FEBRUARY, 1975

Iowa conservationist

iowa conservationist

Vol. 34, No. 2 February, 1975

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

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Front cover photo by Wayne Lonning.

BACK COVER: An occasional winter migrant into Iowa, the snowy owl was painted by J. L. Landenberger, 2031 Northgate Drive, Cedar Rapids.

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 $1.00; two years at $2.00; four years at $3.50. Second class postage paid at Des Moines, Iowa and other points.

WILDLIFE and PEOPLE MANAGEM

By Douglas C. Harr, *Wildlife Manage*

Conservation Commission Photo

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AGEMENT

arr, *ldlife Management Biologist*

Have you ever wondered exactly what a wildlife manager in Iowa does? Well, there are a variety of enjoyable and interesting duties; raising and releasing giant Canada geese, making population counts of pheasants, quail and other game species, banding waterfowl, designing shrub plantings to attract wildlife to shelter and food -- the list could go on and on. All these items are a part of managing wildlife and its habitat.

But the question might be asked (and often is), "Why should it be necessary to manage wildlife?" A legitimate question, to be sure. If you were to look up a definition of "wildlife", your dictionary would probably say something such as, "animals living in a natural, undomesticated state." It is reasonable to believe that if animals are living in a natural state there should be no need to manage them.

Unfortunately this is not true, for few animals in this country remain living in a natural state. To understand this, a short look at the history of the United States may prove helpful.

Before the arrival of early settlers on this continent, wildlife had few encounters with man. Only Indians hunted the native animals, and, since tribes were fairly widely dispersed and often nomadic, they put little pressure on wildlife in any particular area. What's more, the Indians realized that wildlife was a product of the earth and were careful not to overtax this resource. You might say that Indians were the first ecologists.

When the white man entered the scene, he saw a vast wilderness that could provide what he believed would be an endless supply of food in the form of wild game. Little did he realize how populous the nation would become in the ensuing two hundred years. So, he utilized his free source of food without restraint, and, as the land could no longer produce game, men cleared the land and took up farming for food, eradicating the habitat needed for wildlife to survive and reproduce.

As the eastern U.S. became too crowded or the land was farmed out, the settlers picked up and moved west. The cycle was repeated over and over, until most of the desirable land everywhere was taken. In the process of moving, settling, hunting, farming and industrializing, we lost the habitat needed to support, among others, creatures like the heath hen and the plains grizzly bear. Ultimately, we lost these animals themselves. Almost wiped out were the bison, black-footed ferret, giant Canada goose and others.

Game laws were established to regulate hunting and prevent the extermination of wildlife in this manner, but laws were not enough. Not until the 1930's did the practice of wildlife management appear. Pioneers in the field, such as Wisconsin's Aldo Leopold and Iowa's own Paul Errington, realized that *habitat* was the limiting factor. Only through management of the remaining habitat, coupled with the continuance of game laws, could we hope to save our dwindling wildlife.

Wildlife management has now developed into a complex science, requiring of knowledge of not only the animals themselves, but also of preferred foods and cover, interactions between plants and animals, predator-prey relationships, the effects of human activities on wildlife, and how to manipulate all these items at once.

This brings up the important factor of *people management*. For, in today's crowded world, any manipulation of wildlife and habitat must often involve manipulation of man's activities as well. The professional wildlife manager serves as a kind of go-between, coordinating human activities so as to benefit wildlife, while disrupting our lives as little as possible.

To accomplish this, a number of things may be done. The wildlife manager has his staff plan for and maintain numerous game management areas. These areas serve as sanctuaries of habitat where wildlife can live in a relatively natural state, but they can also serve as showcases for the public to see what animals need for survival. In addition, the manager assists private landowners in planning farm shelterbelts to benefit wildlife while providing desired wind protection for the farm. He bands waterfowl and takes game surveys so that animals may be tracked and their numbers estimated; these data may then be used to adjust hunting laws, preventing overhunting.

The wildlife manager issues trapping permits for state-owned areas, and records the take, enabling him to control great fluctuations in furbearer populations and the deleterious effects they might have on other wildlife. He talks to adult education groups, school classes and sportsmens clubs to help them understand the how's and why's of wildlife. He plans crops for tillable lands on State Game Areas, so that wildlife will most benefit, while still providing some harvestable grains for cooperating farmer-leasee's. In short, he manages people and their activities, lessening the effect they might have on the natural state of animals and their habitat.

Lately, there has been an increasingly vocal minority of non-hunters who wish to see an end to all hunting and trapping. This group is not yet aware that human activities which destroy habitat have disrupted nature's normal patterns, and that we must now manage wildlife to maintain the ecosystem balance that was formerly self-maintaining. Through management, hunting takes the place of once-common natural predation in preventing animal population explosions and resulting disease and damage. Additionally, in managing for game, countless non-game animals and birds profit from the habitat improvements made.

So, the wildlife manager has another important task -- bringing the non-hunters and sportsmen together to realize that habitat, and the human activity affecting it, is the key to wildlife's survival. That amounts to people management, probably the most important part of the wildlife manager's job.

THE 'ART' OF MUZZLELOADING

The past is revisited in these powder horns carved by George Van Driessche.

By Roger Sparks,

Editor

Photography by Wayne Lonning

The sport of black powder shooting has taken on new dimensions, as witnessed by the powder horn carvings pictured here. These intricate art pieces are the spare time work of George Van Driessche, a Bay City, Michigan machinist and the only known carver of cow horns. To him and a growing number of enthusiasts, the black powder hobby has become much more than collecting and shooting muzzle-loading guns -- it's become a study in early American living and craftsmanship. Van Driessche and thousands of muzzle-loading buffs across the country are delving into a true form of American folk art.

Iowa currently has five clubs chartered under the National Muzzle-Loading Rifle Association. According to Clint Fraley, Executive Officer for the Clay County Conservation Board (and state Field Rep. for the NMLRA), the organization promotes shooting safety, encourages new shooters and stresses appreciation of the American muzzle-loading heritage.

