DECEMBER 1970

IOWA CONSERVATIONIST

DECEMBER, 1970

IOWA CONSERVATIONIST

CONTENTS

About the Cover . . .

Enjoying a wintry view of the Mississippi River from Pikes Point State Park.

Iowa Conservationist

Vol. 29 December, 1970 No. 12

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, mail items) to the above address.

Subscription price: two years at $2.00
four years at $3.50

Second class postage paid at Des Moines, Iowa

COMMISSION MINUTES

October 6, 1970

Commissioner Les Licklider paid tribute to the late Frank Starr, fish and game conservation officer at Storm Lake.

The Commission approved the following policy in regard to all weather dust free surfacing of roads: All State, county and municipal recreational development plans or project proposals submitted to the State Conservation Commission for approval shall provide for all-weather dust free surfacing to all roadways and parking lots in those areas or portions of the recreational area where dust may cause discomfort or inconvenience to the recreational user. A complete explanation for the elimination of the all-weather dust free surface referred to above must be included in the development plan written report on areas where the additional cost of surfacing cannot be justified due to anticipated low vehicular traffic, roads subject to periodic flood damage, or designated, posted, primitive areas.

The following County Conservation Board Land Acquisition Projects were approved: Appanoose County, Moravia Recreation Area, one half acre; Bremer County, Seven Bridges Recreation Area, 33 acres; Cerro Gordo County, Kuhn Wildlife Area, 78 acres; Des Moines County, Luckenbill Woods, 32 acres; Polk County, Yeader Creek Lake Park, 1.7 acre.

Approved a maintenance and management agreement with Scott County for LeClaire Access.

Approved for submission to the Bureau of Outdoor Recreation the following Land and Water Conservation Fund Projects: Winneshiek County Conservation Board, Meyer Lake, development; Black Hawk County Conservation Board, Hickory Hills Park, development; Worth County Conservation Board, Ochee Yahola Park, development; Page County Conservation Board, Pioneer Park, development; Linn County Conservation Board, Pinicon Ridge Park, development; Buffalo Creek Park, development; Wakema Park, development; Matsell Bridge Game Management Area, development; Muscatine County Conservation Board, Salisbury Bridge Recreation Area, development; Town of Colfax, Community Park, acquisition, 24 acres; Town of Pleasant Hill, Doan's Park, development; Hamilton County Conservation Board, Project Agreement Amendment Request.

Approved an agreement with Lake View for water service to Thirty Acres Camping Area.

Director was instructed to contact the University of Iowa in connection with a short course in sewage lagoon operation in cooperation with the Iowa Highway Commission for park and recreational personnel.

Approved the Five Year State Park and Institutional Road Plan.

Approved a management agreement with Storm Lake for the Boy Scout Point Area.

Landowners—Iowa Needs Your Help!

Iowa—land of plenty—but not necessarily forever. Her vital soil, perhaps the richest in the world, needs protection from wind and water erosion. Her wildlife resources rapidly dwindle in areas where protective ground cover is burned, bulldozed or washed out. Iowa needs your help, landowner, and she needs it now.

Plant Trees, Shrubs, Wildlife Cover

Your help in the restoring of trees and wildlife plantings need not reduce cropland production. Planting trees and cover around ponds, fence rows and waste areas can save you money in reduced soil erosion, as well as provide you and your family with beautiful recreational areas.

The Cost-Sharing Program

Cost-sharing assistance can be obtained through the ACP Program of the Agricultural Stabilization and Conservation Service. In addition, free forestry service is provided by Conservation Commission Foresters from these offices:

1. Elkader, Box 662, 52043
2. Charles City, Box 4, 50616
3. Marshalltown, P.O. 681, 50158
4. Anamosa, Box 207, 52205
5. Muscatine, Box 387, 52761
6. Fairfield, Box 568, 52556
7. Chariton, 1027 N. 8th Street, 50049
8. Adel, Box 175, 50003
9. Red Oak, Box 152, 51566
10. LeMars, Box 65, 51031

These District Foresters can assist landowners in deciding the kind of trees to plant and in determining the cost sharing available under the Agricultural Conservation Program (this state-grown stock may be used for erosion control and wildlife planting, but not for windbreak or ornamental use).

These agencies recognize the tremendous need and take the major steps in the production and planting of trees and wildlife cover. But the final, most important step must be taken by you, the landowner. Join the campaign to save Iowa's soil and wildlife resources. Fill out this form and mail with money order or check to the State Forester, Iowa Conservation Commission, 300 Fourth Street, Des Moines, Iowa 50319. Be a conservationist—do it today.

SEEDLING TREES AND SHRUBS AVAILABLE FOR DISTRIBUTION DURING SPRING OF 1971

SPECIES	AGE CLASS	AVG. HT. IN INCHES	250	500	750	1,000
Austrian Pine	2-0	6-10	$6.25	$12.50	$18.75	$25.00
Jack Pine	2-0	6-12	6.25	12.50	18.75	25.00
Ponderosa Pine	2-0	6-10	6.25	12.50	18.75	25.00
Red Pine	3-0	6-12	6.25	12.50	18.75	25.00
Scotch Pine	2-0	6-12	6.25	12.50	18.75	25.00
White Pine	3-0	6-10	6.25	12.50	18.75	25.00
Norway Spruce	3-0	6-12	6.25	12.50	18.75	25.00
Green Ash	1-0	6-12	5.00	10.00	15.00	20.00
White Oak	1-0	6-12	5.00	10.00	15.00	20.00
Black Walnut (seedlings)*	1-0	6-12	6.25	12.50	18.75	25.00
Multiflora Rose	1-0		5.00	10.00	15.00	20.00
Dogwood	1-0		5.00	10.00	15.00	20.00
Honeysuckle	1-0		5.00	10.00	15.00	20.00
Ninebark	1-0		5.00	10.00	15.00	20.00

SPECIAL WILDLIFE PACKET.....$5.00 _____

The SPECIAL WILDLIFE PACKET contains 250 plants including 50 evergreens, 50 ninebark, 25 honeysuckle, 50 dogwood, 25 multiflora rose and 50 other plants beneficial to wildlife. Illustrative suggestions for odd areas and farm pond plantings will be furnished with each order.

* Maximum order for black walnut seedlings will be 1,500 per landowner. A special minimum of 50 has been set for this species with multiples of 50 thereafter until the maximum is reached in order to supply as many landowner's as possible.

Special Note: The nursery reserves the right to substitute species of a suitable type if a shortage occurs.

TABLES OF PREPAID SHIPPING AND HANDLING (CHARGES) COSTS

NO. OF PLANTS	SHIPPING COST	NO. OF PLANTS	SHIPPING COST	NO. OF PLANTS	SHIPPING COST	NO. OF PLANTS	SHIPPING COST
250	$ 1.40	2,750	$ 5.75	5,250	$ 10.85	7,750	$ 14.90
500	1.90	3,000	6.05	5,500	11.15	8,000	15.40
750	2.90	3,250	6.35	5,750	11.45	8,250	16.40
1,000	3.45	3,500	6.65	6,000	12.05	8,500	16.95
1,250	3.95	3,750	6.80	6,250	12.35	8,750	17.45
1,500	4.10	4,000	8.15	6,500	12.50	9,000	17.60
1,750	4.40	4,250	8.65	6,750	12.80	9,250	17.90
2,000	4.70	4,500	9.65	7,000	13.10	9,500	18.20
2,250	5.30	4,750	10.20	7,250	13.40	9,750	18.80
2,500	5.60	5,000	10.70	7,500	13.55	10,000	19.10

Shipping charges for wildlife packets can be figured on the basis of 250 plants per packet.

