Wisconsin natural resources. Vol. 1, No. 1 January-February 1977

Madison, Wisconsin: Wisconsin Department of Natural Resources, January-February 1977

Wisconsin NATURAL RESOURCES

VOLUME 1, NUMBER 1

Ice-Canos

GEORGE J. KNUDSEN, Chief Naturalist, DNR

During cold, windy winters unique ice features, like *this* one, sometimes form on Lake Michigan's shores! I call them *"Ice-Canos"* (pronounced *ice-kaynos*) , since they resemble volcanos — *cold* ones! They develop as large waves batter the sandy shores and gradually build up steep-faced ice walls. Deep, narrow cracks form in the ice walls, and as waves force water into them the water shoots upward, falls back, and freezes, forming icy cones. Successions of powerful waves keep the "craters" open and the cones often grow to 3-5 feet in height. These features, and *many* other ice formations develop best from mid-winter on. When observing them be safe and stay well back.

Contents

Features

Wisconsin Natural Resources
January-February 1977 Volume I Number 1

Wisconsin Natural Resources is an official bi-monthly publication of the Wisconsin Department of Natural Resources, 4610 University Avenue, Madison, Wisconsin 53705.

Subscription rates are: $4.50 per year, $8.00 for two years and $11.50 for three years. Single copies $1.00. Notification of address changes must include mailing label and new address. Allow six weeks. Send subscription information and requests to: Wisconsin Natural Resources, P.O. Box 7191, Madison, Wisconsin 53707.

Application to mail at second-class postage rates is pending at Madison, Wisconsin.

Editor/J. Wolfred Taylor • Design & production/Paul Tofte/Design

Front cover

DEER:AN OLD DILEMMA FOR A NEW YEAR.
Photo by Olive Glasgow

Despite the controversy about how to hunt them, the state's official big game animal starts 1977 in good shape. This fortunate group of deer use a windswept river as a travel lane when three foot snows confine most others to the northern yards and browse gets scarce. Deer not only overbrowse the yards, they also cause traffic accidents (about 14,000 per year) and devour farm crops. Hunting them is so popular (nearly 600,000 licenses sold per year) that crowds cause safety and quality problems. Dividing the state into different zones with seasons of varying length, limiting hunter numbers in certain areas, prohibiting road hunting and other measures are all proposed solutions. The controversy involves deciding exactly how to make the change. A concensus is now forming.

Back cover

Photo by Dean Tvedt

Sunset at an ice fishing village on Big Green Lake. About 300,000 Wisconsin residents fish through the ice each winter and starting in 1977 a rule change will let them do it all night long except on the Michigan boundary. At one time big lake trout flourished in Big Green but heavy pressure resulted in overharvest. To protect the 25,000 lakers stocked each year, rules forbid use of minnows for bait in more than 50 feet of water. Limit is two per day, 17 inches long.

*See page 16 for message from the chairman

Toward a true conservatism

EPA Administrator Russell Train holds a news conference during a visit on the shores of Lake Michigan in July of 1976.

The man who heads the nation's Environmental Protection Agency gives us a New Year's Resolution: That natural resources must be treated with thrift, frugality, economy and discipline—old American virtues whose time has come round again.

RUSSELL E. TRAIN, Administrator, U.S. Environmental Protection Agency

As I start 1977 and look back at three years as Administrator of the U.S. Environmental Protection Agency (EPA) , I see considerable progress, constant controversy, occasional frustration, some mistakes, much learning and an intense satisfaction to have been centrally involved in the effort to improve our environment. The greatest part of the satisfaction has come from working with the dedicated men and women of EPA, as well as with personnel of State agencies such as the Wisconsin Department of Natural Resources, and with citizens in the environmental movement who made it all possible.

At the outset, I knew that while almost everyone would be in favor of environmental protection in the abstract, attitudes would change as the impact of new requirements began to be felt. I also knew that environmental rhetoric was easy and cheap, but real cleanup was going to take hard work, money, and sacrifice. Most citizens tend to think that pollution is caused by someone else, but the fact is that our whole society is involved and the whole society must share in the work, the cost and the sacrifice. Some think, for example, that every auto pollution problem can be solved in Detroit when in fact, all of us must reduce our reliance on cars in crowded metropolitan areas, promote mass transit, and improve maintenance of personal cars, among other steps.

I did not foresee the Arab oil embargo, the energy crisis or the recession. But these tested our commitment to environmental quality. Many were convinced all would be swept away by a backlash of public resentment. There were some who used national advertising and other means to play on public fears of energy shortages and loss of jobs to promote backlash. It has been to the everlasting credit and good sense of the American people that there has been no environmental backlash.

What has actually happened is that we increasingly recognize the need to take account of energy and economic impacts, particularly job impacts, in planning and implementing environmental programs.

The big news this new year is that we have made strong progress in cleaning up the environment. Since 1970, we have seen strong Federal laws enacted to control air and water pollution, to reduce noise, to regulate pesticides, and, most recently, to assure safe drinking water. A landmark Toxic Substances Control Act, orginally proposed by the Administration in 1971, has been passed by Congress and was signed into law October 11, 1976.

Over the five years since this legislation was first proposed an estimated 5,000 new chemicals were introduced into the commercial market without any systematic advance assessment of their potential impact upon public health or ecological resources. Until now we were without authority to cope with such long-standing problems as polychlorinated biphenyls (PCBs) and other hazards.

Over and over again, we found ourselves engaged in an extremely difficult and drawn-out

struggle to protect the public from a hazard to which it has already been exposed while at the same time trying to avoid putting people out of business and out of work.

There are those who say jobs are more important than the environment. The fact is that the environmental effort as a whole—at least on the Federal level—has a *positive* effect on employment. More jobs are created than lost. I am fully aware that these do not affect the same people at the same time in the same place so we must make every effort to achieve environmental goals in ways that ease or avert adverse impacts on jobs. Economic, social and human costs must be considered.

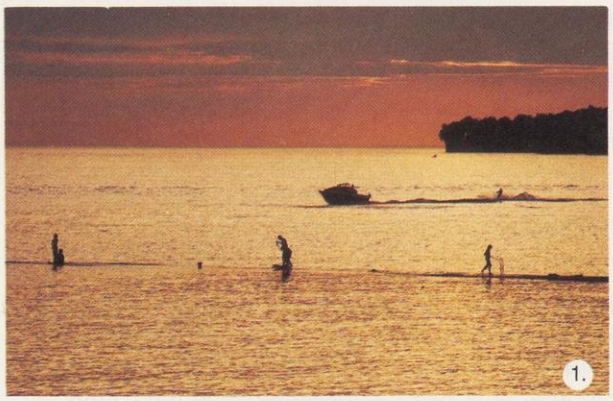
The particular conflict between jobs and the environment are, in my judgment, part of a larger problem which confronts us as a Nation—the problem of managing the transition from patterns of growth that waste resources and generate pollution to patterns of growth that seek to conserve resources, and use them in the most efficient and least polluting way possible. We need to manage this transition so that we don't find ourselves backed up against the wall by such threats as "your paycheck, or your health; your job or your life"—so that nobody is forced to trade off a full stomach against cancer of the colon.

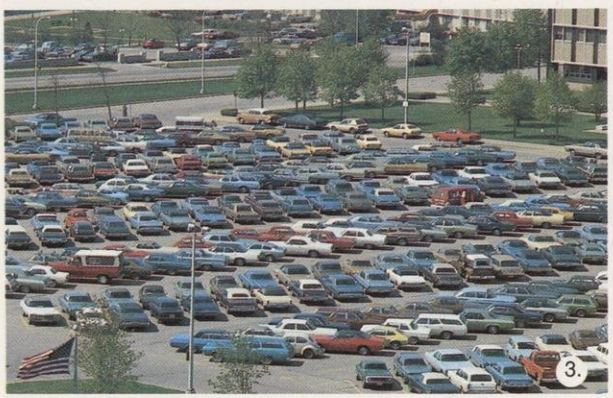
So far as energy conservation is concerned, evidence is overwhelming that we suffer not from too little supply, but too much demand. If we consume at runaway rates, and in wasteful ways, then no matter how fast we run, we inevitably lose ground in efforts to keep supply in step with demand. To throw the throttle wide open in development of energy and other resources and cast human health and environment to the winds, makes little sense when we waste so much. In no small measure our energy, environmental and economic problems reflect the fact that—in one way or another—we are living beyond our means.

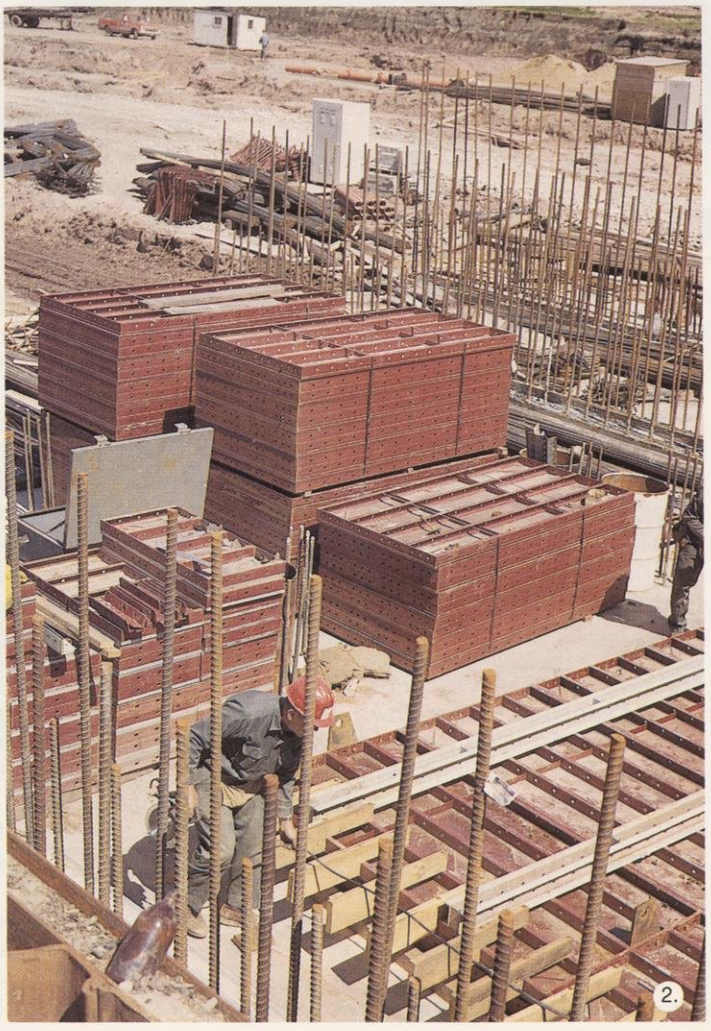
I hope that our experience over the past few years has made us sufficiently aware that the abundant resources of this land are ours not only to consume, but also to conserve. I hope we have finally come to understand that, in the years ahead, our harvest of natural resources will depend upon our ability to be sparing rather than spendthrift, provident rather than prodigal. If we understand these things, and act upon them, I see no reason why we cannot achieve and maintain—at one and the same time—sufficient energy, a strong economy and a sound environment.

All of these goals are well within our grasp this new year if we resolve, as a nation to adopt what we might call *a true conservatism* that reasserts and reaffirms some of the oldest American virtues—thrift, frugality, economy and discipline.

These are old virtues, but today—in our high-technology, high-consumption, interconnected, crowded and complex society—their time has come around once more.







1. Abundant resources of this land are ours not only to consume, but also to conserve. Photo by EPA-Documerica

2. The Environmental effort has a positive effect on employment. Photo by Staber Reese

3. Some think every auto pollution problem can be solved in Detroit when in fact all of us must reduce our reliance on cars in crowded metropolitan areas.