At black powder "shoots", held periodically around the state, "purist" members show up with authentic early American clothing, hand-sewn from buckskin or furs, hand-made necklaces, beadwork, powder horns, rifles, pistols, shotguns and of course, 'coon skin caps. There are trap and skeet events for muzzle-loading shotguns and various accuracy events for flintlocks and percussion long rifles and pistols. The major Iowa shoots are: the Palo Alto Sportsman's Club shoot held at Sportsman Park in Emmetsburg, the first weekend in June; the State Championship Trap and Skeet Shoot on the Fourt of July at the Izaac Walton League grounds in Dubuque; the State Rifle and Pistol Championships sponsored by the Pioneer Muzzle-loading Rifle Club during the second weekend in September on the Ken Ferguson farm near Runnels; and the Fall National shoot sponsored by the NMLRA held in Friendship, Indiana, August 16-23.

For a closer look at a colorful sport and a never-to-be-forgotten chapter of American history, plan to attend one of these events. Or, for details and location of local clubs, write to Clint Fraley, Clay County Conservation Board, Box 445, Spencer 51301. He may have you lookin' down a "smoke pole" before spring.

Note the Fine detail -- this piece was more than a year in the making.

IOWA'S FIRST SNAGGING SEASON FOR PADDLEFISH

By Gary L. Ackerman

Fisheries Management Biologist

Photography by Ken Formanek

DO YOU want the opportunity to catch a prehistoric monster of a fish attaining unbelievably large sizes? You bet! Anglers will have a first opportunity to do so this year in Iowa as it has become legal to snag paddlefish.

The paddlefish, *Polyodon spathula*, is one of the oldest fishes on the continent. It is a living remnant of a group of prehistoric fishes which evolved relatively unchanged for millions of years. The Mississippi River system contains the largest concentration of them in the western hemisphere. Their range is the Mississippi River basin from the Missouri River in eastern Montana to Pennsylvania and New York, southward to western North Carolina, Mississippi, Texas and Louisianna. Recorded only rarely in lakes, it is a fish of the open waters of large turbid, silty rivers. The only other known near-relative of them is a giant fish found in the Yangtze River system of Red China.

Paddlefish, or spoonbill cat, are unique in the world of fishes. They are remarkedly shark-like, but in appearance only. They are distinquished by an elongated, paddle shaped snout affixed to a body resembling a pregnant torpedo. This body is boneless with a strongly upturned tail. Its body is gun-blue color dorsally, shades into lighter grays on its sides and has a silver-white belly. Its eyes are small, beady in

appearance, and probably poorly developed for it feeds indiscriminately by straining microscopic organisms from the water collecting them on efficient sieve-like gill rakers. The paddlefish is one of the more primitive groups of fishes having chiefly a cartilaginous skeleton. It grows to huge sizes, exceeding six feet in length and attaining 150 pounds in weight!

Paddlefish populations declined in the Mississippi River system apparently beginning with construction of dams which changed the river environment. In the northern most parts of the river they are considered a rare species. Alteration of the habitat from river to impoundments might have eliminated some of their basic requirements for spawning. Perhaps over-exploitation by commercial interests played an important role in their decline. But there remains a stable and manageable population of paddlefish in Iowa waters.

Paddlefish are abundant in their lower range, in the lower pools of the Mississippi River, essentially from Dubuque southward. Good populations are also evident in the lower reaches of the Missouri, Des Moines and Iowa Rivers. Typically they concentrate immediately below the large navigation or closing dams, but they are found throughout the rivers in sloughs, chutes, side channels and oxbows.

Although Iowa supports a modest commercial fishery for paddlefish its great potential for sport fishermen led to a snagging season. Snagging is the only method to take paddlefish by sport fishing since they feed by straining minute organisms from the water. In the past, regulations deprived Iowa anglers the opportunity to enjoy a unique and interesting type of fishing. Recent changes in anti-snagging laws have permitted the Iowa angler an opportunity to enjoy a once unutilized resource. Anglers in Illinois, Missouri, Nebraska, Kansas and South Dakota have enjoyed paddlefishing for several years. Iowa's first season for paddlefish was set in 1974.