FROM THE IOWA STATE FOREST NURSERY STATE CONSERVATION COMMISSION
IN COOPERATION WITH THE U.S. FOREST SERVICE

APPLICATION FOR OBTAINING TREES FOR ESTABLISHING OR IMPROVING EXISTING FORESTS, EROSION CONTROL OR WILDLIFE COVER

ORDER NO.
.....
LEAVE BLANK

INSTRUCTIONS FOR COMPLETION OF ORDER

1. Mail your application and remittance to the State Forester, State Conservation Commission, 300 - 4th Street, Des Moines, Iowa 50319. Any questions concerning your order should be directed to him. After April 1st address all correspondence to the Nursery Forester, State Forest Nursery, 2404 South Duff, Ames, Iowa 50010.
2. Payment for the entire order must accompany order blank. Make a check or money order payable to the Iowa Conservation Commission. (Cash will not be accepted.) Your cancelled check will be your receipt.
3. Claims for adjustment due to shortage or delay in shipment must be made within 15 days from the receipt of shipping notice.
4. No order will be processed for less than 500 plants except:
   a) One wild life packet
   b) Walnut in multiples of 50.

DO NOT ORDER LESS THAN 500 IN MULTIPLES OF 250

GENERAL SHIPPING INFORMATION
(Please Print)

Landowners Name _____

Address _____

Phone _____

☐ Ship Prepaid. *(If shipping address is different from Landowner's, enter below.)*

Name _____

Address _____
Street or Rural Route City Zip Code

☐ When notified by the Nursery, I will call for stock.

KIND OF TREES OR SHRUBS WANTED	AGE CLASS	NUMBER WANTED	COST
Please indicate an alternate choice of species if your 1st choice is unavailable.			
		Subtotal	
		3% Sales Tax	
		Prepaid Shipping Charges	
		TOTAL COST:	

APPLICATION INFORMATION

ORDER SUBMITTED BY:
PLEASE CHECK BOX

- ☐ Soil Cons. Service - SCS
- ☐ ASCS Office
- ☐ County Extension Dir. - CED
- ☐ Conservation Officer
- ☐ District Forester
- ☐ Other _____

TYPE OF PROGRAM

- ☐ Agri. Cons. Program - ACP
- ☐ Purchase Order
- ☐ Other _____

DO NOT ORDER LESS THAN 500 IN MULTIPLES OF 250

THE LEGAL PLANTING LOCATION AND YOUR SIGNATURE IS REQUIRED

These trees are to be planted in _____ Quarter, Section _____, Township _____, Range _____, in _____ County, Iowa.

I agree to plant and use the trees ordered upon the described property for establishing or improving existing forests, erosion control, game or water conservation according to restrictions noted below. I agree NOT to re-sell or give these trees away with roots attached to any person, firm, corporation or agency nor to plant any of them as windbreak, shade ornamental, or street trees. All areas planted with state stock must be protected from fire and domestic livestock grazing. I agree to forfeit for destruction any trees planted or used in violation of the above restrictions.

SIGNED: _____

MAIL ADDRESS - RFD: _____

CITY: _____

STATE: _____

ZIP CODE: _____ PHONE NO.: _____

PURCHASE ORDER

☐ YES ☐ NO

ORDER NO.
.....
LEAVE BLANK

DO NOT ORDER LESS THAN 500

From four inches to this in only four months.

Operation Catfish Crib

It certainly seems logical that all Iowans have seen a corn crib or heard of cribbing corn. But if an individual were to mention cribbing catfish he would surely receive some quizzical stares from his audience.

Actually "operation catfish crib" is an experimental method of raising channel catfish carried out by Iowa Conservation Commission fishery technicians. The experiment has proven the feasibility of raising small fingerling catfish to almost frying pan size in only four months.

You are probably wondering how a four inch channel catfish can be converted into a good sporty size fish in such a short period of time. Theoretically, the operation is based on the same method a cattleman feeds beef. While cattle are closely quartered in a feed lot the catfish are placed in a 4 x 4 x 8 foot rectangular cage container which is anchored in a lake. Once the fish are in the so-called "crib" the only basic labor insofar as tending the fish is a daily feeding of commercial fish food.

State fishery personnel constructed the cribs with 2 x 4 inch framework which are enclosed with ½ inch hardware cloth. In order for the cage to be buoyant a styrofoam collar was attached around the top. Last but not least, a plyboard lid was hinged to the top preventing the fish from jumping out.

Operation catfish crib was tested at four different localities during 1970—Browns Lake, Lake Wapello, Clear Lake and Lock Ayr Lake near Mount Ayr. After state fishery officials finished analyzing the final results, the program proved to have great potential for the future with many remarkable statistics. For example, here is what occurred at Lake Wapello in Davis County.