New threat to Buena Vista Chickens

Among the shocks — prairie chicken.*

When blue grass farming failed, Wisconsin prairie chickens were saved from the brink by friends who bought the grasslands birds needed to survive. Now other threats emerge — drainage, irrigation and pesticides. The author, Dr. Fred Hamerstrom, who first researched the chicken's salvation, is clearly worried again.

F.N. HAMERSTROM, College of Natural Resources, University of Wisconsin-Stevens Point

Chickens among the shocks — once a familiar sight in Wisconsin, older than the memory of any man. At times and in some places, "a chicken on every shock" would not have been much of an exaggeration.

But corn shocks are now almost as anachronistic as corsets ribbed with whalebone. Modern farming, with its clean fields and corn mechanically picked or hauled for silage, leaves little room for prairie chickens. Both shocks for winter food and prairie grass for nesting have disappeared. Wisconsin's chickens have been squeezed into a few odd corners not yet subdued by the plow.

The most important of these is the Buena Vista Marsh in Portage County. With the adjoining Leola Marsh, it is the southern end of a three-linked chain which stretches north to the Meade Wildlife Area. For practical purposes, all of Wisconsin's prairie chickens are in that one basket.

The Buena Vista Marsh was never prairie, and it is not now marsh. It was originally a large — roughly 50,000 acres — tamarack-spruce swamp with some open marsh. Fire, drainage, and the plow produced farmland. Throughout the twenties, thirties, and forties — in fact, until very recent times — farmers kept dairy cattle, tilled 40 acre fields, cleared new land and left untidy, weedy corners. It was not easy farming. Midsummer frosts made row cropping chancy and discouraged many a family. Those who learned to rely mainly on pasture, hay, and the harvest of bluegrass seed made a go of it, and so did the chickens.

Prairie chickens seemed secure, but land use began to intensify. The bluegrass seed industry failed. Land that had been used only for seed harvest and hay now had to be put to other uses. Some was plowed. Beef cattle rather suddenly appeared in numbers, often with severe overgrazing. Nesting cover began to disappear at an alarming rate.

This time there were no out-of-the-way corners to which chickens could retreat. This was the last stand.

It was plain that the only way to save prairie chickens was to save some grass for nesting and rearing. Grass for nests and broods does not rule out other uses. Late summer mowing and grazing — a boon to neighboring cattlemen — and even small

*Courtesy of the artist, Owen J. Gromme and Wild Wings of Lake City, Minn.

patch cultivation, are not only possible but desirable. The proper pattern of land use for chickens calls for land control. The most certain control — control that will still hold when pasture and hay are short — comes with land ownership.

In the very nick of time, friends of the prairie chicken came forward to buy grassland reserves. The first, an 80 acre pasture, was bought in 1954 by the old Wisconsin Conservation League. The first purchase by individuals was a 63 acre meadow bought by Mr. and Mrs. Gordon Kummer in the same year. In 1955 Mr. and Mrs. Clarence Jung bought a 40, and so did the Wisconsin Society for Ornithology. These beginnings were enormously important, but the pace had somehow to be stepped up. In 1958 Paul Olson set up the Prairie Chicken Foundation within the Dane County Conservation League; with the help of William H. Pugh, things began to move. Then, in 1960, the Society of Tympanuchus Cupido Pinnatus was established by Willis G. Sullivan, Sr., John Best, and Ferdinand Hinrichs and the program of private purchase reached full stride.

Today, 11,100 acres have been bought specifically for prairie chickens on the Buena Vista Marsh at a cost of well over a half million dollars. These acres are privately owned, remain on the local tax rolls, and are leased for 99 years to the Department of Natural Resources, which has responsibility to manage the land for prairie chickens. The amount of land under control plus DNR's management plan seemed to provide security for the long future.

But the story does not end there. The last few months have brought new developments. Some of the irrigators — agrobusinessmen, not family farmers — who have made a good thing of the Golden Sands which border Buena Vista now have their eye on the Marsh. They have already whittled off 5,000 acres of the drier edge along the east and north, and now wish to make a clean sweep. This calls for *thorough* drainage of the Marsh, such as there has never been before, because irrigation can be succesful only where unwanted water (spring melt, heavy rains) can be removed at will. Crops are irrigated by water pumped up from deep underground; the grass that prairie chickens and cattle require depends on moisture in the top few inches of soil — the very water that the irrigators need to get rid of.

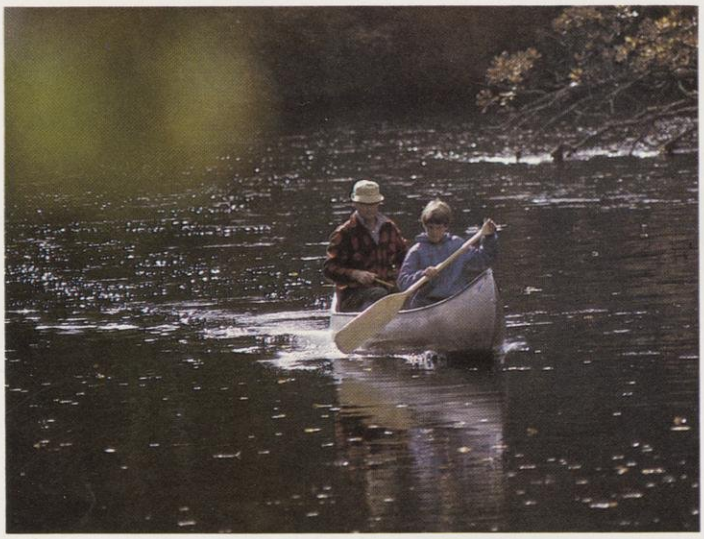
If the Marsh were converted to irrigated fields, so that the grassland reserves were surrounded and cut off from one another by bare cropland, would the existing reserves under lease to DNR then be sufficient? And what of the summer-long drift of aerially applied pesticides, some of them so poisonous that fields are posted against entry for two days? Once again the future looks scary.

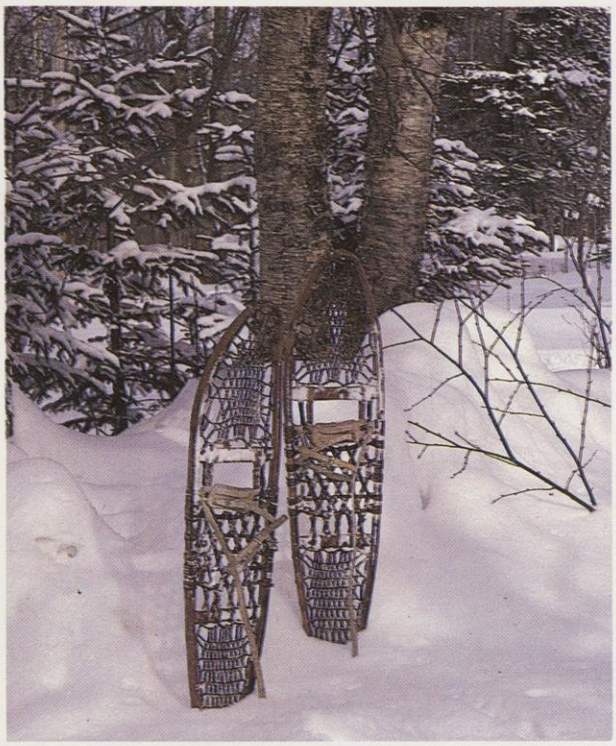
A dried out, plowed up, irrigated and pesticide doused Buena Vista Marsh would certainly be one more threat to Wisconsin's prairie chickens. An accommodation between prairie chicken raising and cattle raising, since both need grass, could be worked out. In fact, there is already a considerable amount of interchange between the two. Prairie chickens and people *can* live together here given the chance.

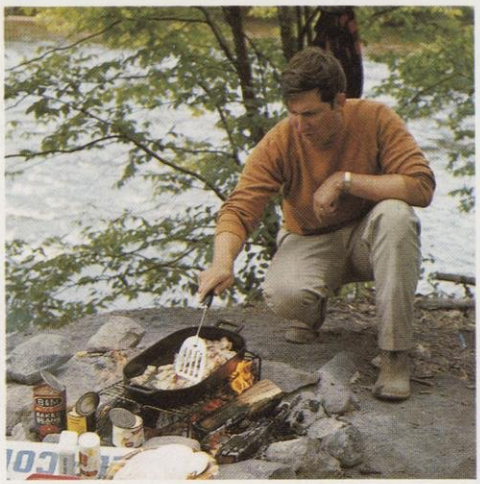
Whither Buena Vista?

Dr. Hamerstrom banding a prairie chicken.

The St. Croix River State Forest







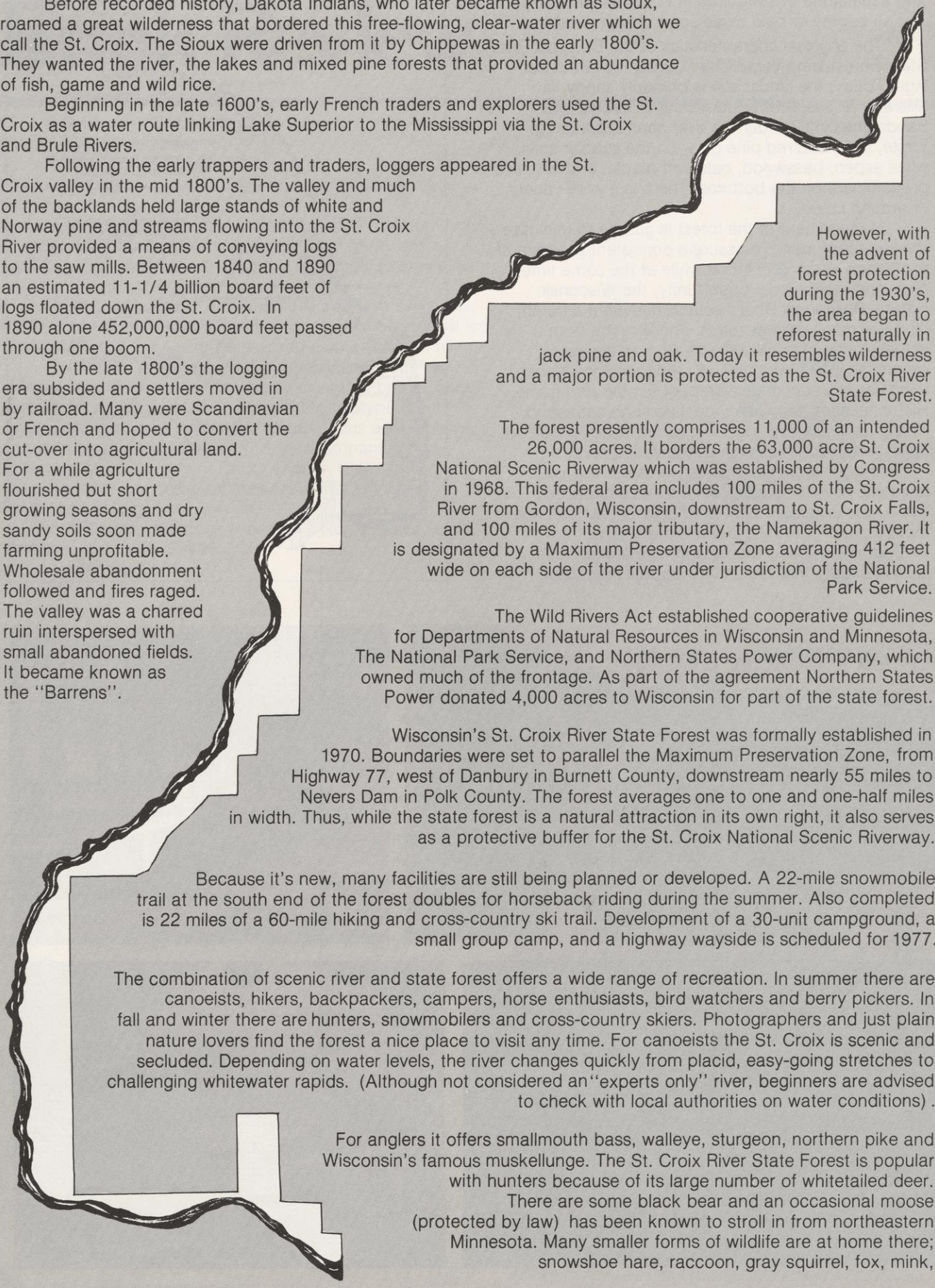
JON L. BUGENHAGEN, Superintendent, St. Croix River State Forest

Before recorded history, Dakota Indians, who later became known as Sioux, roamed a great wilderness that bordered this free-flowing, clear-water river which we call the St. Croix. The Sioux were driven from it by Chippewas in the early 1800's. They wanted the river, the lakes and mixed pine forests that provided an abundance of fish, game and wild rice.