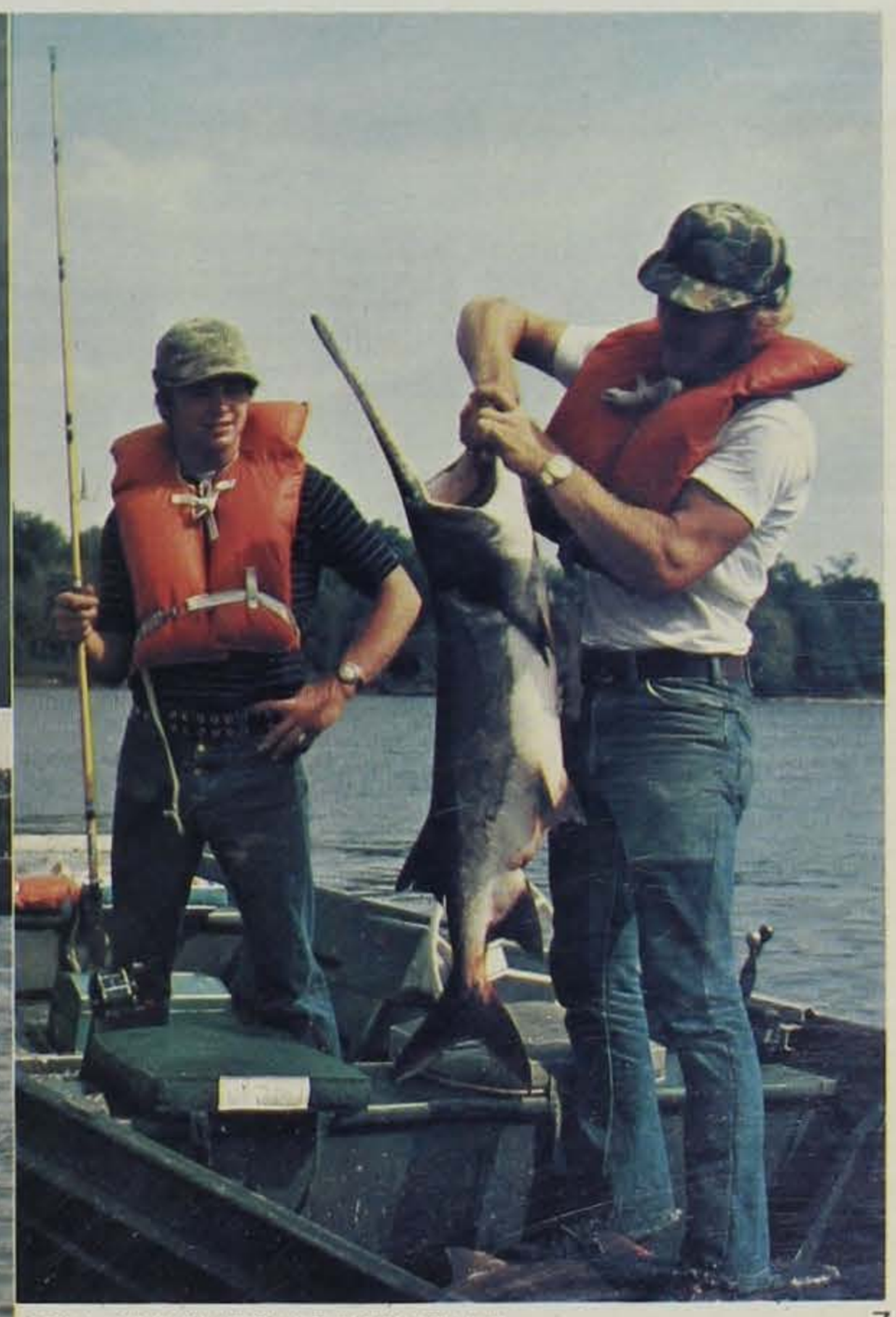
LEGAL AREAS

The Departmental Rule was drafted to select certain areas as paddlefish fisheries. The Mississippi River boundary waters were unrestricted to taking paddlefish knowing the fisheries would develop where paddlefish concentrate below the Navigational Locks and Dams. The U.S. Coast Guard does impose a 100 foot closed area below the Navigational Locks and Dams for safety reasons. The Missouri River boundary waters were also unrestricted, although top snagging will not develop along the Missouri, except in deep and quiet pools where paddlefish might concentrate over-winter. "Snaggeries" might develop in open oxbows during the fall when paddlefish feed on or near the surface. The Iowa River was restricted to include the river below the closing dam at Iowa City, and the Des Moines River was restricted to include the river below the bridge on Highway No. 1 at Keosauqua. Paddlefish fisheries will develop in deeper pools below dams on the two inland rivers.

SNAGGING

The Iowa Rule provides anglers the opportunity to take paddlefish by snagging methods. It was the intention to set a conservative season at the onset.

Two specific and wholly unlike fisheries will develop. The first is topwater or mid-water snagging in fall when paddlefish can be taken by trolling techniques. They can be taken by



Once snagged, paddlefish like the one pictured here put up a tremendous fight. This fish weighed more than sixty pounds.

motoring slowly across the current into concentrations of them below dams. Often they can be observed jumping or breaking water. Paddlefish when hooked in the warmer water in fall provide anglers with a "Battle Royal". When hooked, they typically roll then sound for the bottom. A heavy line on a reel with a good drag system is a must, along with a light steelhead or musky rod.

The other type of fishing is a bottom type snagging in winter or early spring when paddlefish can be taken by jigging methods or slow trolling. As the water cools and their metabolism slows down, paddlefish tend to school up in deeper and quieter pools where, once located, they can provide fast action. The fish are sluggish and not as sporty to catch at this time of year, yet a large one will still place plenty of back-breaking strain on man and rod.

The cold weather fishery will be restricted by natural elements such as freezing and ice cover thereby limiting the fish to open water areas found principally below closing dams.

Paddlefish snagging is a rather specialized pursuit, using special gear while fishing for them in select areas. Most paddlefish probably will be taken in deeper pools on the bottom in cold weather and on or near the surface depending upon the time of year. No doubt some other species will be accidentally snagged, but no major problems are anticipated.

DAILY AND POSSESSION LIMITS

The limits as selected were based on several factors. The two daily and four possession limit is presently lawful in Iowa. These limits also conform closely with the surrounding states (except Illinois which has no daily or possession limit).

Missouri, Kansas, Nebraska, and South Dakota have low catch limits. Conservative catch limits will provide a means to distribute the resourve over the greatest number of people as equitably as possible and will provide a conservative start to better management of the paddlefish resources.

HOOKS AND SIZES

Present Iowa Code allows anglers to use two rods with not more than two hooks on each line. Hook size is not of importance for study from other sources indicates that mortality of hooked and released paddlefish is not a problem. Even large 5/0 to 7/0 hooks do not rip a huge chunk out of the fish, and typically they are hooked by a single barb. They are easily unhooked and released if one chooses to do so. Paddlefish are naturally equipped with the huge flat bill which can be used instead of a gaff to boat them.

LAW UNIFORMITY

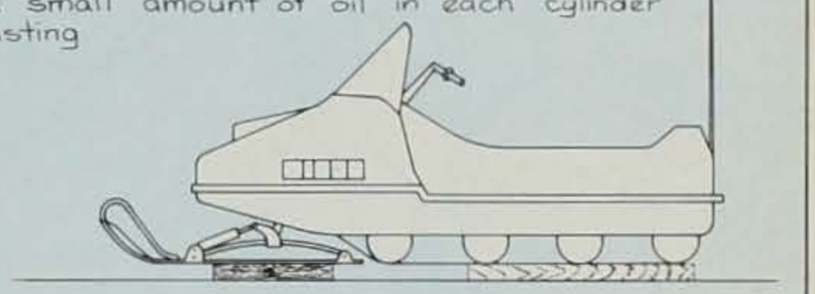
Basically, law uniformity was possible between Missouri, South Dakota, Nebraska and Kansas. None was possible with Wisconsin which had previously placed paddlefish on their "rare and endangered species" list. And none was possible with Illinois which has surprisingly opened a snagging season on paddlefish in select areas of the Mississippi River in 1973. Illinois opened a season without regard for the paddlefish resource or their management. Basically they set a year-round season without possession limits. This resulted in extremely high harvest of them in concentrations such as at lock and dam 12 at Bellevue, Iowa. In the future it is hoped Illinois will take a different approach and a new look at their season governing paddlefish on the Mississippi River And hopefully Illinois will adopt a more conservative season which will provide the paddlefish resource with some degree of protection from over-exploitation and waste of a resource, while simultaneously enabling fish managers to unite together across state boundaries to manage the total resource. Law uniformity between Iowa and Illinois, too, would provide anglers from both states with similar regulations which will result in less enforcement conflicts arising where dissimilar regulations now exist.