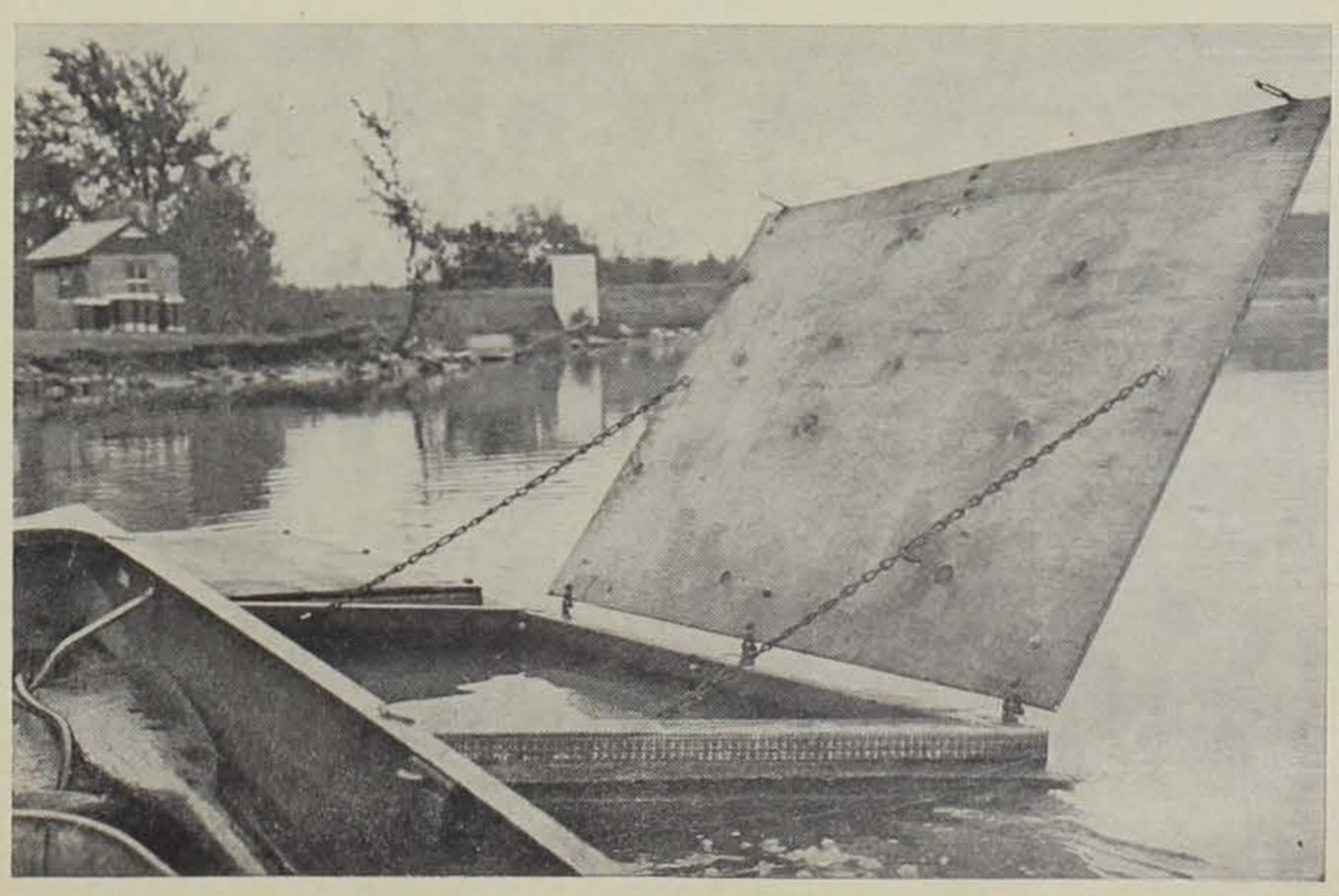
On May 28, 1970, 250 channel catfish, averaging four inches in length and with a total weight of 12 pounds, were placed in a Lake Wapello crib. The catfish were fed approximately three percent of their total weight daily. Fishery personnel checked their progress every 14 days for a routine weight sampling and when necessary recalculated the fishes feed formula.

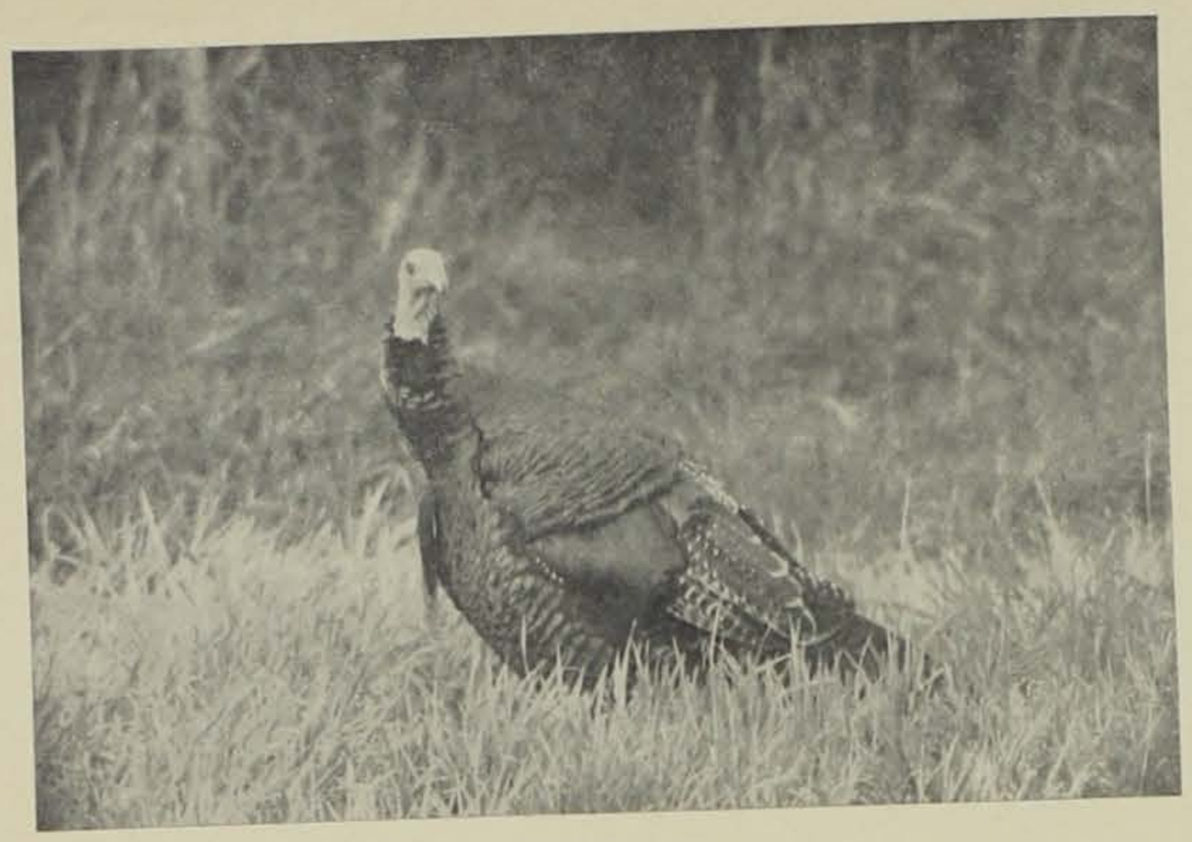
On September 2, the remaining 247 catfish in the cage (only three died) weighed an amazing 132 pounds. Another weight check on October 11 showed that each catfish weighed approximately one pound and averaged 13 inches in length. In approximately four months the fish increased from a mere total of 12 pounds to a whopping 250!

