of any wildlife employee who has died or been killed in a job-related activity will be eligible for financial assistance from the Foundation. Assistance is not restricted to state employees, but will include federal and private wildlife organizations. The Foundation will provide application forms for financial assistance upon request.*

*Contributions are now being accepted for the Foundation, and are tax deductible. All contributors of \$100 or more will receive the special limited edition print of the wild turkey by Guy Coheleach. Send to National Foundation for Conservation and Environmental Officers, 44 Main Street, Clinton, N.J. 08809.*

# IOWA FISHING

1976 REGULATIONS

## 1976 Iowa Fishing Seasons and Limits -

March 1, 1976 to  
February 28, 1977

Kind of Fish	Inland Waters of the State				Boundary Rivers
	Open Season	Daily Limit	Poss. Limit	Min. Leng.	
Rock Sturgeon	Continuous	1	1	None	Same as inland waters.
Paddlefish*	Continuous	2	4	None	Same as inland waters.
Perch, Yellow	Continuous	25	50	None	Same as inland waters except no catch or possession limit.
Trout	Continuous	5	10	None	Same as inland waters.
Catfish	Continuous	8	16	None	Continuous open season, no catch or possession limit.
Largemouth Bass	Continuous	5	10	†None	Largemouth and Smallmouth Black Bass: Continuous open season. Aggregate daily catch limit 10; aggregate possession limit 20.
Smallmouth Bass	Continuous	5	10	†None	Continuous open season. Aggregate daily catch limit 10; aggregate possession limit 20.
Walleye and Sauger††	Continuous	Combined Walleye and Sauger 5	Combined Walleye and Sauger 10	None	Continuous open season. Aggregate daily catch limit 10; aggregate possession limit 20.
Northern Pike††	Continuous	3	6	None	Continuous open season. Daily catch limit 5; possession limit 10.
Muskellunge or Hybrids††	Continuous	1	1	30 inches	Same as inland waters.
All other fish species	Continuous	None	None	None	Same as inland waters.
Frogs (except Bullfrogs)	Continuous	48	96	None	Same as inland waters.
Bullfrogs ( <i>Rana Catesbeiana</i> )	Continuous	12	12	None	Same as inland waters.

\*Snagging of paddlefish will be open on the Iowa boundary waters of the Mississippi River and Missouri River; Missouri River oxbow lakes which are open to the river; Iowa River from the lower dam at Iowa City to the Mississippi River and the Des Moines River from the hydro-electric dam at Ottumwa to the Mississippi River.

†A minimum length limit on largemouth and smallmouth bass of 12 or 14 inches shall apply on selected lakes as approved by the Commission and posted as such.

††Open season for walleye, sauger, muskellunge or hybrid and northern pike in the natural lakes of Dickinson and Cerro Gordo Counties shall be May 1, 1976 to February 28, 1977. All other waters have a continuous open season.

FROM THE

## Warden's diary

By Rex Emerson  
Law Enforcement Supervisor

THE COURT SYSTEM THAT WE HAVE is a long way from being perfect. However, I don't know of a better one anyplace in the world. It has been improved since the old justice of the peace days. During the days of the justice of the peace (J.P.) system each township could have such a judge. They were elected by the people, and usually most of them were pretty level headed individuals. There were no real qualifications for the job. Some of them didn't ask for the position and found out the next morning after an election that their name had been written in and they were all at once a judge.

Many times the public thought the law enforcement officers shopped around for the J.P. who would be the best for the officer. During my twenty years as an officer the only thing I tried to do was to send a violator to a judge who would hold a good court. A person should know he is in court, and he should have a fair trial or hearing. Working in many parts of the state, the only way we had to find out if a J.P. held a good court was to try him once. That is what this story is all about—some of the J.P. courts that I have been in as the arresting officer.

One man was taken to a J.P. in a small town after shooting a woodcock out of season. His two friends went along. We all stood around the dining room table while the judge, dressed in bib overalls, held court. He looked for a long time at the information sheet that I had filled out and then asked that I read it. At first I thought it was my handwriting that was causing the problem. When the printed law in the book was presented to the judge it was then discovered he was illiterate.

There was the case when the defendant had asked for a change of venue to another court. The J. P. said, "He got a change of vengeance on me." Maybe he did use the right word.

In one county where I worked they only had one J.P., so there was no choice. He was an old man who couldn't hear much of anything without his hearing aid. Every time a defendant wanted to tell his side of the story the judge's hearing aid would fall out.

While enroute to town with a violator one day in December I called the sheriff's office on the radio and asked if they would locate the J.P. They found him in a department store all decked out in a Santa Claus suit, and that is the way he held court, false beard, red suit and candy bag. After he levied a fine, he offered the defendant a candy cane.

There was the case when the defendant had plead "not guilty" and a date had been set for a hearing before the J.P. It was a case where there was no physical evidence to bring into court, just the defendant's word against mine. The defendant was a good friend of the judge. I was wondering how it would come out as I arrived at the courthouse a little early the day of the hearing. When the J.P. arrived he said, "Mama told me that man is guilty, or you wouldn't have him in here."

One night we had court in the living room of a farmhouse while the judge's large dog chased a cat from room to room. That was very distracting, and so was the big spider that was spinning its web on the window shade behind and just above the judge's head.

The J.P. who always opened court by asking the defendant, "What are you guilty of?" didn't make the defendant feel as if he had much of a chance.

The kindly looking old gentleman who was always well dressed when he held court and had his dog lying on the floor beside his desk gave the impression of being an old softy. Those thoughts soon left the defendant's head when the dog would move and the "nice old man" would whale the daylight out of him with a riding crop.

It never looked good for the J.P. to ask the officer, "What do I do now?" or call the officer into the next room to ask how much the fine should be.

A cute little lady who had actually won a beauty contest went to court for fishing without a license. She was dressed (almost) in short shorts. After her plea of guilty, the J.P. looked at her over the top of his glasses for a long time and then said, "I don't think I'll fine you. I think I'll just keep you!"

Well, the old days of the justice of the peace courts are gone. We now have a magistrate system. The judges are well qualified. It's called a "unified" court system. However, it's often different in each county. So it seems like we have 99 "unified" systems.

Photo by Jerry Leonard