Here is a summary of regulations as they pertain to snagging paddlefish from the boundary states surrounding Iowa:

FIELD GLANCES By Larry Pool

SNOWMOBILE STORAGE

1. Always refer to your owners manual
2. The entire machine, including engine, chassis, upholstery, and plastic parts should be thoroughly cleaned, washed and waxed where necessary.
3. Clean and touch up any rusted or bare painted surfaces. (spray paint can be purchased from your dealer)
4. All bearings, spindle shafts, steering arms, throttle and brake inner cable wire, etc. should be coated with a light weight oil.
5. Drive belt should be removed and the faces on both clutches oiled.
6. If machine is equipped with electric start, disconnect battery cables, clean battery cables and battery posts. Store the battery in a cool dry place.
7. The tension on the track should be reduced and machine should be blocked up. Do not allow the track to rest on concrete or ground surfaces.
8. The machine should be stored in a garage or shed out of sunlight or covered outside with a snowmobile cover.
9. The fuel tank, fuel lines, and carburetor should be completely drained of gasoline. Engine should be run until it stops to eliminate any gas remaining in the carburetor. Remove the spark plug or plugs and apply a small amount of oil in each cylinder to prevent rusting

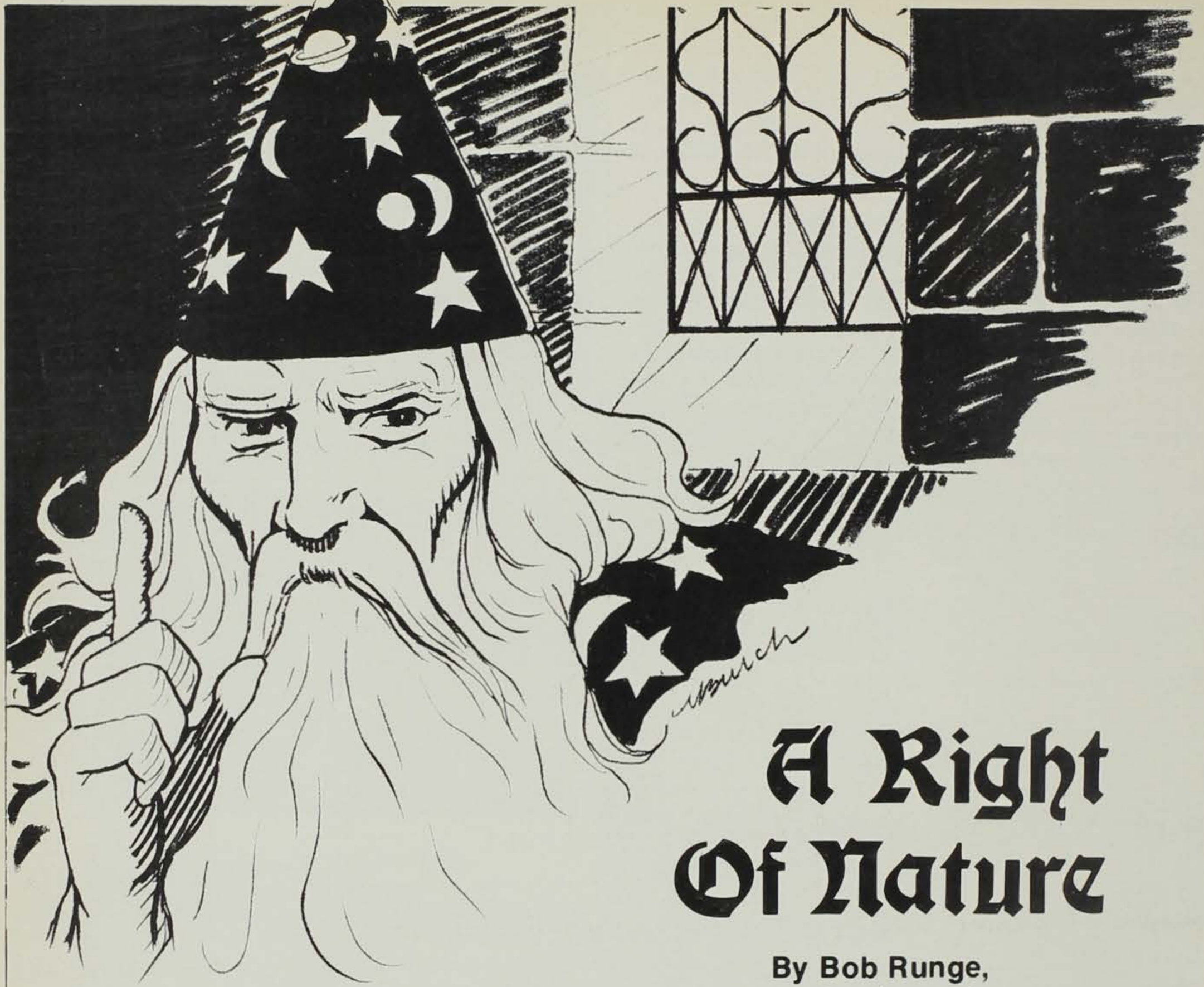


HARVEST OF PADDLEFISH

Apparently snagging paddlefish is an efficient method to take them when some degree of angler expertise is employed. Creel survey data from other states has shown the relative efficiency of snagging techniques, and the potential need for management of them here in Iowa by imposing restrictive regulations to control their harvest.