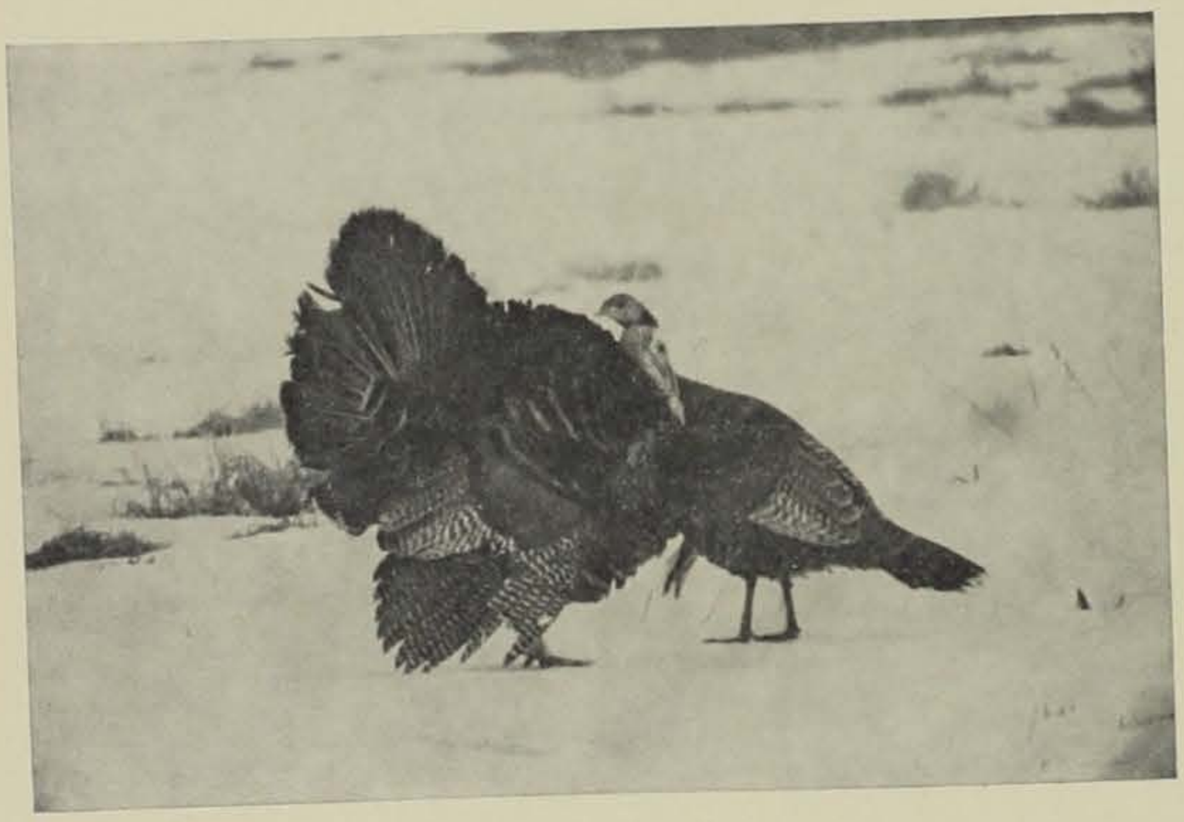
How much cost was involved is a likely question. A final analysis showed that each catfish consumed approximately 1½ pound of feed to attain one pound in weight. This figures out to 14c per fish which is quite economical.

Basically, the concept of the program is to raise catfish to an 8-10 inch size before release into various state and county lakes. Normally catfish would be stocked as fingerlings which have a slower growth rate and a higher mortality rate due to predation and other factors. This large size when stocked enables the catfish to avoid being caught by predatory fish, such as bass and crappies. This higher survival rate should create better catfishing for YOU, the angler, when the fish grow to a larger size in the lake. An immediate benefit of this program results from the fact that some of the catfish when released—because of differential growth that occurs in the cribs—are 12 to 14 inches and ready for the "frying pan" when stocked.

This program will be initiated in the future to further boost catfish populations primarily in county lakes. Through a cooperative effort, the Conservation Commission will furnish County Conservation Boards with fingerling catfish and technical assistance while county personnel will be responsible for the daily care of the fish. It is a very beneficial supplementary stocking method designed to provide almost instant angling for Iowa's most sought after game fish.







Eastern

WILD

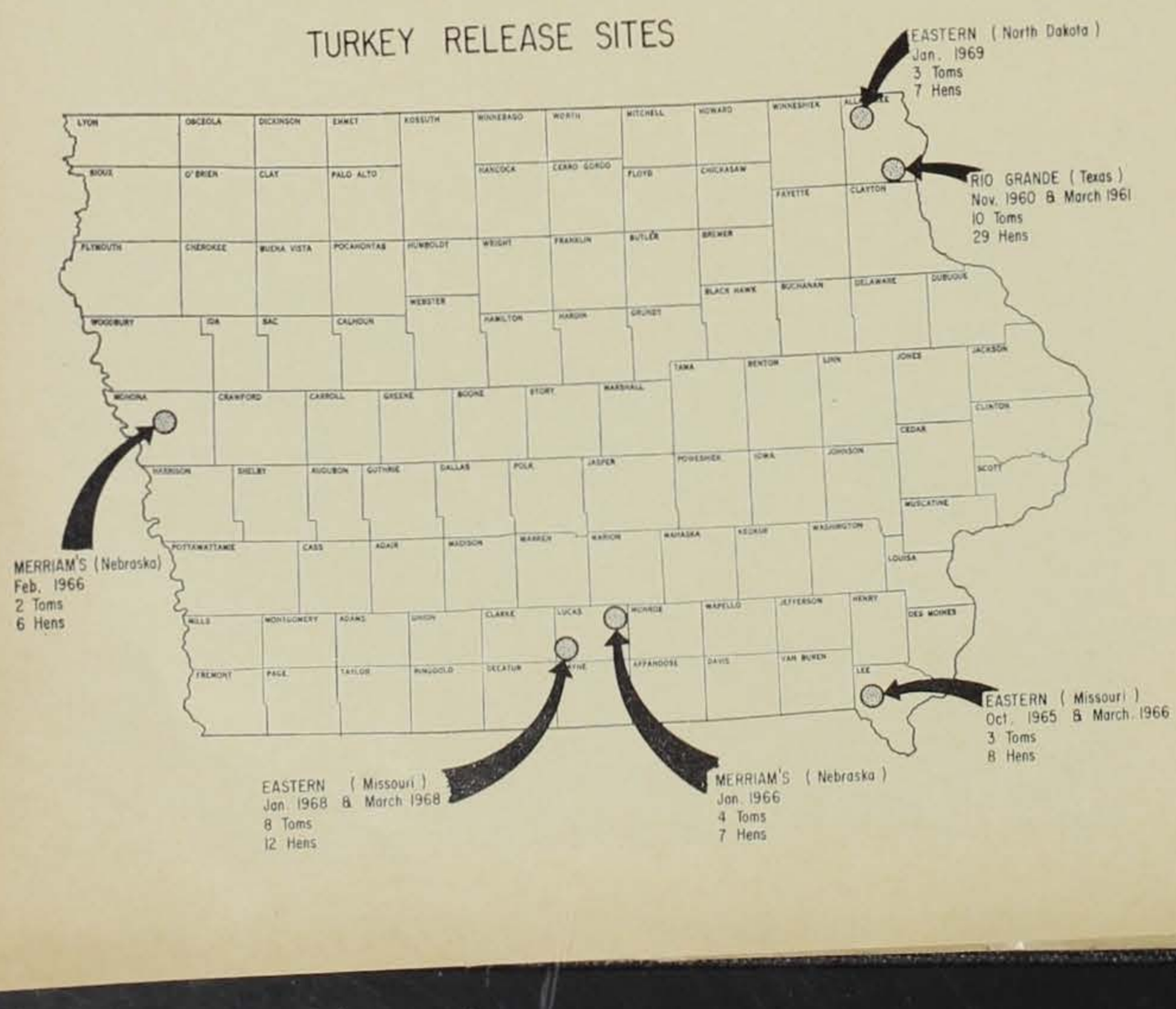
The thrill of seeing a brood of wild turkeys or hearing a gobble in the spring stirs even the strongest of hearts. This regal bird, once considered for the honor of the national symbol and regarded as the ultimate game species, has been extinct in Iowa since the early 1900's. Efforts by the State Conservation Commission during the past 9 years have brought this bird back in some parts of Iowa. An encounter with a wild turkey is still rare for most people but the turkey is doing well in it's native habitat. It is now up to the birds to increase their numbers and with help from the Conservation Commission, to expand into surrounding habitat. In the near future, birds will be trapped from areas were they are plentiful and transplanted to areas where no turkeys exist. Beyond the trapping period are possible hunting seasons in areas where the birds have reached the carrying capacity of their area and the surplus birds can be safely harvested.