Beginning in the late 1600's, early French traders and explorers used the St. Croix as a water route linking Lake Superior to the Mississippi via the St. Croix and Brule Rivers.

Following the early trappers and traders, loggers appeared in the St. Croix valley in the mid 1800's. The valley and much of the backlands held large stands of white and Norway pine and streams flowing into the St. Croix River provided a means of conveying logs to the saw mills. Between 1840 and 1890 an estimated 11-1/4 billion board feet of logs floated down the St. Croix. In 1890 alone 452,000,000 board feet passed through one boom.

By the late 1800's the logging era subsided and settlers moved in by railroad. Many were Scandinavian or French and hoped to convert the cut-over into agricultural land. For a while agriculture flourished but short growing seasons and dry sandy soils soon made farming unprofitable. Wholesale abandonment followed and fires raged. The valley was a charred ruin interspersed with small abandoned fields. It became known as the "Barrens".



However, with the advent of forest protection during the 1930's, the area began to reforest naturally in jack pine and oak. Today it resembles wilderness and a major portion is protected as the St. Croix River State Forest.

The forest presently comprises 11,000 of an intended 26,000 acres. It borders the 63,000 acre St. Croix National Scenic Riverway which was established by Congress in 1968. This federal area includes 100 miles of the St. Croix River from Gordon, Wisconsin, downstream to St. Croix Falls, and 100 miles of its major tributary, the Namekagon River. It is designated by a Maximum Preservation Zone averaging 412 feet wide on each side of the river under jurisdiction of the National Park Service.

The Wild Rivers Act established cooperative guidelines for Departments of Natural Resources in Wisconsin and Minnesota, The National Park Service, and Northern States Power Company, which owned much of the frontage. As part of the agreement Northern States Power donated 4,000 acres to Wisconsin for part of the state forest.

Wisconsin's St. Croix River State Forest was formally established in 1970. Boundaries were set to parallel the Maximum Preservation Zone, from Highway 77, west of Danbury in Burnett County, downstream nearly 55 miles to Nevers Dam in Polk County. The forest averages one to one and one-half miles in width. Thus, while the state forest is a natural attraction in its own right, it also serves as a protective buffer for the St. Croix National Scenic Riverway.

Because it's new, many facilities are still being planned or developed. A 22-mile snowmobile trail at the south end of the forest doubles for horseback riding during the summer. Also completed is 22 miles of a 60-mile hiking and cross-country ski trail. Development of a 30-unit campground, a small group camp, and a highway wayside is scheduled for 1977.

The combination of scenic river and state forest offers a wide range of recreation. In summer there are canoeists, hikers, backpackers, campers, horse enthusiasts, bird watchers and berry pickers. In fall and winter there are hunters, snowmobilers and cross-country skiers. Photographers and just plain nature lovers find the forest a nice place to visit any time. For canoeists the St. Croix is scenic and secluded. Depending on water levels, the river changes quickly from placid, easy-going stretches to challenging whitewater rapids. (Although not considered an "experts only" river, beginners are advised to check with local authorities on water conditions).

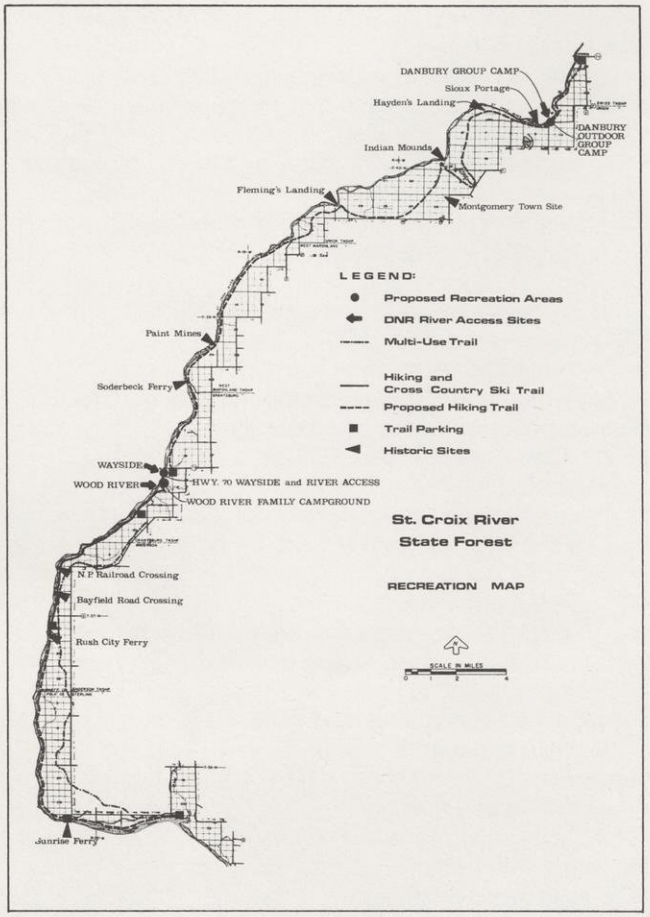
For anglers it offers smallmouth bass, walleye, sturgeon, northern pike and Wisconsin's famous muskellunge. The St. Croix River State Forest is popular with hunters because of its large number of whitetailed deer. There are some black bear and an occasional moose (protected by law) has been known to stroll in from northeastern Minnesota. Many smaller forms of wildlife are at home there; snowshoe hare, raccoon, gray squirrel, fox, mink,

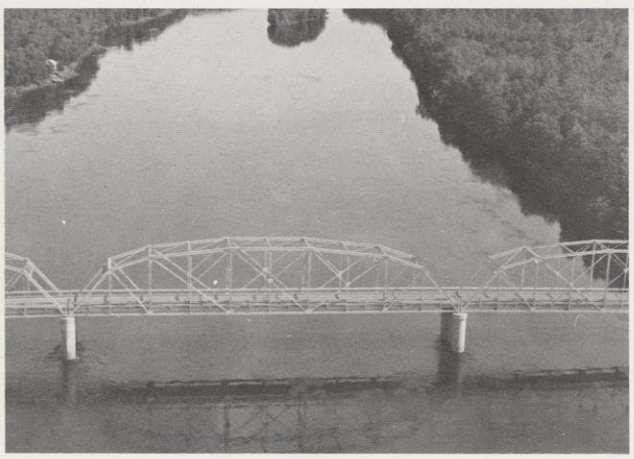
muskrat, otter, beaver, ruffed grouse, mallard, wood duck, black duck, blue-winged teal, Canada geese, and a multitude of songbirds. It is not uncommon to see an osprey or bald eagle soaring high overhead.

The physical characteristics of the St. Croix River State Forest were established during the Great Ice Age. Today, the landscape is primarily sandy flats, hills and slopes, and bottomlands or flood plain. Sandstone cliffs border the river near Grantsburg. White, jack, and red pine grow on the sandier soils, while aspen, basswood, oak, soft maple, and elm, are predominant on the bottoms. There is a wide variety of ground cover.

Management of the forest is geared to minimize the impact of man. To assure a consistent program of protection and preservation while at the same time providing recreational opportunity, the Wisconsin Natural Resources Board established eight different land use management zones. These range from a virtually untouched Wilderness Area to zones permitting intensive multi-use management for such things as recreation development, timber and game. Historical sites have been identified and cataloged. Hiking trails are designed to give the visitor a look at the different zones as well as the varied flora.

The St. Croix River State Forest serves local residents of Polk and Burnett Counties but at the same time is located only two hours by car from the metropolitan Twin Cities, and a day's drive from Chicago/Milwaukee. Come and take a look at its unique beauty this year. You'll be well rewarded.





Highway 70 bridge, near Grantsburg.

Book Review

A Season of Birds
by Dion Henderson
Illustrations by Chuck Ripper

Speaking of winter and the wild visitors to his acre, Dion Henderson writes:

"But now we are drawn close and share the common purpose: to stay merry when we may, and warm when possible, and fed if we are able; but above all, to stay alive until there is spring again."

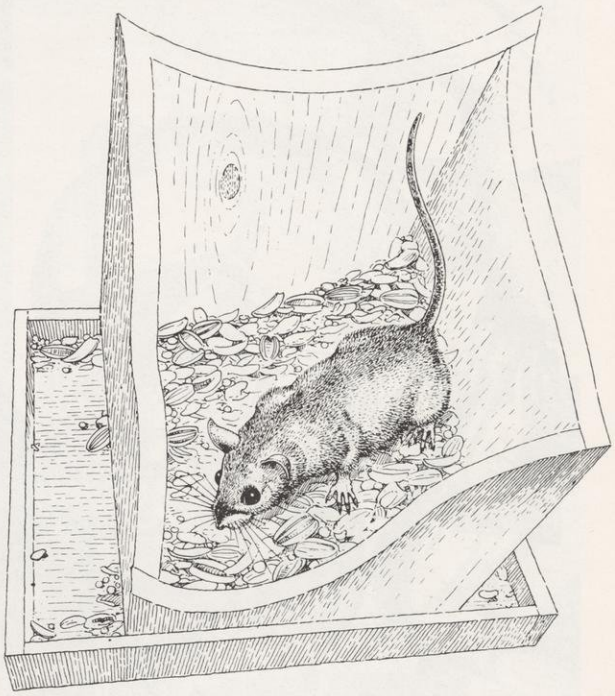
Henderson's book, *A Season of Birds,* expresses his long-time love affair with the out-of-doors in Wisconsin. It is gently reflective, meant to be savored as the seasons turn.

Henderson is bureau chief for the Associated Press in Milwaukee and he has written six other nature books, each of them an antidote for the clatter of the teletype. Each essay contains some perceptive observations about common natural experiences and is accompanied by an illustration from the pen of Chuck Ripper, a well-known illustrator who has designed many National Wildlife Federation stamps.

Publisher is Tamarack Press, 517 North Segoe Road, Madison, Wisconsin 53705.

Hardcover $5.95.

illus.



Walk When the Moon is Full
by Frances Hamerstrom
Illustrated by Robert Katona

Dr. Frances Hamerstrom is a reasearch biologist and Wisconsin author.

This book is a documented report of moonlit walks with her children and the frogs, owls, deer, lightning bugs and other wildings they met. It came into being after the children asked whether they had to go to bed early every single night until they were old. Her answer was a promise to take them exploring whenever the moon was full.

The book is written for children and is meant to be read out loud in the old-fashioned way of telling good stories.

Robert Katona's illustrations have a dreamlike quality appropriate to the subject matter.

Publisher is Crossing Press, R.R. 1, Trumansburg, N.Y. 14886

Cloth $5.95

illus.