The future paddlefish fishery in Iowa may not yield such high rates of return as in some states, but with careful management of the species, paddlefish will provide Iowa anglers with a real trophy fish in stable quantities for many future generations.

	Iowa	South Dakota	Nebraska	Kansas	Missouri	Illinois	Wisconsin
Legalized Snaggery	yes	yes	yes	yes	yes	yes	PROTECTED—Rare and Endangered Species
Limits	2 daily 4 possession	2 daily 2 possession	2 daily 2 possession	none	2 daily 2 possession	none	---
Size limit	none	none	none	none	none	none	---
Catch retention	none	all taken must be retained	all taken must be retained	none	none	none	---
Minimum hook size	none	none	none	#1 or less	none	yes	---
Snagging season	15 Nov. to 28 Feb.	1 Oct. to 30 Apr.	1 Oct. to 30 Apr.	10 March to 10 May	15 Mar. to 15 May & 1 Oct. to 31 Dec.	none	---
Commercial Fishery	yes	closed	closed	yes	yes	yes	---



A Right Of Nature

By Bob Runge,
Contributing Editor

And so it came to pass in the land that there were those who would hunt wild animals and those who wished to end all hunting. Those who would hunt sited that man had always hunted and that it was good and necessary. Those who clamored for the end claimed that man had progressed beyond the need for hunting and that the life of each animal was sacred. Many in the land held no opinion at all and these people were sought after by both sides. Arguments were presented everywhere and some of them were good and some of them bad. The two sides could never agree and the problem was not to be solved.

But it was a land of good people who were fair and just. In the land there lived a wizard whose wisdom was held in awe by all the people. It was thought that he might provide the answer. And so it was decided to seek out the wizard and his judgment. Both sides were confident and they went in search of him.

Upon hearing the people, the wizard only smiled and said, *"You bring to me a question with no simple answer. The solution is in your own thoughts and mind. How am I to respond?"*

The people only urged him on to which he replied, *"If you must have help to find the answer that is already living within you, I will help; but it is you who must decide."*

So to this end the people formed a court where a spokesman from each side would present his case. The wizard agreed to preside and called the people to order.

The hunter took the floor and the crowd grew quiet. The wizard spoke.

"Why does the hunter wish to hunt?"

"Because it is his nature. Man has always been a predator in our world and this natural heritage is not to be denied. But more than that, to enjoy the out-of-doors, to learn to understand it. For companionship of friend with friend and man with son. For being one with nature and taking of its bounty. For enjoyment of old traditions and the satisfaction of accomplishment."

"The things you speak of are well and good, but have not some kinds of animals died and disappeared? Is the tradition you speak of not ending?"

"It is true that some kinds of animals have disappeared. We mourn their loss. It is true that man's past ignorance has

played a part in this. But these times and ways are gone. The hunter has gained knowledge and passed laws to make sure hunting can never threaten wildlife. More devastating has been the change in the face of the land. Man has plowed prairie meadows, drained marshes and leveled forests for his grains. It is here that the major portion of the blame must lie, for no animal can live without a home. No one can bring these animals back and the harsh lesson has been learned. We choose to manage the animals now by training our people to help them and we buy lands in which the animals might live. In these lands most of the animals are never hunted. The few kinds we allow ourselves to hunt, prosper and they will not disappear. Today's hunter is a sport hunter and a boon to wildlife not a threat."

"You talk as if you own the animals. Is this true? Do they live and die for you alone?"

"No one owns the animals. With them we share our world just as we share it with the mountains and the trees. We are an animal and we must accept our role in nature to give and to take; to sow and to harvest; to live and to die. Thus has it always been. Animals are meant to kill and eat and live on the land within the purpose of nature. Far swifter is the hunter's kill than death by starvation, fang, or claw."

"Have we not progressed beyond the need to kill these animals for food?"

"In our land we kill many animals each day to feed our people. We hire men to kill and butcher them for us and we buy the meat without ever seeing these animals. They are raised to be killed and no one seeks to end this process. We too manage our animals to be killed. But they are free and may escape the hunter, and many of them do. It is our plan. We only kill what will do their numbers no harm. We harvest the surplus for what it provides. We do not claim that these animals must be killed to feed our people. We take what nature provides and ask no more."

The crowd grew restless as the hunter left the floor. Many were talking among themselves, but the wizard only nodded. The second man stepped forward and once again the people were quiet and the wizard spoke.

"Why must we end the hunting in our land?"

"The need of hunting has died and so too must hunting itself. Man no longer lives in harmony with nature; he dominates it. Man has harnessed the rivers, the oil and mineral deposits, the sun and wind, and the very earth itself. No more does man venture into the woods to hunt an animal he needs to eat. Now he hunts for an animal he enjoys to kill. There is no longer a natural threat against man, only those threats which he has created for himself. The wild animal is born and lives and recreates his kind and dies. No longer must we interfere and no longer should we interfere. We have come upon the world and its animals and we have conquered; now we must leave them in peace."

"Are animals safe if we ignore them?"

"It is true that many kinds of animals have died and disappeared and yet never fell before the hunter's gun. We must never ignore the animals, but must help them to live and prosper. We have made mistakes as have the hunters, but we have gone one further step in correcting our errors. We don't want them to be needlessly killed by man. Life must be respected for all the creatures of the world. If we have no need to kill them, we have no just reason to do so."

"Have you too bought land and trained people to aid the wild animals?"

"We have not had the funds to do so as a group, but some small areas exist as provided by people who share our views. Our government has also provided some sanctuaries but the animals are only safe inside these boundaries. We are not able to manage the animals as others would. We must let nature manage and allow us to be observers ready to help if the need arises."

"Do the animals belong to you and not the hunter?"

"The animals belong to nature and to the scheme of our world. Once it was our place to pursue them, now we must preserve them."

"Does not the hunter preserve the animals with his lands and managers? And do not the animals other than those he hunts use these lands to live and prosper?"