Population estimates are made by contacting residents in the release site area and obtaining reports on turkey sightings. These reports are plotted on a map, duplications are discarded, and a final population estimate is made. Aerial and ground surveys are also made to obtain data on population size.

The first release of wild turkeys in Iowa was made during the winter of 1960-61 in the Yellow River Forest, Allamakee County, in northeastern Iowa. Ten gobblers and 29 hens of the Rio Grande subspecies were obtained from Texas. Their production was good for several years and they began to distribute themselves throughout the available habitat. Recently however, their numbers have not increased beyond about 100, and the stocking of this subspecies is not considered much of a success. Although disappointing the work continued.

Two other subspecies were considered for stocking in Iowa. The Eastern and Merriam's turkeys. The Merriam's was considered because they had been successfully stocked in Nebraska and South Dakota. The Eastern which is native to Iowa and considered to have the best chance at success was being stocked in Missouri. Steps were taken to obtain birds of these two subspecies from other states to evaluate their potential in the habitat available in Iowa.

TURKEY RELEASE SITES



Strain Shows Great Promise

By Lee Gladfelter
Game Biologist

TURKEYS — on the rise

The following explains the results to date:

Stephens State Forest—Merriam's

In late January, 1966, 11 wild turkeys of the Merriam's subspecies were successfully released in the Thousand-Acre Unit of the Stephens State Forest, Lucas County, in south central Iowa. This release consisted of four juvenile toms, two adult hens and five juvenile hens. These birds were wild-trapped in western Nebraska by the Nebraska Game Commission.

Reports of brood production since the release are not very encouraging. At least two broods, possibly three, were reared in 1966, only one verified in 1967, two in 1968, and none reported for 1969. There have been several reports of sightings of small numbers of birds (up to eight in one flock), but nothing compared to the flocks of 30 and 35 reported from other stocked areas. The population has not changed much since 1966 and the latest winter estimate puts the flock of Merriam's at around 20 birds.

Monana County—Merriam's

In February, 1966, eight Merriam's wild turkeys were released in the heavily wooded hills near Castana in Monona County, west central Iowa. These two adult toms and six juvenile hens were wild-trapped by the Nebraska Game Commission in the western part of the state.

Brood production from this release of Merriam's has also been poor, and duplicates the poor success of the Merriam's in the Stephens State Forest. There were no verified reports of broods in 1966 or 1969 with one brood reported in both 1967 and 1968. The population has not shown any rapid increase during the past 4 years with winter estimates ranging from 12 birds in 1966-67 to 15-20 birds through 1969-70. The largest single flock reported was 12 turkeys sighted about 1 mile from the release site in 1967. Some sightings of smaller flocks have been received during the 4 years since the release but little noticable increase in population or distribution has been detected.

Shimek State Forest—Easterns

During the winter of 1965-66, 11 wild turkeys of the Eastern subspecies were released in the Shimek State Forest, Lee County, in southeastern Iowa. The release consisted of three toms and eight hens that were wild-trapped in Missouri by the Missouri Department of Conservation.

This stocking venture is one of the great success stories in the restoration of wild turkeys in Iowa. At least two broods of turkeys were reared in 1966, four in 1967, at least four in 1968, and possibly as many as 12 in 1969. Large winter flocks have been seen every year, since 1966 with some flocks of 30-35 birds being sighted during the winter of 1969-70. Population estimates as determined from sight records indicate that the population in the Shimek State Forest has been continually increasing. Winter estimates for the turkey population are: 1966-67, 49-50 birds; 1967-68, 80-90 birds; 1968-69, 100-125 birds, 1969-70, 150-175 birds!

The Shimek State Forest now contains a large enough turkey population to carry out step number two of the turkey restoration program. That is the trapping and transplanting of wild birds to other parts of the state where suitable habitat exists for turkeys (3,000-5,000 acres of continuous hardwood forest stands).

Stephens State Forest—Easterns

During January, March, and October, 1968, 20 Eastern wild turkeys were released in the Whitebreast Unit of Stephens State Forest, Lucas County, in south central Iowa. Eight adult toms, seven juvenile hens, and five adult hens were obtained from Missouri for this release site in northeastern Lucas County.

Brood production was apparently poor the first year with only one, possibly two, broods reported during the summer of 1968. However, production was very good during 1969 with at least five broods reported in the release area. The population has been increasing with winter estimates for 1968-69 at 20-30 birds and for 1969-70, 60-70 birds. A large flock of 25-30 turkeys was sighted several times in the release area during the winter of 1969-70. Initial reports indicate that this is indeed a successful stocking and we can expect to build up a good population of turkeys in south central Iowa.

Upper Iowa River—Easterns

The most recent attempt to re-establish turkeys in Iowa was the release of 10 Eastern wild turkeys in January, 1969, along the Upper Iowa River in Allamakee County, northeastern Iowa. One juvenile tom, two adult toms, two juvenile hens, and five adult hens, were obtained from the North Dakota Game Department.

Results of this release have been encouraging to date. Nine of the original 10 birds survived the first winter. At least three broods, possibly four, were reared in 1969, but brood size was small with four poults being the largest brood reported. The hatching season was late presumbably because of a very wet spring and the stress to the birds of being released in a new environment just before the breeding season. A sighting of 15 turkeys was made in March, 1970, in the Upper Iowa River Area. This would confirm that some poults did survive the winter and that the flock has increased during the first year in the new environment.

What's in the Future

The evaluation of the success of three subspecies of the wild turkey in Iowa is almost completed. The results show that the Eastern wild turkey is the subspecies adapting best to the habitat in Iowa. Within the next year the Conservation Commission will begin a trapping and transplanting program to release Eastern turkeys in other areas of the state where suitable habitat exists.

Following completion of the trapping program the third step in the turkey restoration program will begin. This will be an open hunting season to harvest surplus birds in areas where the populations are good. Such a season would probably be a spring gobbler season with a limited number of licenses issued on a drawing basis. Turkey hunting provides a great deal of recreation at very little expense to the turkey population. (Most states indicate very low hunter success). Because of his keen senses and secretive habits, the turkey is an exciting and challenging quarry. A hunting season is in the future with the time being controlled by the success of turkey production in several key areas of the state.

In the meantime turkeys will continue to be admired by those individuals lucky enough to catch a glimpse of this secretive bird. Some will take camera and telephoto into the woods with the hope of photographing a strutting gobbler or newly hatched brood of turkeys feeding in the early morning. Turkeys run deep in our pioneer heritage and through the efforts of the Conservation Commission and the cooperation of the public, turkeys have returned to the forest scene in Iowa.

Wildlife, Environment depend on YOU

Courtesy the
Wildlife Management Institute
Washington, D. C.

The composition and condition of fish and wildlife populations serve as a barometer of the quality of the environment for man, because he too must have clean water, fertile fields, and healthy forests.