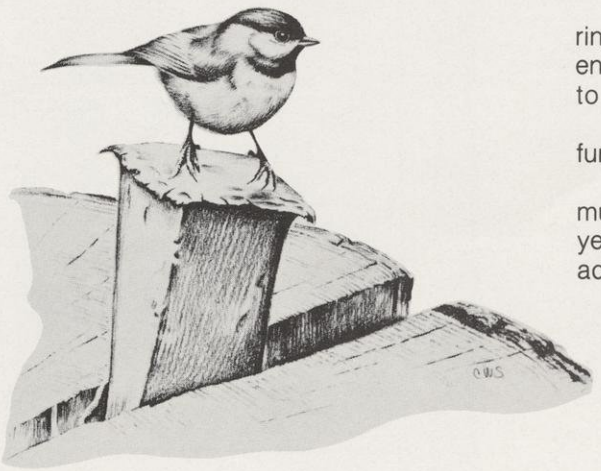
Allegory

Sketch by Charles W. Schwartz

Editor's note: A first issue of any Wisconsin Natural Resource Magazine needs some words from Leopold for perspective and luck. His enunciation of the "land ethic" gave modern environmentalists a philosophy. He was a Wisconsin Conservation Commissioner and founded scientific game management. "Allegory" was taken from "Good Oak" in "A Sand County Almanac" published by Oxford University Press in 1949. Three essays in Leopold's book were originally printed in this magazine's predecessor, the **Wisconsin Conservation Bulletin.** The sketch of the chickadee is reprinted with the kind permission of the artist, Charles W. Schwartz and Mrs. Nina Leopold Bradley who furnished the original sketch.

ALDO LEOPOLD

From A SAND COUNTY ALMANAC, and SKETCHES HERE AND THERE



Now comes the job of making wood. The maul rings on steel wedges as the sections of trunk are upended one by one, only to fall apart in fragrant slabs to be corded by the roadside.

There is an allegory for historians in the diverse functions of saw, wedge and axe.

The saw works only across the years, which it must deal with one by one, in sequence. From each year the raker teeth pull little chips of fact, which accumulate the little piles, called sawdust by

Mr. and Mrs. Aldo Leopold at the Shack, locale for the Almanac. (photo courtesy of Susan Hickey Nehls and the late Mrs. Aldo Leopold)

Aldo Leopold

woodsmen and archives by historians; both judge the character of what lies within by the character of the samples thus made visible without. It is not until the transect is completed that the tree falls, and the stump yields a collective view of a century. By its fall the tree attests the unity of the hodge-podge called history.

The wedge, on the other hand, works only in radial splits; such a split yields a collective view of all the years at once, or no view at all, depending on the skill with which the plane of the split is chosen. (If in doubt, let the section season for a year until a crack develops. Many a hastily driven wedge lies rusting in the woods, embedded in unsplittable cross-grain.)

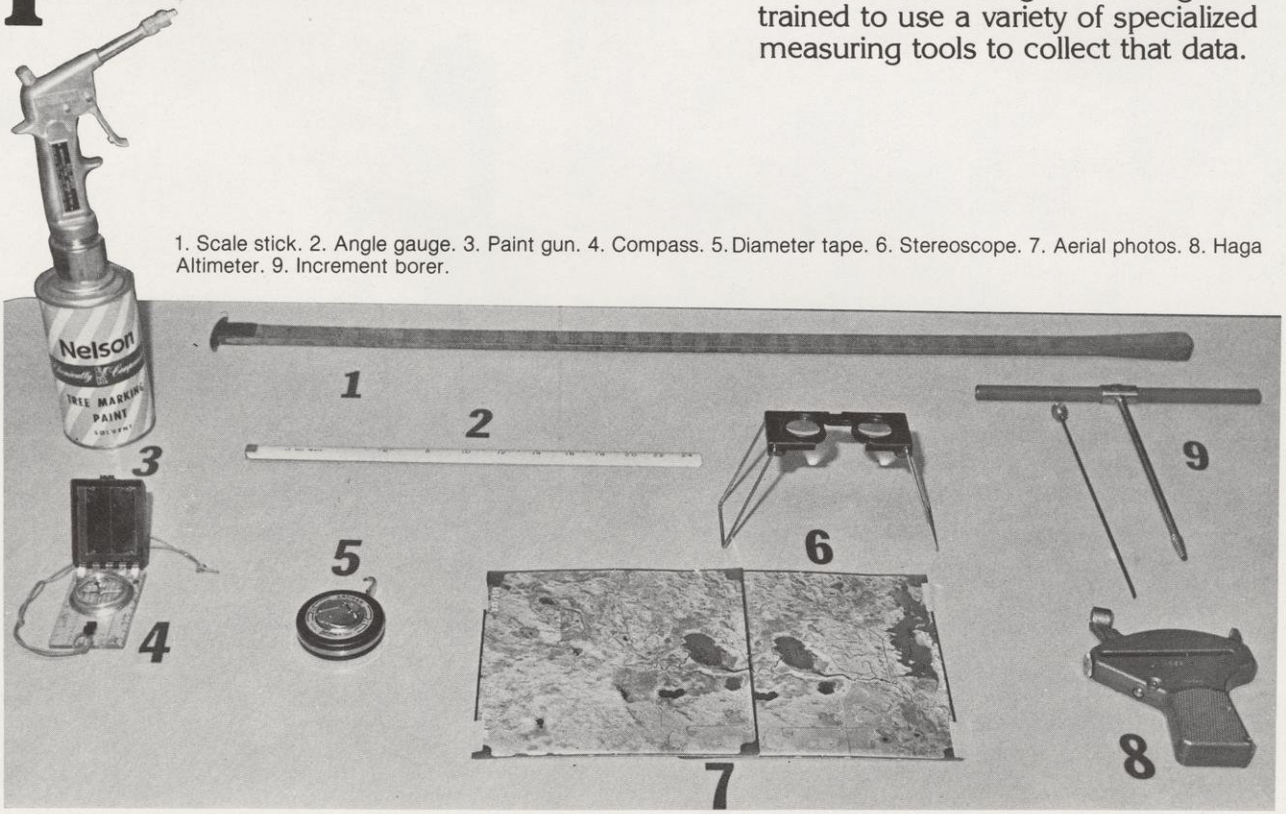
The axe functions only at an angle diagonal to the years, and this only for the peripheral rings of the recent past. Its special function is to lop limbs, for which both saw and wedge are useless.

The three tools are requisite to good oak, and to good history.

These things I ponder as the kettle sings, and the good oak burns to red coals on white ashes. Those ashes, come spring, I will return to the orchard at the foot of the sandhill. They will come back to me again, perhaps as red apples, or perhaps as a spirit of enterprise in some fat October squirrel, who, for reasons unknown to himself, is bent on planting acorns.

Tools of the profession

Forest management, even in an age of computers, still depends on basic data gathered from the land. The forester, among other things is trained to use a variety of specialized measuring tools to collect that data.



1. Scale stick. 2. Angle gauge. 3. Paint gun. 4. Compass. 5. Diameter tape. 6. Stereoscope. 7. Aerial photos. 8. Haga Altimeter. 9. Increment borer.

1. Scale sticks measure the volume of cut trees in board feet.

2. Angle gauges or "cruising sticks", help determine how dense a stand of timber is. The gauge has a built in mathematical formula that gives the forester basal area (square feet of wood per acre) and volume in cords or board feet per acre. This is useful data in thinning a stand.

3. Paint guns sometimes replace the axe. They mark trees for cutting or define project boundaries.

4. A hand compass helps maintain accurate control of location in relation to maps and aerial photos. A popular style has a rotating face which can be set for running a line of travel at any angle. The cover usually has a mirror on the inside that aids in projecting the line of sight to a distant object.

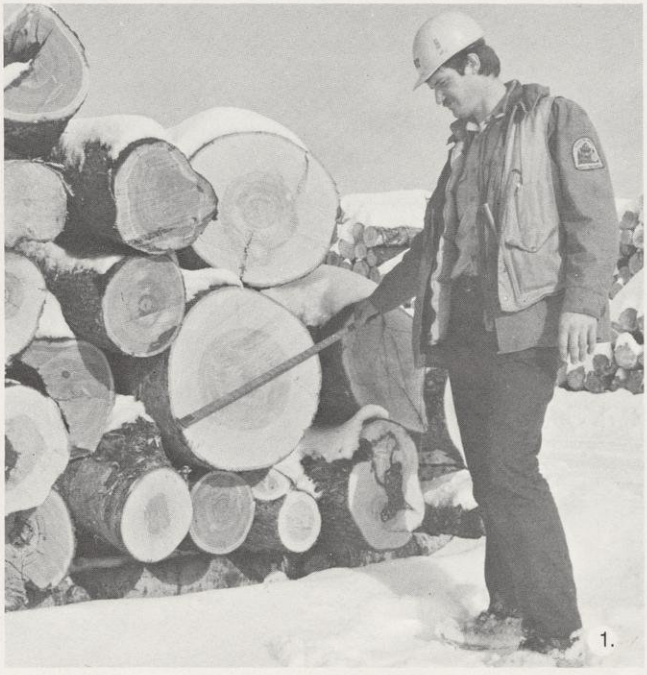
5. Diameter tapes help determine volume and growth. When wrapped around a tree, the reading gives the diameter, not the circumference.

6-7. The stereoscope is used with aerial photos for detailed mapping of forested areas. Roads, lakes, rivers and various timber stand types can be seen on the photos. Accurate maps are vital to most land management. The stereoscope allows foresters to look at the photos in three dimension. Hills, valleys and even tree height differences can be seen. Acreages also may be computed from the photos.

8. Tree heights are measured with a Haga Altimeter by sighting top and bottom and then reading the height from the instrument scale.

9. An increment borer extracts a core of wood from a tree. Annual growth rings can be seen and used to plan harvest dates.

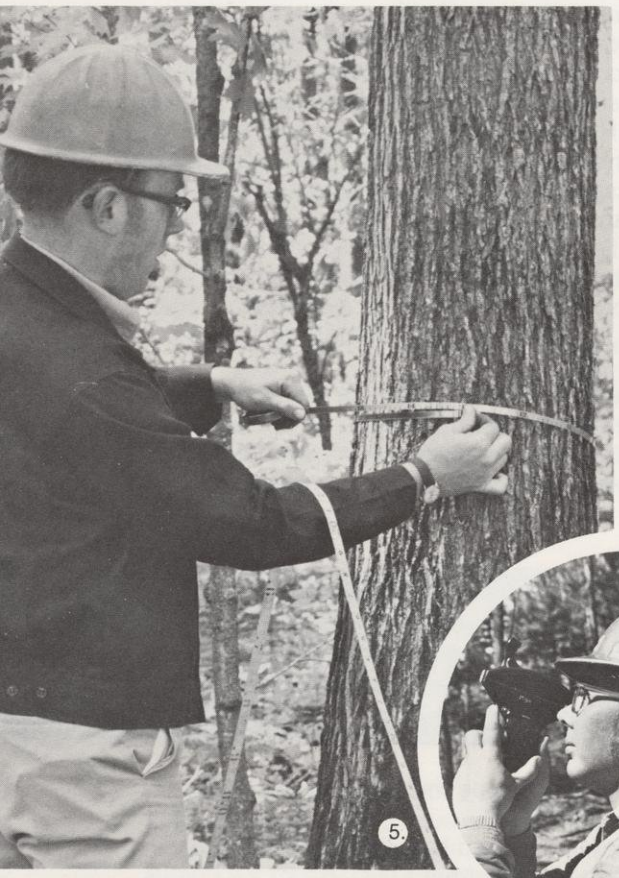
RALPH HEWETT, Timber Management Forester
Northern Highland-American Legion State Forest