"We would be foolish to deny the benefits of these lands and programs. But he does this only so that he may have something to kill. He does not have other animals in mind when he makes these areas, but adds it to his argument only as an afterthought. His means are spent in an effort to justify killing. If killing is needed to trim the herd or flock to healthy numbers, let the managers do it and the meat be given to the poor. There are not many such cases, but where it is necessary we must condone it out of mercy."

"Do you speak only out of mercy for the animals?"

"Mercy, respect and the reverence for life, that precious thing we share with all of our animals. They too know birth and growing, safety and comfort, happiness, fear, and death. Why must man be the judge of their life and death? There is fear and pain when the animal falls; let him not fall for our amusement."

The speaker turned and walked from the floor and once again the crowd grew noisy. The wizard rose to speak and all fell silent.

"You have come before me with a problem I cannot answer for you. I have told you that the answer is hidden among your thoughts and you have proven that today. Those you have chosen have spoken well and their arguments were true to their hearts. Neither man is wrong, and neither man is right."

The crowd grew restless as no one understood.

The wizard continued. *"It is wrong for some people to kill and they themselves know this to be true. It is right for some to kill, and they know this to be true. As I said, the answer is in your mind. It haunts your very thoughts. This question must be answered by you and for you; but most importantly, for* **only** *you.*

"As long as the hunter manages his resources wisely and as long as no kind of hunted animal dies and disappears as a result of hunting, then nothing is lost and much is gained. Should he abuse his right, then he must also fear of losing it.

Those who would not hunt must not force their will on others. They can be at peace with themselves, and that is good. But they cannot be at peace with those they would restrict for their own personal beliefs. The hunter does not object to those who would only enjoy our wildlife by observing. He does not object to their concern for animals.

Let the hunter forever be on guard for man's past ignorance and mistakes, and let the others be diligent watchers. For this is the best of all possible safeguards for nature. One man to control, one man to watch, with a personal inner peace for all."

A New Light on Old Fort Atkinson

By Marshall McKusick
State Archaeologist of Iowa

Photos by the Author

The central section of the north barracks still stands as a frontier monument of the Neutral Ground. Remade into the fort museum it once housed enlisted men of the 1st U.S. Dragoons. The exposed white plaster and fireplaces were part of the hospital at the fort.

Discarded debris from the officers privies illustrates frontier life in the 1840s. Artifacts are a lice comb, fragmentary slate tablet and slate stylus, child's clay marbles, hand-carved bone dominos, and an English clay pipe. The jews harp was found in the Guardhouse and belonged to an enlisted man.

IN THE BLUFFS above the Turkey River, the ruins of Old Fort Atkinson are left from the 1840s, preserved by the State Conservation Commission. Fort Atkinson was built when northeastern Iowa was a virtually unsettled wilderness, by treaty it was the "Neutral Ground". The Sioux living in what is now southern Minnesota were continually raiding the Sauk and Fox of east-central Iowa. The Neutral Ground, an uninhabited area, was established to keep the fighting tribes apart. Forty miles wide, the Neutral Ground began at the mouth of Upper Iowa and stretched southwest all the way to the Des Moines River.

In the late 1830s the government decided to arrange a treaty with the Winnebago living in Wisconsin, removing them west of the Mississippi to resettle in the Neutral Ground. The Winnebago were most reluctant to move west for it was difficult to make a living in the new territory and they were also fearful of their enemies. In Iowa they would be exposed to attack from the Sioux, Sauk, Fox, and the Ioway. But in 1840 over a thousand United States troops arrived at Fort Winnebago, Wisconsin, and forced the Winnebago to move west. Because of low water the steamboat chartered to take them across the Mississippi could not run, and the Indians were paid $3.00 for each canoe they built to carry themselves across.

In Iowa the Winnebago were provided with a mission, and school. Annuities from the government gave the families their basic supplies of food, clothing, tools, and other necessities. Fort Atkinson was built to protect the Winnebago from their Indian enemies. However, the garrison actually spent much of its time marching through the wilderness and searching in Wisconsin for Winnebago who attempted to leave the reservation and return to their homeland in Wisconsin.