Nearly every wild fish, bird or mammal has a comparatively narrow range of environment elements that determines its survival. These may be divided broadly into food, water, and cover. But, every species' need for each of these essentials differs to some degree from those of others.

Some desert animals, like the kangaroo rat, require little or no obvious water supplies; they have become adapted through evolution to obtain their moisture requirements directly from plants. At the other extreme, waterfowl and aquatic mammals, like the muskrat and beaver, need an abundance of water—not only for drinking but as part of their cover requirements and to promote the growth of their essential foods.

Climate, topography, and geology in a given area are basic influences on the composition of the plant community, and the nature and abundance of the local plants, in turn, govern the kinds of wild animals that the area can support.

Man-made changes in the environment need not be destructive of wildlife in general, although they may alter radically the composition of the wildlife population. Felling an isolated woodlot and replacing it with corn, for example, will eliminate gray squirrels but may improve conditions for pheasants. Flooding the entire cornfield would drive out pheasants but create useful habitat for ducks and muskrats. Altering or maintaining the environment to favor the needs of certain wild species, in fact, is a basic technique of wildlife management.

Man—a major environment factor

Some environmental changes, however, may be extremely damaging to all wildlife. Excessive pollution, repeated uncontrolled forest fires, and farming and forestry practices that destroy soil fertility and the diversity of the plant community can create wildlife deserts.

When the balance between wildlife and its habitat is recognized, it is possible to understand why some species that never were hunted extensively became extinct while others that have been hunted intensively are among our most abundant species. The white-tailed deer, for example, is many times more abundant today than it was in 1900, and in most places more numerous than in 1600. Few of the birds and mammals listed as rare and endangered by the U. S. Bureau of Sport Fisheries and Wildlife ever were hunted. Most are victims of pollution, landfilling and clearing and other massive man-made environmental changes that have destroyed one or more essential elements in their habitat.

The transformation of America from wilderness to an urban-dominated landscape has brought great changes in the composition of the native wildlife. Species like the woodland caribou and ivory-billed woodpecker, which require habitats supplied only by wilderness, inevitably declined. But their places usually were taken by other species better adapted to an envionment shaped by man, like the starling, not always as well liked by man.

When desirable wildlife begins to disappear from a given area, in spite of legal protection, it is an indication that something is wrong with the environment. And the effects on human beings may extend far beyond the loss of esthetic and recreational values.

The basic needs of wildlife are essentially the same as those of man. Most species of wildlife are products of a clean, fertile, and productive environment. They must have adequate food, clean water and protection from the elements if they are to survive. So must man.

Wildlife needs variety in its habitat in order to exist. So, too, does man, but perhaps on a larger scale.

Even the most urban-oriented citizen, who rarely ventures from the asphalt and concrete of modern Metropolis, needs a constant supply of uncontaminated water, meat from ranches and rangelands, produce from farms, fish from seas and estuaries, and paper pulp from forests. Although he may not think of them in such terms, these far-flung natural and cultivated areas are essential parts of the habitat of modern man.

The lands and waters that produce these commodities also harbor the bulk of our wildlife, and their capacity to support fish, birds and mammals is a good indicator of their capacity for meeting the basic needs of man.

Wild lands have human values

Most modern Americans are only beginning to recognize their close bonds with the natural world. A sign of this is found in changing attitudes toward swamps, marshes, and tidal estuaries. Until recently, these wetlands, cherished only by sportsmen and naturalists, generally were considered worthless until drained or filled. Unfortunately too many people still consider that their highest economic use is to serve as dumping grounds for the solid and liquid wastes of cities and industries.

The effects of this negative attitude have been apparent to sportsman and wildlife scientists for many years. Marshes that once teemed with songbirds, shorebirds, waterfowl and a variety of mammals, their waters clouded by noxious bacteria and algae, now support little but starlings and rats. Many wetlands have disappeared completely under the avalanche of human expansion.

Inland ponds, potholes, and marshes—vital breeding grounds for waterfowl and natural refuges for many other forms of wildlife—also have important economic values. In many places they are essential functioning units of the natural recharging of underground water supplies—vital to local agriculture, industry and human existence.

Much of the pollution that originates on the land finds its way to the seas—pesticides carried by the air or washed into rivers, chemical wastes from factories, detergents from laundries and kitchen sinks, untreated sewage, water-soluble solids dumped offshore, carbon dioxide from heating plants, and lead and carbon monoxide from motor vehicles and aircraft.

Pollution—a threat to wildlife and man

The effects of this constant and increasing contamination of the air and oceans are already apparent. Some wild species have declined dramatically. The brown pelican has all but disappeared as a breeding species on much of the Pacific Coast and around the Gulf of Mexico. There has been a sharp decline in the nesting success and numbers of bald eagles and ospreys in the United States. All of these birds feed heavily on fish, which absorb the peristent pesticides and store them in their tissues. DDT is considered a major culprit in the decline of these birds, as it is in the virtual extinction of the peregrine falcon in eastern North America.

A chilling threat—not only to wildlife but to all life is seen by some scientists today in the cumulative effects of pollution on the oceans. Marine phytoplankton are the basic of food chains in the seas. Without these microscopic plants, all ocean life from the smallest shrimp to the largest whales would perish. Moreover, phytoplankton have approximately three times as much gross capacity for converting carbon dioxide to usable oxygen as all land plants combined. Their present abundance is

essential, these scientists believe, to maintain the oxygen content of the atmosphere at a level that will support life.

But phytoplankton are extremely intolerant of acidity and trace elements, which are common in most pollutants, including pesticides. When carbon dioxide —a near universal by-product of human activity—is absorbed by sea water in quantities beyond those that marine plants can readily convert to oxygen, it creates an acid condition that kills the phytoplankton. Trace elements in other pollutants cause the death of more. If too many die, according to this sobering theory, the oxygen content of the atmosphere will fall, and Earth will become another dead planet.

How far down the line the world has progressed toward this grim end, no one is sure. But the rising quantities of carbon dioxide in the atmosphere and the fact that DDT has been found in the tissues of Arctic polar bears, Antarctic penguins, and many wild species between the poles are warnings of a possible trend in that direction.

The trend can be reversed, if Americans and people of other nations have the will, intelligence, and prudence to act promptly and vigorously to cure the Earth's environmentals ills. Wildlife that is threatened by air and water pollution and by the destruction of essential vegetation, soil erosion, and a general degradation of the environment can be saved.

By saving wildlife man may save himself.

Editor's Note:

WHAT CAN YOU DO?

) Work through local educational organzations (PTA) to bring more environmental quality, forestry and wildlife management, and general conservation programs into your schools at all levels.

) If you are a farmer and/or landowner, work closely with soil and watershed rograms (Soil Conservation Service) to eep those chemicals in your soil, rather han being washed into the streams and ivers. Use the hard chemicals discriminately.

) Support federal, state and local government plans to set aside and protect arks, preserves, wild rivers, marshes, sh and game management areas, and orests. Also support municipal disposal nd city waste treatment plant bond ssues. Give your support by voice, pen, nd your all important voting "X" on all onservation matters.

) Join or organize local groups toward iese ends—a group of 10 is often more nfluential than 100 individuals.