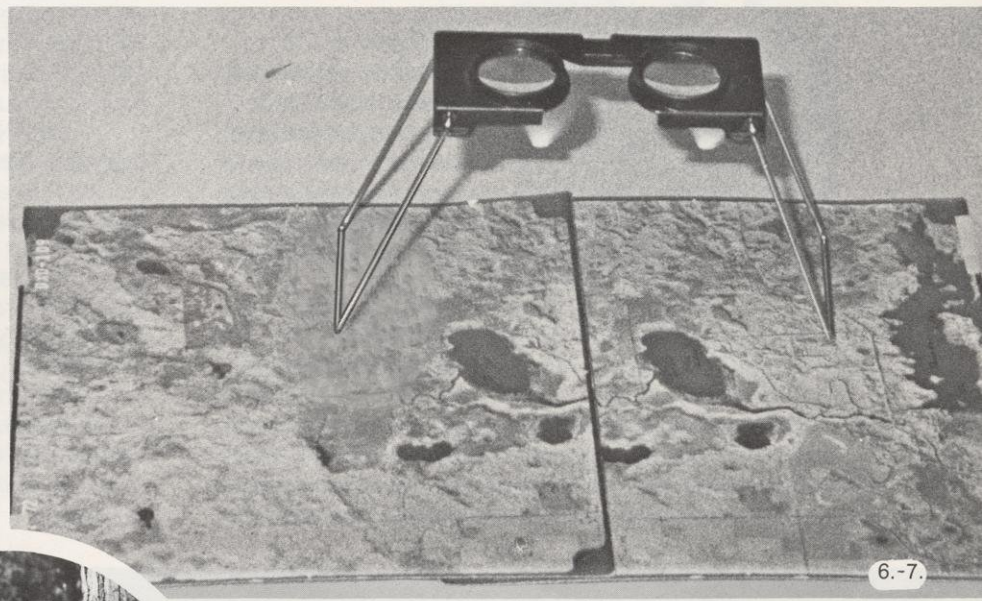


1.

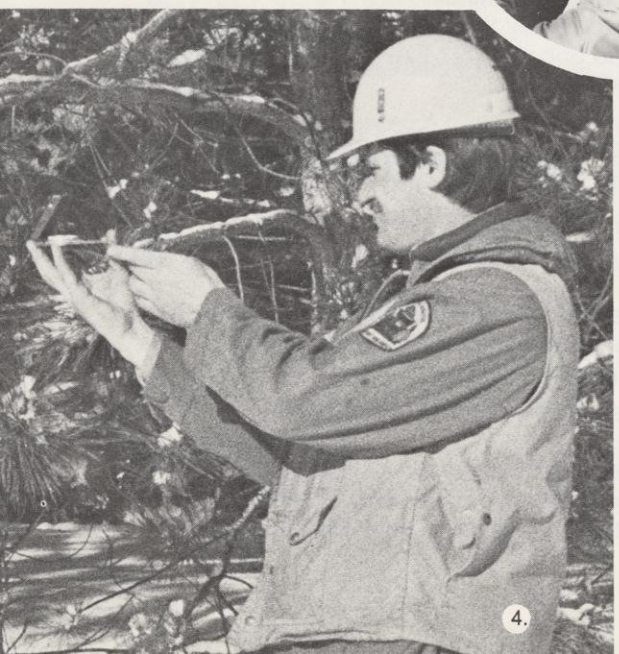

2.


3.


5.

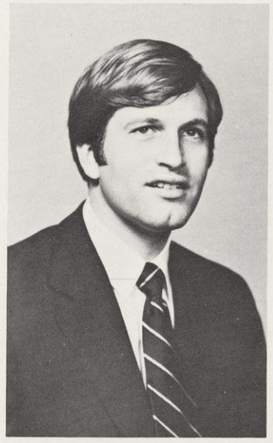

6.-7.


8.


4.


9.

From the board



The Natural Resources Board is again working on a strategy to combat the litter and resource waste caused by nonreturnable beverage containers. Effective remedies will require legislation.

The Board thinks —The sale of cans with detachable pop-tops should be banned. This would mean use of the new nondetachable type and should result in cleaner, safer recreation areas.

Nonbiodegradable plastic binders used to package beverage can six-packs should be prohibited. These are unnecessary, visually offensive and can harm wildlife.

A deposit should be required on sale of all bottle and can beverage containers. Other states with such laws find this to be an effective way to reduce litter and save cleanup money. To date there has not been sufficient support for legislation of this kind and therefore consideration should be given to a statewide advisory referendum on the question.

Another item which has generated much public interest is the proposed new format for the deer hunt, particularly the idea of using zones to influence hunter distribution. Public informational hearings have been held and many thoughtful comments and suggestions received. While Wisconsin sportsmen should not expect implementation of a zoning requirement in 1977 they should expect further consideration of alternatives to reduce hunting pressure to continue to receive discussion by the Board and public.

The DNR budget proposal for the 1977-79 biennium has been prepared. It highlights a grant program to assist municipalities in construction of treatment plants. It also seeks a $2.50 trout stamp for stream trout fishing with all monies received to be applied to rehabilitation and maintenance of Wisconsin trout waters. The budget has been submitted to the Governor and soon will go to the Legislature.

And finally, the Board applauds the new format of this magazine. We hope that during the new year and thereafter you find it instructional, entertaining and a valuable asset to your interest in natural resources.

The readers write

Readers are invited to express opinions on published articles. Letters will be edited for clarity and conciseness and published at the discretion of the magazine. Please include name and address. Excerpts may be used in some instances. "Letters to editor" should be addressed to Wisconsin Natural Resources magazine, Box 7921, Madison, Wisconsin 53707.

Support fee

Thank you for the years of free issues. It's now my turn to be a supporter and I dón't mind paying the price. **WILLIAM ZIEGER, 4702 N. 21st St., Milwaukee, Wis. 53209.**

—You will now lose all of those who expect something for nothing. **MARTIN MITTERMILLE.**

By far the best Bulletin I've ever subscribed to. Keep up the good work. Thanks, **JOHN H. LANGSDORF**

Please consider for discussion a one time life payment for the "Bulletin".

I strongly believe many persons would pay $50—$200 for a life subscription. Thank you, **STEVEN L. FOUST, Oshkosh.**

I was shocked to see that inflation has finally caught up to D.N.R. also.

For years I wondered how you could put out such a fine magazine for free!

But do you really think that it was necessary to go from free to 65¢ a copy? **EARL D. KLUG, 2153 S. 97th, West Allis.**

Will pay reluctantly

In regard to charging for your valuable magazine—let me comment that I think it is well worth the price!

However I still think it is a bit unfair to those who buy a complete sportsman's license. **LORINDA WEBER, Stratford.**

I have enclosed a check to sustain my subscription.

However I do not approve of the new policy. The sportsman pays enough in fees and taxes and is not a burden on other "taxpayers". **ROLAND L. KAYE, New Berlin.**

Editorial

What does the editor say about the first issue of a new magazine? It was fun-frantic-anxious work. Everybody worried, but here we are with a Happy New Year publication.

It received cooperation and help from hordes of people, all, for the most part, given gladly.

Even before it was an idea, it was what the bureaucracy calls a "decision item." Secretary Tony Earl and the Natural Resources Board decided to keep publishing even though we went broke last year and had to skip four issues of the old "Bulletin." They decided to charge a subscription fee, put out a better magazine and try to reach more readers.

After the decision, came guidance. It was provided by DNR's Editorial Board, patiently chaired by our Research Editor, Dr. Ruth Hine.

Here's what the Editorial Board wants the magazine to do:

1. Communicate with as broad a segment of the Wisconsin citizenry as possible.
2. Identify and explain active DNR programs and tell how they help accomplish the basic goal of resource management and environmental protection.
3. Stimulate development of public attitudes on environmental ethics.
4. Present current thinking of the Natural Resources Board and the Department and provide leadership on various major issues.
5. Identify problems and explain DNR policies, goals and principles that must be considered in reaching solutions (i.e. deer-forest relationships, mining, PCB's, financing pollution clean-up, land use planning, etc.).
6. Be entertaining.

Wisconsin Natural Resources will try to do all that and more. Watch us in 1977. We want to get better with each issue and in a year or so get bigger.

Meantime, during the pauses in production, the new magazine will be haunted by a 40-year tradition of excellence (1936-1976) established by previous Bulletin editors Neiman Hoveland, Ruth Hine and the late Ed Hein. It will also be aware of an even more remote predecessor, *The Wisconsin Conservationist* which was published from 1919 until 1922.

Ringing out the old gives both perspective and humility. For example, in 1919 *The Conservationist* published a "Hunter's Creed." It is now 58 years later, but take a look at page 23. In 1949 Aldo Leopold published his philosophy on the land ethic. It is now 26 years later, but take a look at pages 19-21. The search for answers to serious resources questions is still on. The aim of this magazine will be to help readers find them and furnish some lore and good reading along the way. HAPPY NEW YEAR!

Fine publication! Don't want to be without it. I think it's a mistake to squander your meager resources on color. Concentrate on substance. **BENTLEY COURTENAY, Madison.**

I am sending for your Bulletin but my husband told me not to. He enjoys reading it but the price is way out of line.

Every time a person turns around the government charges for it. Cut the spending on some of these high priced fish hatcheries—they don't help small stream trout fishermen much—mostly big lakes. **MRS. KENNETH BUNN.**

Oppose fee

Now with the cost of everything continuing to rise we do not feel we can afford to add to our outgo of funds—so we'll have to say Good Bye to a finely edited magazine.

Thank you for the years we did enjoy it. **RAYMOND HOTOPP.**

I have bought a Sportsman license for more years than I care to count.

I believe you have now convinced me to buy just a fishing license and in a couple of years I am not even going to need that.

Thank you for saving me some money. **ELTON VAN HORN.**

After removing a million acres from tax rolls, getting us all to pick up added taxes, now I should pay for the only decent magazine out?? **E.J.D.**

To start charging for the Conservation Bulletin is ridiculous. I've been supporting the DNR for many years—four Sportsman licenses in my household with one Bulletin. Was that asking too much?

Please do NOT send me the Bulletin. **VERN WALSER, Fond du Lac.**

I do this against my better judgment! Between license fees, snowmobile fees, boat fees and now this — where the hell does it end? **BRUCE JENSEN.**

Nonpoint source pollution

Nonpoint source pollution is a great burden to Wisconsin waters. DNR has just started to lift it. To finish successfully will require a good assessment of the breadth of the problem, public participation and understanding, cooperation by government agencies and maybe legislation.

TIM WARNER

Nonpoint source pollution is a great burden to Wisconsin waters. DNR has just started to lift it. To finish successfully will require a good assessment of the breadth of the problem, public participation and understanding, cooperation by government agencies and maybe legislation.

Industrial and municipal waste systems have traditionally been blamed for poor water quality in Wisconsin. Discharge from these "point" sources is easily photographed, measured, and otherwise shown to be fouling lakes and streams.

Point sources used to be the sole target for cleanup.

But now it's becoming obvious that to restore water quality we have to re-aim at something more diffuse: "nonpoint source pollution". What's that? Well, to put it simply, nonpoint source pollution is the degradation of lakes and streams by pollutants which are picked up in rainwater as it runs off urban and rural land and into surrounding surface waters.

Pollutants in these runoff waters include nutrients, pesticides, heavy metals, various oxygen demanding materials, and large amounts of soil. In urban areas sources include construction site erosion, stormwater runoff, traffic-related wastes, litter, lawn fertilizer and grass clippings. Major sources of runoff pollutants in rural areas are unprotected farm fields, improperly handled manure, and mining activities.