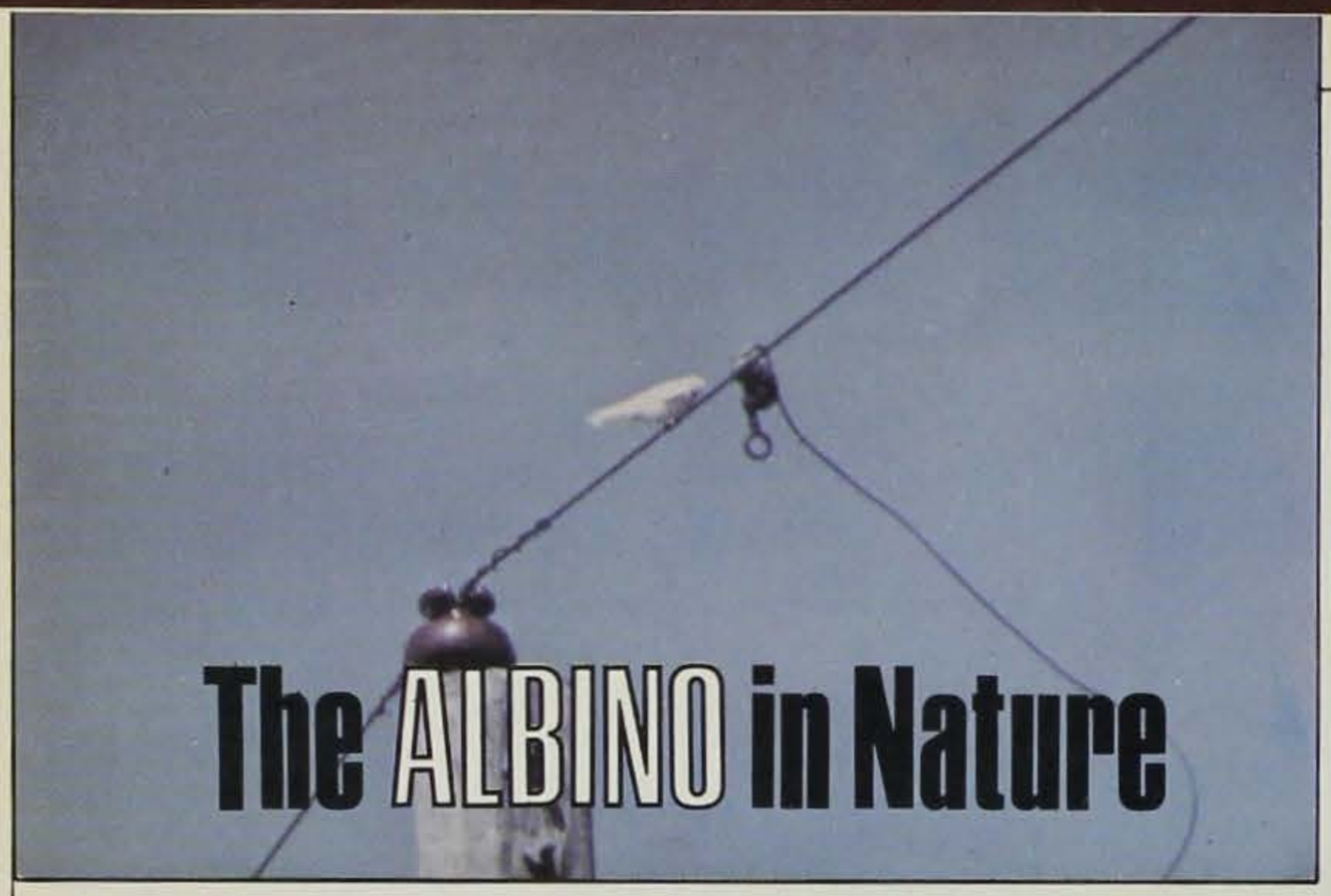
One company of infantry and two companies of mounted infantry called dragoons garrisoned Fort Atkinson until 1846 when the Mexican War made it necessary to remove the regular army regiments from frontier outposts throughout the west, sending them south to fight. The U.S. Army at Fort Atkinson was replaced by state troops, volunteers who stayed until January 1849. The Winnebago themselves were moved north to Minnesota in 1848 and the Neutral Ground was sold to settlers who were arriving in Iowa in increasing numbers from the east. The fort, no longer needed, was eventually allowed to fall into ruins and was sold to private owners. Stone from the fort was carried off and many buildings in the modern day town of Fort Atkinson have foundations and walls built from the limestone of the old fort.

The Conservation Commission finally acquired the fort in the 1920's and the foundations within the original stockade line were cleared and exposed in the summers of 1939, 1940 and 1941 so that present day visitors can see where the original barracks, commissary, guardhouse, and other buildings stood. The original central section of the north barracks was made into a museum with exhibits on the fort history. Two other original buildings from the fort still survive—the powder magazine which has double stone walls and a solid masonry roof under the shingles, and the southwest blackhouse which is a single story building with cannon ports and rifle slits where the visitor can look out over the Turkey River. The stockade was partially rebuilt in the 1940s.

In the 1960s the State Archaeologist located the officers' privies where broken pottery, glassware, hardware, and other trash was dumped by the Officers' wives. Broken wine bottles, plates, bowls, and other specimens were carefully sorted out and glued back together in the archaeological laboratory at the University of Iowa, Iowa City. These artifacts provide a new light on the life at Fort Atkinson, an archaeological dimension to the written history.

Fort Atkinson is an interesting place today and each year many thousands of visitors get a glimpse of the American frontier in the 1840s. In coming years Fort Atkinson will be even more interesting. The museum exhibits will be expanded to include the restored English china and other personal belongings actually used by the officers at the fort.

The State Archaeologist is now working on a documentary film describing the history, architecture, and archaeological discoveries. The State Bicentennial Commission has recently made a grant to assist in the development of this film which will be available to park visitors as part of the interpretive program. The Conservation Commission administers Fort Atkinson through the Superintendent of State Parks and the Advisory Board for Preserves, and long range development studies will be made. Old Fort Atkinson will be of far greater interest to visitors in the future. A number of state agencies are working together to bring this about.



The ALBINO in Nature

By Jim Zohrer,
Wildlife Management Biologist
Photos by the Author

The albino animal is an uncommon sight in the wild. Most of us have seen white laboratory rats and mice, or white rabbits. These are true albinos, but they have been artifically bred to create this white strain. In their natural state, albinism in these animals is a rare occurrence. So rare in fact, that only one albino is born for every 20,000 normal individuals.

Exactly what is an albino? It is an animal that has lost the ability to produce the normal color pigments of the species. The basic color of an albino is white. At times the white may be yellowed or off-white, but this is a result of colored materials picked up by the skin, fur, feathers or scales. The exposed skin and the eyes of an albino appear pink. This color is produced by the blood vessels below the surface of the skin and within the eyeball showing through the tissues over them.

Albinism should not be confused with the normal light color phases of a species, or seasonal variations shown by an individual. Wild animals, especially birds, often have light and dark phases. A family of young hawks in a nest may contain both light and dark colored members. In other birds and some mammals, a single individual may be dark in the summer and turn white in the winter to match his surroundings. This color change is a result of the loss of the brown hairs or feathers in the fall, and the replacement by white ones. A white snowshoe hare or willow ptarmigan seen in the winter is probably a normal animal and not an albino.

In both of these examples the variation from normal color is only in the fur or feathers. The skin and eyes will be of normal color. Only the true albino will have pink eyes.

Albinism is an inherited trait. The tendency for the albino characteristic is carried by only a few individuals within a wild population. Two normally colored parents can only produce an albino offspring if both parents carry this rare tendency, or if a mutation takes place within the inherited material that is passed on to the young. In some cases, an animal may carry the characteristic for albinism but not show it himself. Through this mechanism the albino trait can continue to persist within a population, although always at reduced levels.