If you notice or suspect an act of pollution or major fish kill, report this information to State Conservation Commission personnel, local authorities, or he Iowa Water Pollution Control Board. E A POLLUTION DETECTIVE.

Hit the Hotspots

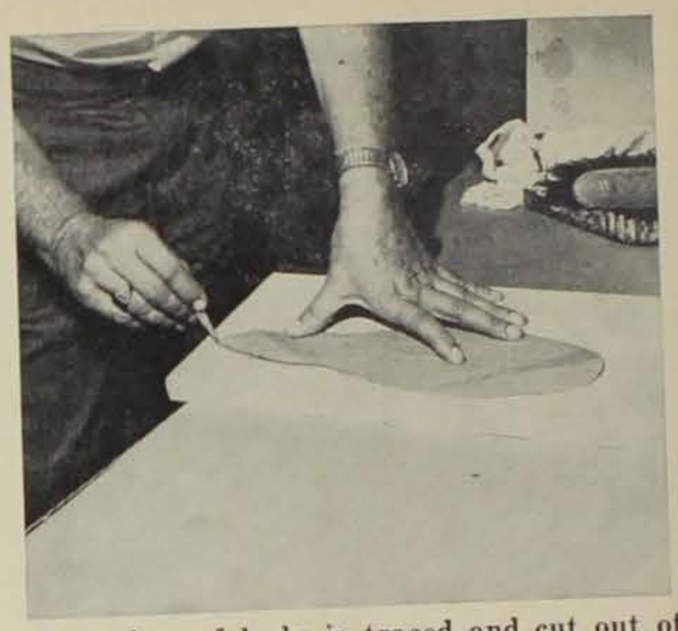
Early to mid-December marks the beginning of the excitement on Big Spirit and West Okoboji lakes in Dickinson County. Just as soon as the ice becomes strong enough to safely support heavily dressed anglers, the best winter ice fishing gets under way.

Hotspots are of course hard to predict, but not hard to find once you're in the vicinity. Concentrations of local anglers indicate productive areas—usually for "jumbo" perch running up to a pound. Any other information can be obtained from local bait shops and sporting goods shops in nearby towns. Some of the year's biggest walleyes will come from this area after freeze-up, some probably over 12 pounds. Jumbo bluegills also provide action.

Another top ice fishing area lies along the upper Mississippi River. The various channels and backwaters would look like a labyrinth to the average visitor, but information about the good, accessible areas can be attained by asking at local business shops in Guttenberg, McGregor, Harpers Ferry, and Lansing. Nice bluegills and crappies provide most of the backwater action, along with northerns and bass, while walleyes are caught below the dams in open water all winter long. Sometime between mid-December to the 1st of the year the ice in the backwaters becomes safe.

After the 1st, ice fishing for bluegills, crappies and bass takes off in Iowa's southern county artificial lakes. These impoundments generally provide the best warm water angling for these species, and the same holds true during the winter. The best ones seem to be Lake Aquabi, Lake Anita, Red Haw Lake, and Prairie Rose Lake.

1. First, sketches are made.



2. Outline of body is traced and cut out of one inch white or sugar pine boards. Body should be three tiers high.

Carve Your Own Decoys

Jack Musgrove, with a few examples of his fine work.

By Roger Sparks

To a waterfowl enthusiast, the sight of ducks wheeling about and whistling into the blocks, wings set and feet outstretched, is a splendid reward, even if a shot is never fired. Although techniques such as attracting geese to white tissue strewn about a cornfield have been successfully used, most waterfowl men agree that the more realistic the decoys, the greater the attraction success. Assuming the hunter makes no quick movements and is well concealed, life like decoys will tend to bring those ducks on in. This prevents a lot of high shooting resulting in cripples and losses.

The very best decoys are hand carved by experts like Jack Musgrove, Curator of the Iowa State Historical Museum. His talents represented in these photos (unfortunately black and white) are of international championship caliber.

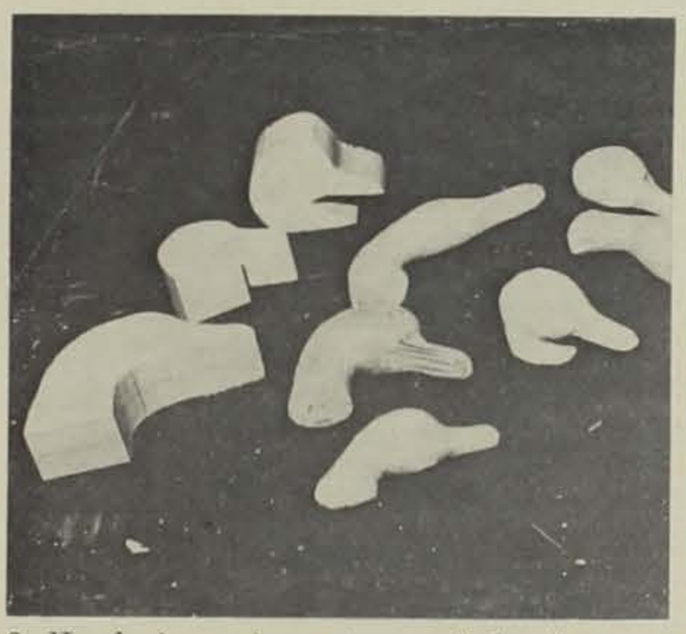
This art can be rewarding to hunters and non-hunters alike, for a detailed, hand-painted carving fits nicely on the mantel or in a den. However, the real value is out on that marsh, and they're just as practical to handle as styrofoam. The work does, of course, take time, and not everyone can be as expert as Mr. Musgrove. But try your luck this winter and enjoy a challenging hobby.

A very accurate decoy can be constructed from sketches of a real duck, with additional help from an illustration. Weight and balance is important. The width of these decoys is exaggerated slightly to give stability and a more natural rolling motion. More ducks are frightened away by unnatural bobbing motion than by lack of detail in appearance. Lightweight commercial decoys are not as effective on breezy days because their exaggerated bobbing and rolling tendencies. Hollowed wooden decoys are suprisingly lightweight, and as Mr. Musgrove puts it, "If you carry 15 decoys half way across a marsh, plus gun and shells, you realize the value of a light weight decoy." Leading should be used for proper balance and a small anchor can be used.

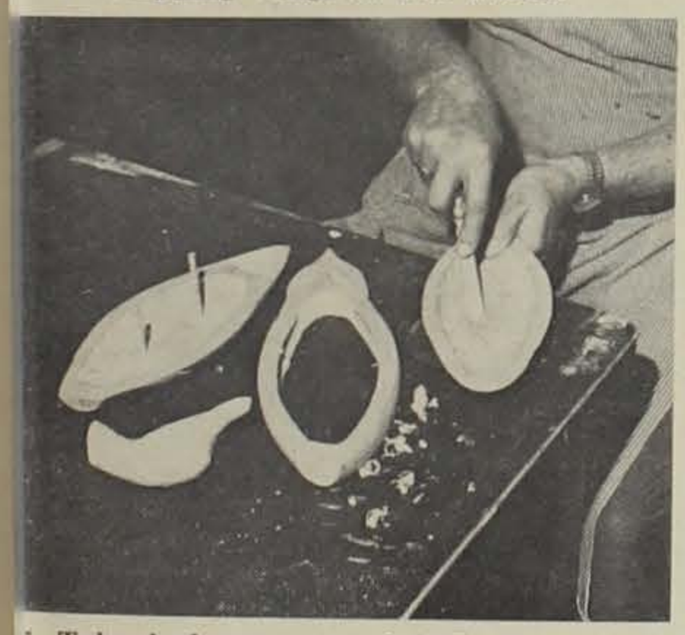
3. Three layers are then drilled and pinned together with two wooden dowels. Note: do not glue together at this point.