Because these have such an immense impact on water quality, control of industrial and municipal discharges will not alone solve our water woes.

Fortunately, the effort to control runoff pollution is now steadily gaining ground in Wisconsin. The following points capsulize where the effort has brought us and where it might take us.

Professional statewide assessment of the nonpoint pollution problem is now a federal requirement.

Since passage of amendments to The Water Pollution Control Act by Congress in 1972, waste treatment planning, also known as Section 208 planning, has required significant nonpoint pollution evaluation. As the principal agency responsible, DNR is working to establish an effective statewide program to assess and control it.

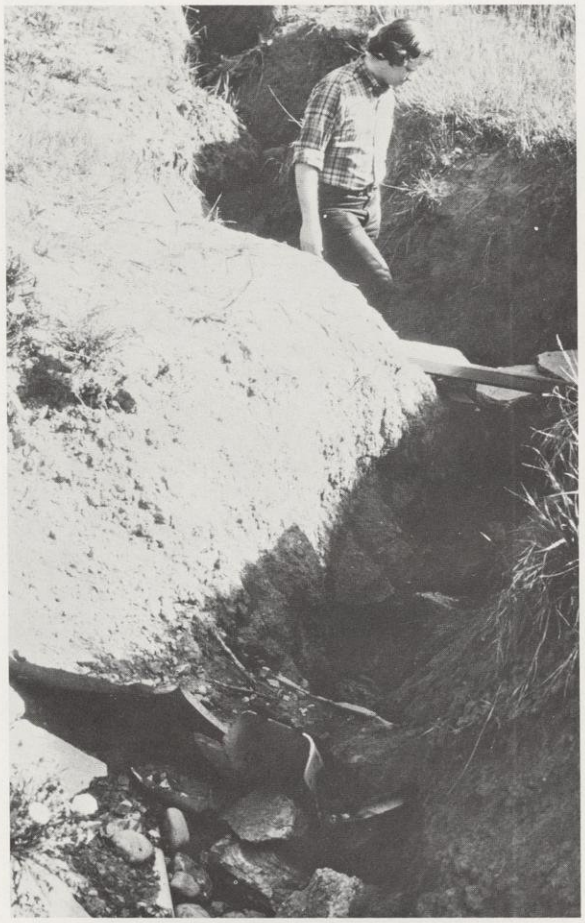
Because runoff pollution is so diffuse and relatively unstudied, a control program is still a few years away on DNR's overall nonpoint planning schedule. In the words of John Konrad, special studies coordinator for the nonpoint program, DNR's first concern "is to identify the pollutants and assess the magnitude of the problem." Konrad is quick to point out that DNR will rely on the assistance of other state, federal and local agencies in this work.

A Statewide Water Quality Advisory Committee, made up of representatives from various state and federal agencies, has been established to provide overall coordination.

DNR's 1976 Water Quality Report to Congress is an example of cooperative effort to evaluate the problem. *The report estimates that over one million acres of Wisconsin lands are in critical need of soil conservation measures.* A "critical need acre" was defined as an acre with soil losses in excess of 20 tons per year. Combine this estimate, described by Wisconsin State Board of Soil and Water Conservation Districts (SWCD) Board Member Leo Mulcahy as "conservative if anything," with the fact that it measures solely the magnitude of soil erosion, and the urgency of the nonpoint pollution problem becomes evident.

Nonpoint pollution control is not synonomous with soil conservation.

There are three major differences: First, and most important, nonpoint pollution control is designed to improve water quality. In contrast, the U.S. Soil Conservation Service (SCS) and Wisconsin State Board of Soil and Water Conservation Districts (SWCD) sediment control programs are primarily intended to enhance agricultural production by reducing erosion. So while soil losses that don't affect



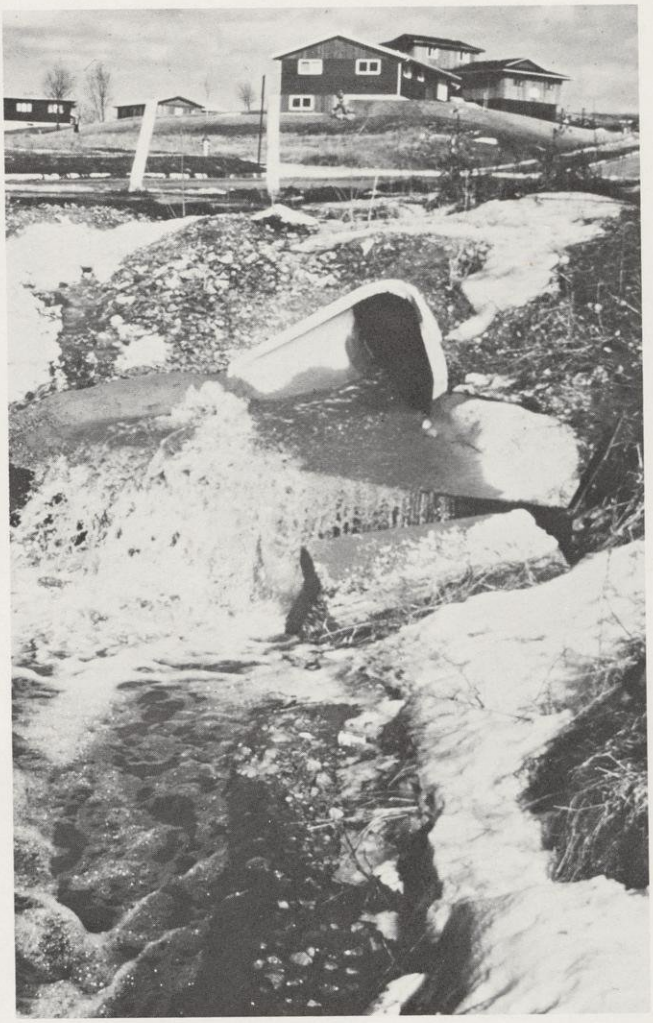
productivity — but do affect water quality — have not been a major concern of soil conservation programs, they are considered vital in nonpoint pollution control.

The second difference involves scope. Nonpoint pollution programs, in attempting to improve water quality, will be concerned with *all runoff pollutants in all areas.* The soil conservation programs are by and large concerned only with soil erosion in the agricultural setting.

A third difference—and one that promises to be controversial — is the legislation that might be necessary to implement a successful nonpoint pollution program. Soil conservation programs are largely voluntary, with increased productivity providing incentive for cooperation. Most nonpoint pollution control, however, has no obvious economic incentive. In fact, many of the control measures may be rather costly, with clean lakes and streams the only payoff. So to obtain statewide cooperation in solving the problem, legislation will probably be necessary.

Right now, however, DNR is gearing the statewide program toward voluntary activity and hoping to keep new legislation to a minimum. Various incentives will be looked into and the potential of existing legislation thoroughly reviewed. It may turn out that more consistent enforcement of current state, federal, and local regulations is all that is needed.

Every county in the state has unique nonpoint pollution problems. The reason is simple: land uses, land formations, and surface waters vary from county to county. Public concern and financial resources also differ from area to area. Differences make it essential



for DNR to consider the unique problems of each county in developing a statewide nonpoint program.

The cooperation of SWCD's which correspond to the state's counties, will be invaluable to the DNR in its potential appraisal of these unique problems. The SWCD's will develop local contacts and encourage local input.

DNR is also equipping its own Districts with water quality monitoring materials so they can concentrate on nonpoint monitoring in their own areas. This monitoring will generally assess the nonpoint pollution load of representative watersheds.

Monitoring during *high* water — especially in springtime is crucial to accurate gauging of nonpoint pollution because runoff pollutants are more concentrated in high waters. By contrast, *point* source pollution is monitored carefully during low water. This is because the amount of point source pollutants does not increase as runoff water increases. Point source pollutants are more concentrated in low water levels. DNR District monitoring programs will also measure precipitation.

An example of nonpoint monitoring is the program by the Dane County Regional Planning Commission in cooperation with the local SWCD. Dane County has set up five different monitoring stations in representative rural watersheds to determine the impact of rural land use activity on water quality. In addition, four urban areas are being sampled to identify and measure specific pollutants being carried in their runoff.

By identifying the amounts and forms of pollution nonpoint planners can then identify sources and, hopefully, recommend feasible water management techniques and "Best Management Practices" to control the pollutants.

In Dane County and all DNR district programs the primary emphasis is on water quality. Assessment of quality will precede identification of sources and recommendations for control. This is why DNR is organizing its districts to focus on nonpoint monitoring. It is a preliminary to controls.

To succeed, nonpoint pollution programs need public participation and it must take place during as well as after the planning process. To encourage this DNR urges citizens to participate in SWCD planning sessions. Special SWCD community meetings and areawide seminars are also being held.

Local officials will play a significant part in evaluating potential sources of financial assistance and cost-sharing available to the community.

DNR will have a program to educate citizens about nonpoint pollution and UW-Extension will work closely in this.

Hopefully, educated citizens involved in the planning process and guided by professionals will enact responsible controls based on public sentiment.

Since we all generate runoff that fouls our lakes and streams, we're all obligated to join forces to control it. We can do this if everyone helps and DNR will give all of you the chance.

Photos by Dane County Regional Planning Commission

Hunter Ethics

A 30-member citizens committee, nearly all hunters but some non-hunters, was asked to examine hunting ethics as practiced in Wisconsin with the overall objective of recommending action to upgrade the sport. They did it with firmness and conviction. This is the essence of their report.

A Committee Report

The committee takes a strong position that hunting *is* an ethical sport and that hunters have perpetuated many species of wildlife and provided countless hours of recreation for many citizens. Hunters have effectively supported wildlife programs by providing funds through licenses and voluntary contributions of time and money to improve habitat and populations of both game and nongame species. Sportsmen have helped save some species that had been reduced to critical levels by environmental degradation or early market hunting. They are an effective voice in working to preserve natural resources.

Unfortunately, there are some bad apples who are highly visible and whose behavior is assumed by nonparticipating onlookers to be typical of the majority. They are not typical. Most sportsmen are well behaved and obey the rules. However, the committee believes that obeying rules and laws imposed by government does not in itself guarantee ethical conduct. Ethics are something more and the committee tried to express this.

Starting with nearly 100 problem situations, 12 items of major concern were sifted out for action and categorized as either regulatory, educational or administrative.

Under regulatory, there were five recommendations:

1. Require a hunting license examination to guarantee competence afield. An examination to qualify for ones first hunting license was especially supported. It would involve comprehensive abilities including basic knowledge of regulations, wildlife specifics, firearms, landowner rights and a vision check. As a practical matter, a grandfather exclusion would probably be necessary to put it into effect.
2. Reestablish the original sportsman's license concept to provide for a contribution by the purchaser. It would be earmarked for specific wildlife programs.
3. Eliminate road hunting. It tarnishes the hunter image, is not safe and is likely to involve trespass on private lands.
4. Provide authority for hunter density control, especially on public land. Safety, courtesy, ethics and adherence to regulations all suffer if the outdoors is overcrowded and competitive. Regulations and management practices that attract too many people also need to be changed.
5. Require backtags for all hunters for identification purposes.

Turning to education, the committee wants to:

1. Start an improved program to teach all hunters about the biological and social factors that affect their sport. It would go beyond present hunter safety training which aims at beginners and include all hunters.
2. Encourage courts to impose stiff uniform penalties in all parts of the state for game law violations.
3. Encourage use of hunting dogs.
4. Establish a code and require that it be signed so that hunters know what is expected of them beyond printed regulations furnished with the license. The code is shown in the attached box.

Under administration:

1. Increase the level of law enforcement. Hire more wardens and encourage other law agencies to cooperate with DNR during hunting season.
2. Simplify and clarify regulations so they are easily understood by all.
3. Establish a program of incentives for private landowners that will help keep their land open to public hunting. This will help eliminate many trespass problems.