Why is albinism in wild animals so rare? The simple answer is that the animal born albino does not live long enough to reproduce and pass this trait on to it's young. Often an albino member of a brood or litter will be rejected by it's parents or siblings and will perish before it has a chance to mature. In other cases the white color of an albino does not permit it to compete successfully with it's normal counterpart. Most animals are colored to match their surroundings. This camoflage enables an animal to hide from it's enemies. It also helps predatory animals to conceal themselves and more easily capture their prey. The white prey animal is easily seen by it's enemies and is the first individual taken. Likewise the white predator can not easily capture food and may starve.

An albino animal also has one more enemy than it's naturally colored brothers and sisters. That enemy is the sun. Exposure to direct sunlight may produce such severe sunburn in these unprotected animals that death results. Solar radiation can also damage the sensitive eyes of an albino causing poor sight or blindness.

The end result is that the albino animal usually dies at a young age before it can reproduce it's own kind. This natural selection tends to eliminate the albino individuals and favor the normally colored animals.

The sight of an albino animal in the wild is truely an unusual thing. The albino has held a place of respect in primitive superstitions and continues to arouse man's interest.

Above: Albino tree swallow
Below: Albino red-winged blackbird (center on corn tassle)

CLASSROOM CORNER

By Curt Powell,

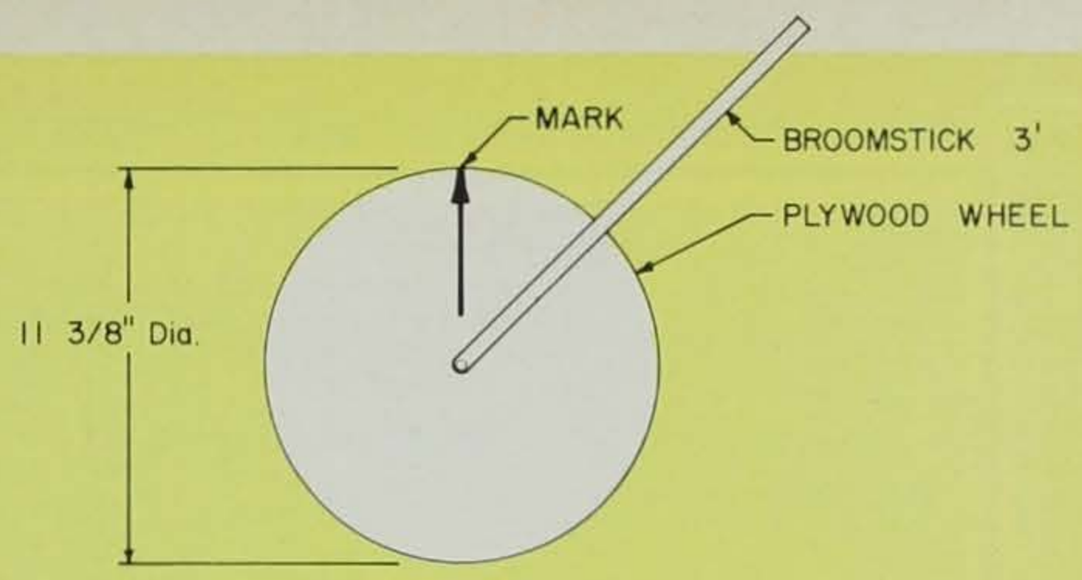
Administrator, Conservation Education Center

February can be sort of a slack time for many people because it is thought that there is not much to do. However, now is the time to be planning your spring activities in the out-of-doors. There are many projects which you can do to make outdoor learning more meaningful.

Do your students have a difficult time measuring distances? Being able to measure distances is very important in determining the height of trees, spacing of new wildlife planting, terracing and many other outdoor projects. Have you had your students measure their pace? What is a "pace"?

Mark off 100 feet somewhere in or near your school. Have each student walk the 100 feet each time and count the number of times their right foot touches the ground. The average of these "paces" divided into 100 will give them the length of their pace.

Another way to measure distance is to construct a measuring wheel. They really are not difficult to build. You need a broomstick for a handle, a piece of plywood, a bolt, washers and a self-locking nut. Let's build this one to measure a horizontal distance of 3 feet (one yard). Cut the plywood



into a circle with an 11⅜" diameter. Drill a hole in the middle of it and one in the broom handle. Attach the handle to the plywood circle with the bolt, washers and self-locking nut. Mark the wheel as illustrated. All you need to do now is to count the revolutions (number of turns) the wheel makes to measure distances. If it turns 15 times as you walk, then the distance is 45 feet.

Do you see how simple it would be to measure an acre of land or the length of a shadow of a tree? Can you find some interesting math problems that could be used with the wheel?

Now is also the time to be planning for summer school. Two courses will be offered at the Education Center this summer. Each will carry three semester hours credit (graduate or undergraduate) through Drake University. They will be offered June 16 - June 25, 1975, --ELEMENTS OF ENVIRONMENTAL EDUCATION and July 14 - July 23, 1975, --TOPICS IN ENVIRONMENTAL EDUCATION -- IN DEPTH STUDY IN AREAS OF WILDLIFE, OR PLANTS OR GEOLOGY AND LAND USE. There are scholarships available for these courses. With the new legal requirement that conservation of natural resources and environmental awareness be taught in grades 1-8, you might attend a course to keep current. For more information contact the Conservation Education Center, Route 1, Box 138C, Guthrie Center, Iowa, 50115, or Dr. Robert Vanden Branden, Drake University, Des Moines, Iowa, 50311.

IOWA'S CONTRIBUTION TO D.U.

Photo by Ken Formanek

Fred Priewert (left), the Director of the Iowa Conservation Commission and Jim D. Bixler (right), Chairman of the Iowa Conservation Commission present Dick Thorton, Iowa Chairman of Ducks Unlimited, a check for $33,000 which will benefit waterfowl and many non-game species in Ducks Unlimited's marsh development and restoration programs in Canada. The funds are from revenues collected from the sale of the state's $1 Migratory Waterfowl Stamps. At least 50% of the money collected is used directly in Iowa to benefit various waterfowl programs. The remaining money is presented to Duck's Unlimited each year.


J.F. LANDENBERGER