4. Rough finish with draw knife and sander.

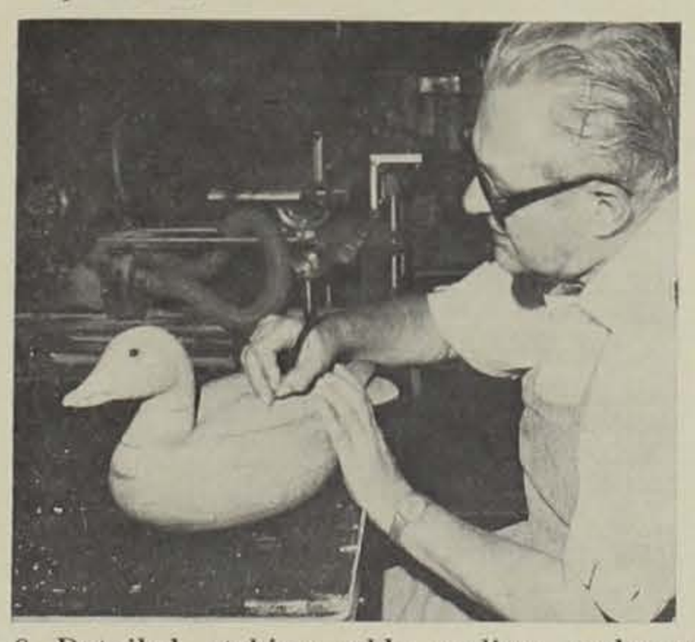
5. Exact shape is carved. Note detail of overlapping wings in this model.



6. Heads in various stages of development, positions.

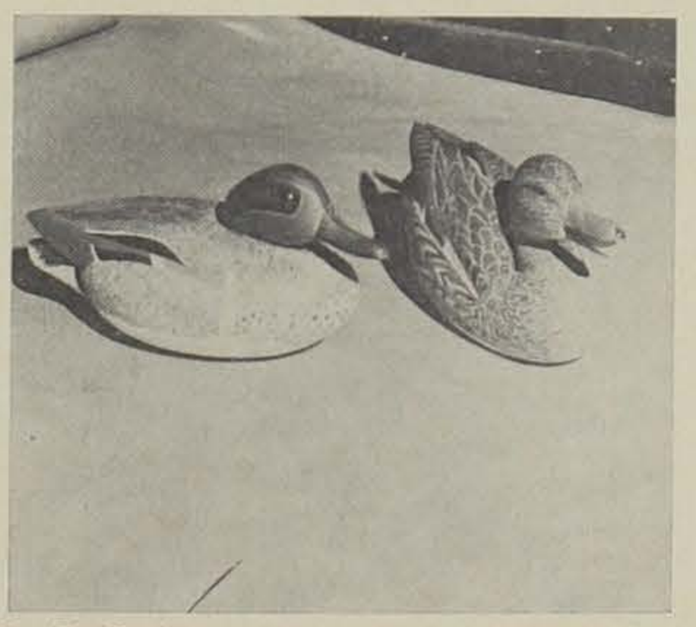


7. Take body apart and hollow as shown. Test for balance and add ballast if desired before gluing. Attach head with long wood screw and glue with epoxy glue.



8. Detailed etching adds realism, reduces glare. Add glass taxidermist eyes.

9. Seal with wood spar varnish and sand smooth. Paint with artist oils. When dry, light sandpaper reduces sheen.



10. Realistic green-winged teal decoys. Note life like head positions and open bill of hen.

By Dick Ranney

As a Santa of long standing I would like to pass along for your approval a suggestion for a treat you might leave Santa this Christmas Eve. It is well known that all the rigorous activity of this big night each year make Santa happy and hungry. There are many other jobs that tax one's strength. The doll furniture comes in a large flat box. The instructions are printed on the side, and read something like this. "Any one of average intelligence can assemble this toy in 20 minutes." It will take you three hours even if Mrs. Santa helps you. If you look this happy night you will see Santas creeping out to the garage, up into the attic, over to grammas and next door to carry home all of the things that make little eyes glow and round faces rounder.

Sometimes Santa's nose gets red at this time of year and will stay red until two days after New Years at which time even Santa's hair has begun to hurt. This hurt can also be found in Santa's pocket which is as clean as the turkey carcass on Christmas Day. Other rigorous activities that most Santas engage in on Christmas Eve are filled with good fun and cheer; but they can make the round old man in red hungry. To bring a twinkle back into his eyes try this: Cut a fresh dressed young Iowa pheasant into halves and roll them in flour. Place in a large skillet in which you have put some shortening. Brown the pheasant halves on both sides until they have a golden crust. Remove the pheasant from the skillet and pour off any excess grease. Scrape the fryings that are stuck to the bottom of the skillet loose but leave them in the pan. Replace the pheasant and add one can of cream of mushroom soup, two cans of buttered mushrooms, and ¾ can of water. Salt and pepper lightly and place back on the stove. Put a lid on the skillet and cook at very, low heat until the meat is tender (about 3 hours). Remove from the fire and place the pheasant, mushrooms and all in a large bowl and let cool. After it has cooled, cover the bowl and place in the refrigerator and chill. On Christmas Eve when Santa's ho-ho becomes a little weak, pour small glasses of wine and set out the ice cold pheasant. Be sure to pull your shades or you will have all the other Santas in the neighborhood at your house. Cold pheasant and a glass of wine make Christmas Eve the best; however, there is one thing that can be done to improve the night. It is quite simple—be sure to stand under the mistletoe while eating. Merry Christmas to All.

Ruffed Grouse

Ruffed grouse once ranged over most of Iowa's woodlands, but are now found only in extreme northeastern Iowa. Careful management in this area has brought about a hunting season during the past three years and surveys indicate the successful harvests have not affected the grouse populations. The rugged habitat and quickness of wing make him a classic gamebird.

The male grouse, previous to and during the mating season, protects "his" territory and attracts his mate by a peculiar "drumming" performance. The drumming sound is caused by cupped wings rapidly drawn upward followed by the sudden reversal of this motion, causing the air to "crack." In late March through early May, the cock stands upright on a log, stump or boulder and the repeated drumming rings-out across the forest.

The hen fits herself into a cupped shaped nest crudely formed in the leaves on the ground. She lays an average clutch of 10 to 12 eggs. After about 24 days, the brood of chicks hatch and the life sequence begins again.

Ruffed grouse are mostly mottled brown with black markings. A beautiful fan-shaped tail is striped with black bars. "Ruffs" on the neck are iridescent black. Ruffed grouse weigh about one and a half pounds at maturity.