Hunters and decision makers in private organizations, state agencies, the Conservation Congress, and the Legislature will review and refine these recommendations during the next few months. Whatever they come up with will then be implemented where and when it can be. The trick will be to satisfy as many factions as possible. The result should be a better outdoor experience for everyone from the hunter, anti-hunter and landowner to the sightseer and casual observer. Hopefully it will not take too long.

CONTINUED

ethics committee comments...

The Creed of the Wisconsin Sportsman

I will:

Set a personal example to broaden public understanding of sport hunting as a valuable form of outdoor recreation and an essential tool of wildlife management, and recognize that my conduct is a reflection on the collective hunter image;

Go afield mentally equipped with a knowledge of the species I seek, the game laws and regulations I am pledged to obey, and the character of the habitat in which I hunt;

Go afield physically fit and equipped to demonstrate gun safety and markmanship that will assure a safe, clean, conservative harvest;

Consider myself an invited guest of the landowner, seeking his permission, protecting property from damage and litter, and so conducting myself that I will be welcome in the future;

Recognize fully the rights and privileges of my fellow hunters, and of the nonhunting public, engaging in fair, honest sport, courteous relations, and sportsmanlike acceptance of results;

Shun hunting practices that degrade the safety and caliber of the sport: careless gun handling, road hunting, gang hunting, and other practices which are dangerous or unethical;

Treat my quarry, alive or dead, with profound respect, engaging only in fair chase, retrieving all game, and utilizing it fully, seeking primarily a priceless outdoor experience, enjoying companionship and scenery as well as a beneficial hunting experience;

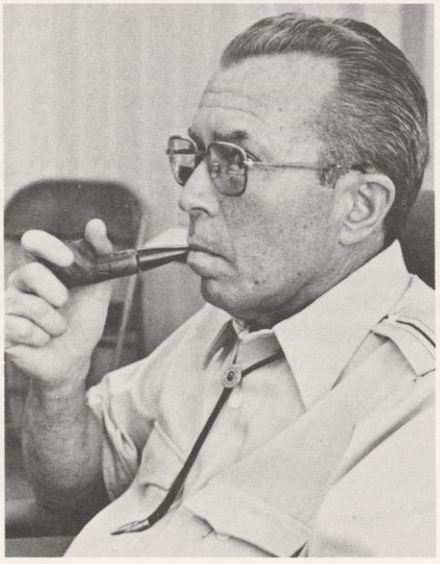
Support wildlife management projects, hunter control policies, and law enforcement programs that protect and increase the quantity of wildlife and the quality of the quest;

Support organizations offering public leadership in campaigns for broad environmental quality, energy conservation, and ecological education;

Respect the privilege of hunting and the ethic of its pursuit, and initiate hunters of all ages in that spirit.

PHIL SANDER, Kenosha Conservationist & Sportsman:

Sportsmen have to start policing themselves. They know what's ethical and what's not.



CLAY SCHOENFELD, Chairman of the subcommittee that drafted the Sportsman's Creed:

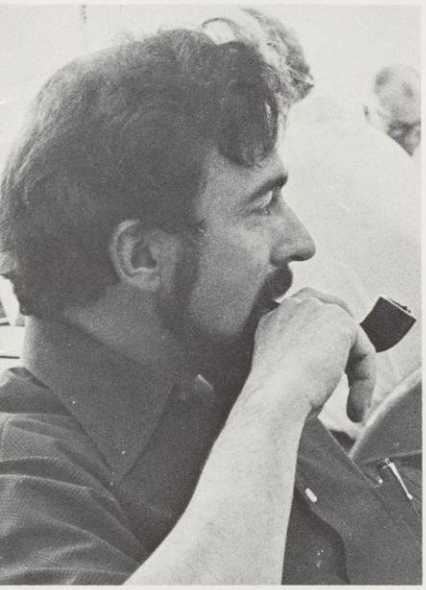
A written statement won't make anyone ethical but it provides a guideline against which a hunter can measure his conduct.

KAREN RUSCH, Rib Lake Non-Hunter and Conservationist:

I am enthusiastic about the educational recommendations and this is a good start, but we also need to ask whether, in fact, some hunting now being done should not be further restricted or forbidden for the good of the species involved.

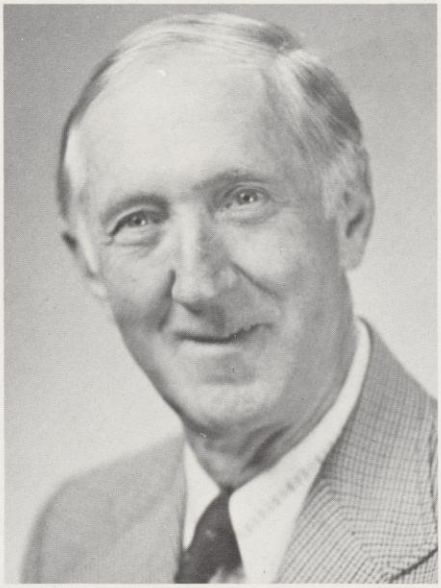
FRANCIS "BILL" MURPHY, Chairman, Conservation Congress:

A first time, new approach to problems which become worse each year.



TOM HEBERLEIN, U-W Madison social psychologist:

Hunting is more than a sport. It's almost a social institution.

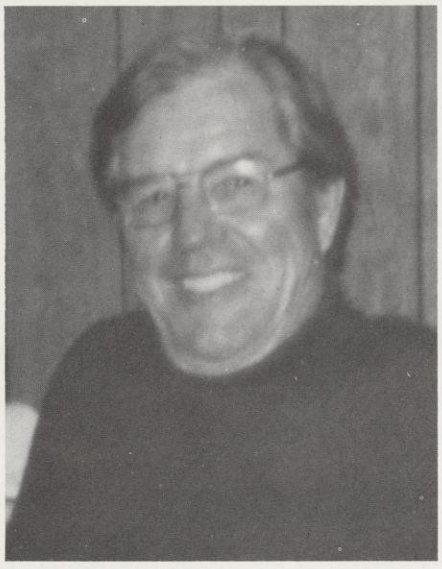


ROBERT A. MCCABE, Professor, Wildlife Ecology, U-W Madison:

The ethical hunter behaves with dignity and concern for the wildlife resource when there are no eyes on him to approve or disapprove.

JOHN KEENER, Director, DNR's Bureau of Wildlife Management:

Resource agencies today can't stop at merely managing fish and wildlife to provide large populations. They must also make certain that use of these populations by the public is above reproach.



DICK HEMP, Wisconsin Wildlife Federation, editor of Wisconservation:

The hunter ethics committee report is not all inclusive but it did well in reviewing and re-emphasizing age old values of sportsmanship and addressing these to the needs of the hour.

Hunting Ethics Committee

John Keener • David Backus • Dale Cattanach • Gary Connell • Anne Fancher • Arthur Freiheit • Thomas A. Heberlien • Richard A. Hemp • Duane Kreb • Gerald Laudon • Robert A. McCabe • Charles R. Morgan • E. J. Morse • Francis W. Murphy • Fred Pinkerton • William Radies • John W. Renk • Ronald C. Ross • Karen Rusch • Phil Sander • Robert F. Schaefer • Clay Schoenfeld • Robert W. Skiera • J. R. Smith • Roger Staven • Gene Taylor • Daniel Trainer • Cornelius J. Wallendal • Terry A. Willkom • James H. Zindl • Stanton P. Helland •

Riddle of the effigy mounds

The author, a long time student of Eskimo culture, has discovered customs he believes explain why Wisconsin's effigy mounds were built. Professional archeologists may disagree, but this summary of his ideas are one man's interpretation of the facts as he found them.

LEWIS P. RASMUSSEN, Kenosha, Wisconsin

Who built Wisconsin's effigy mounds? When? What were they supposed to represent? Why were they made in the shape of birds or animals? Who was buried in them?

Ever since the first Europeans arrived answers have eluded us, and the secrets remained a perplexing riddle.

During the past 100 years, archeologists determined those who built the effigies were members of a unique culture, and gave them the name "Effigy Mound Builders". They were a highly-specialized offshoot of more numerous predecessors, the Woodland Culture.

When the first settlers arrived in Wisconsin, they found thousands of effigy mounds in the southern half of the state and in a few adjoining areas. Today, we count them in the hundreds and nearly all are located on private land, headed for ultimate destruction by plow or bulldozer.

Early surveyors continually referred to the mounds as *ancient works.* Modern archeologists using new dating techniques have set construction at somewhere between 600 and 1000 A.D.

In their various shapes of birds, animals, and reptiles, the effigy mounds have long baffled both archeologist and historian.

Some believed the particular shape of mound indicated a specific clan, or tribe, to which the group belonged. Still others felt they represented some mythical creature, living only in the minds of the people. However, both ideas may now be considered obsolete. If a mound did indeed indicate clan affiliation, why then were different-shapes built in the same burial area by the same group of people?

The question of *why* the mounds were built at all, in whatever shape they happened to occur was the most extraordinary riddle of all. For 500 years we have been told we did not know the answer...for 500 years since the first settlers came to America, the mystery has persisted.

Recently, and quite by accident I think I found the answer while documenting tribal customs of Canada's remote Eskimos. Their customs, as practiced down to the immediate past, proved identical with those of the prehistoric Indian Effigy Mound Builders 1,000 years ago.

A look at the sequence of these people's way of life reveals a series of events, culminating in a climactic elaboration of an entirely new spirit concept, and the fulfillment of an idea offering hope for perpetual immortality.

Effigy Mound Builders were among the first North Americans to farm crops. An increase in human population, coupled with a steady decrease in wild game, prompted them to turn from full-time hunting to at least part-time farming.

They grew maize, squash, beans and their favorite tobacco.

This new life-style gave them leisure to contemplate the glories of the universe, and more

importantly, time to devote to an entirely new socio-religious custom.

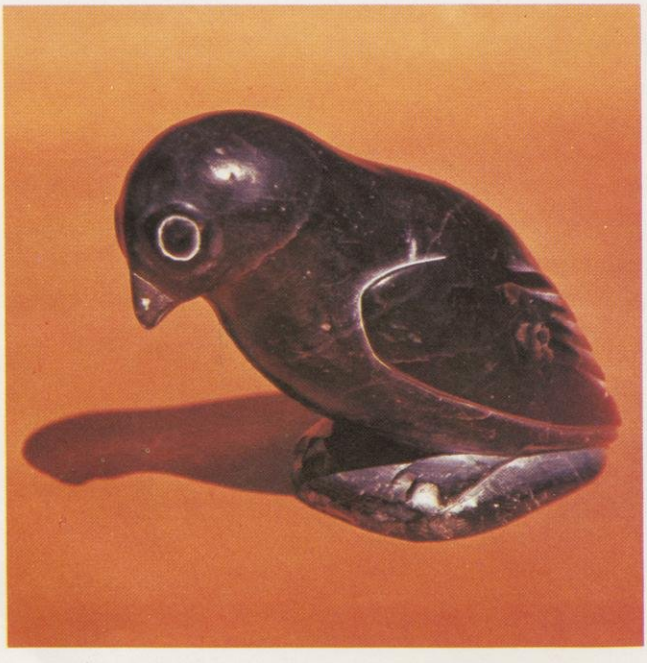
This custom of youth seeking a *vision* is well-established and has persisted into historical times. The vision-seeking ritual-including its attendant spiritual ramifications was a drama of unusual consequence.

The Effigy Mound Builders were dominated by spirits. Every tree, animal, man, bird, rock, lake...all objects, animate or inanimate...were believed to possess an identical spirit counterpart, existing in a completely separate spirit world. In pursuit of his vision, a young man would begin fasting, without food, water or shelter. A few days later, when in a possible state of delirium, the vision would hopefully occur. Then returning to camp, the neophyte would make a full report to his tribal council of men. If his vision were deemed acceptable, and if it included an animal or bird (we will assume a bird in this instance), the neophyte would then carve, preferably of stone a small, pocket-sized replica of the bird seen in his vision.

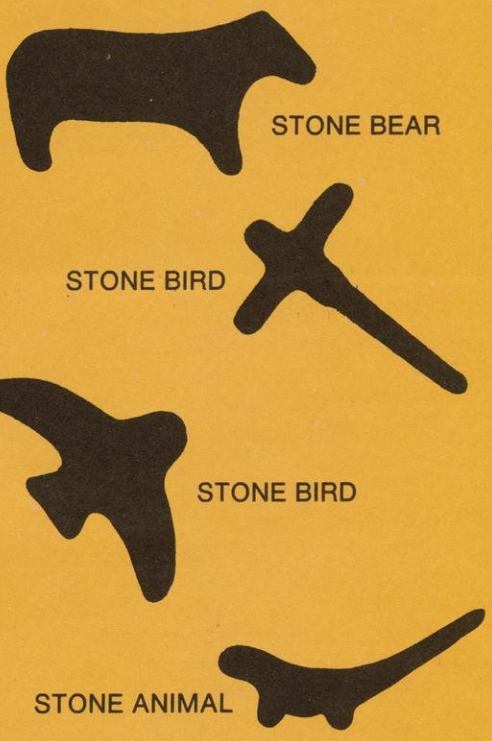
Upon completion, this stone replica or birdstone became the young man's *personal amulet.* The spirit of the bird in his vision, portrayed by the birdstone amulet, would then serve as his guardian spirit for the rest of his natural life. The sole function of the amulet was that of an all-powerful intercessor. It was the most sacred possession a man could ever own. It was indispensable.

Daily prayers were addressed to the amulet then swiftly sped to the spirit world for recognition. Return messages traversed the route in reverse order. Amid countless spirits, good and bad, appeasement was often required, resulting in a vast array of tribal taboos. The shaman, or medicine man, important in spirit affairs, utilized his own amulets and tools.

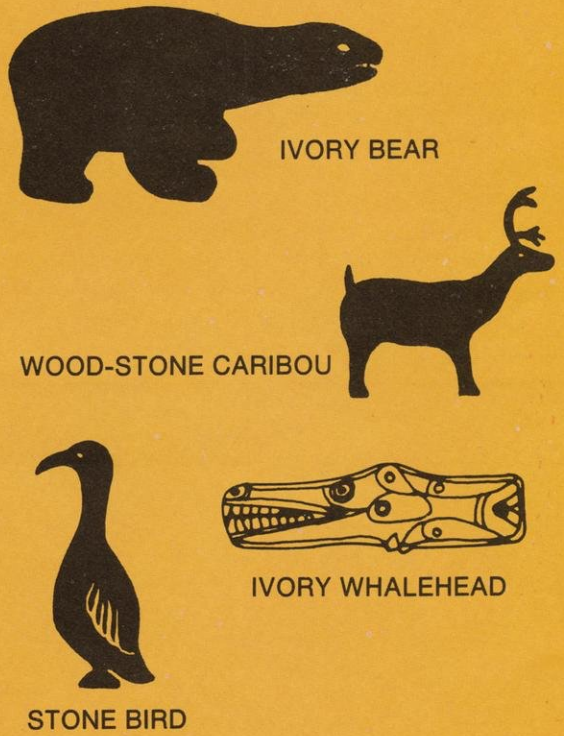
Finally, when death overtook the postulant, his amulet became inactive. Its power and spirit, like that of its owner, died. The body of the deceased would be confined to a grave with earth heaped over the top to form a domed, or conical-shaped mound. The amulet, now considered useless, was often merely tossed aside and lost. Life's events had come to an end.



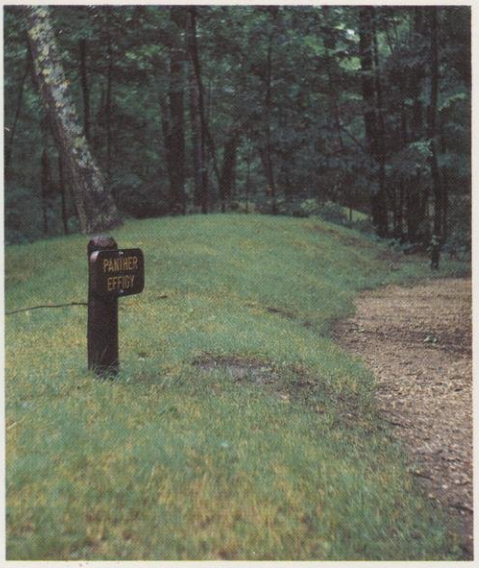
Typical illustrations of hand-carved amulets of the Effigy Mound Builders 1,000 years ago.



Typical illustrations of hand-carved amulets used *today* by Eskimos of Arctic Canada.



Illustrations by Lewis P. Rasmussen



But somewhere around the year 600 A.D. a new spirit concept evolved. It required building a burial mound identical in shape to the decedent's personal amulet. This effigy would serve, not only as a grave, but also to launch the dead person on the flight to the spirit world. Since it would be indestructible, the effigy mound would provide an everlasting connection with the hereafter until the very end of time.

Construction required countless hours of labor involving tons of earth, carried basket-load by basket-load to the top of the mound. Today, after 1,000 years of exposure to the elements some mounds still measure 5 feet high and 300 feet in length.

Having embarked on a new cultural pathway, Effigy Mound Builders were caught up in a new religious role, one that offered hope for immortality by way of the effigy mound. This elaborate spiritual custom persisted for the next 400 years, until about 1000 A.D., and then died out. Areawise it appears to have originated in Wisconsin.

Fortunately, in 1950, the state established Lizard Mound State Park six miles northeast of West Bend. An excellent foot path winds among the 31 variously shaped mounds, 11 of which are effigies. The park derived its name from one in the shape of a lizard. This is one of the finest assemblies of prehistoric Indian mounds in the nation.

The riddle of *why* Wisconsin effigy mounds were built was in my view solved by a recent documentation of some of Canada's more remote Eskimos. Although separated by 1,000 years of time, and 3,000 miles of space, customs of the Eskimos seem identical to those of Wisconsin's Effigy Mound Builders.

The Eskimos fostered an identical spirit-world concept. Their socio-religious elite used amulets...and at death, amulet holders were also accorded burial in effigy mounds in the identical shape of their amulets.

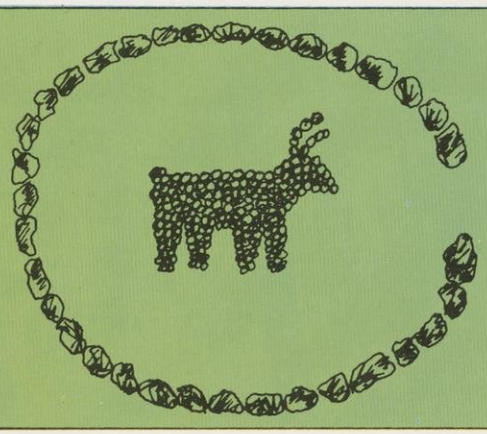
The only difference between the two cultural customs was that the Eskimos, without available soft earth, always used stones for effigy construction, whereas Wisconsin Mound Builders used earth exclusively. Logically, each culture used the building material that occurred in greatest abundance

Eskimo isolation perpetuated the custom for 1,000 years and enabled us to discover it.

The question of exactly *who* received the honor of burial in an effigy mound, was likewise revealed by the Eskimos. Their ancient customs required that only a man...one who had lived an intimate life with nature...who never violated his tribal taboos...who utilized his all-powerful amulet as a daily intercessor...who possessed a deep and reverent faith in an all-consuming spirit-world concept...only such a man would be accorded the high honor of effigy mound burial and its perpetual benefits.

Today, when one finds an empty effigy mound it merely means that its intended owner moved away and lived, died and was buried elsewhere. Effigy mounds built in advance of their need, no doubt served as a means of commanding honor and respect, and also as a constant reminder to ones fellows, to follow the path to immortality. Quite often, skeletal remains of several people are uncovered in the same effigy. They may be wives, children, or other close relatives.

The overwhelming evidence now in hand appears to have solved the riddle of the effigy mounds. They have taken on a whole new luster...a sort of perpetual one that gives a spiritual essence to a truly unique Wisconsin heritage.

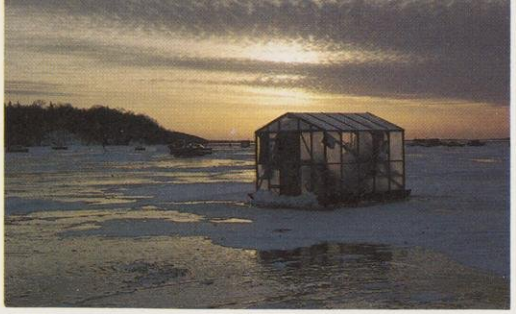


Typical Eskimo-built, caribou-shaped, stone effigy mound, located 50 miles north of Eskimo Point, N.W.T's., along the western shores of Hudson Bay, Canada.

This burial mound is about 10-12 feet long, and is about 100 years old. The deceased was an Eskimo man who evidently practiced the use of a caribou-shaped amulet as his intercessor during his earthly career.

Outer ring of stones has a diameter of 35-40 feet, with an opening at one side to allow spirit of man free and easy access to his earthly remains and final resting place.

Fishing through the ice is nice



1

-so sayeth the hardy who do it. If you want to try, here's how.

VERN HACKER, Supervisor Warm Water Fish Management, Oshkosh

Winter on ice is fun and highly productive for fish in the pan. If you haven't tried, I'm recruiting and it's time you joined—weather or not.

Ice shanties come in every shape, color and description. They are a base for congenial card games, brat fries and beer, a howdy-do to visiting fishermen and a source of the latest fishing information—some of it false.

Ice fishermen come in all kinds of warm winter wrapping and they arrive by car, plane, snowmobile, skis, snowshoes or afoot depending on the quality of the ice which is often 30 inches thick.

Smart ice fishermen know there are several times of year when conditions are dangerous. One is when ice first starts to form and is covered by an insulating blanket of snow. This may result in ice two inches thick in one location or enough to support an automobile a few feet away. Another is just before spring break-up when ice appears "black." Then melting snow, rain and warmer water underneath combine to change the crystalline structure to long needle-like shards that crumble easily. To ice fishermen, the rule of thumb is: if ice cracks, pounds or booms, it's safe—when quiet, it's dangerous.

Remember to read the regulations pamphlet and keep out of trouble.

Winter anglers range from perch and bluegill specialists to tip-up fishermen after northerns and walleyes. Or they may use spears in a waiting game for big sturgeon.

Here are a few tips for the recruit:

—Never venture onto the ice of big waters without a compass. A sudden blizzard has caused many a confused fisherman to drive in circles or into open water on a river channel.

—Always cross expansion cracks at a right angle. You'll traverse them faster and with much less danger.

—Stick to well-travelled ice roads. Don't move off where no one has driven before. Leave that to those who *know* the lake.

—A pair of creepers can prevent spills on slick ice.

—Water in winter is usually much clearer than in summer. That means light lines, small hooks, small bobbers. Never use snelled hooks, snap swivels or metal leaders.

—Fish usually bite lightly. If you use a bobber for panfishing, counter-balance it with a split shot or two so that the bobber literally struggles to stay on the surface. Then, the slightest touch will carry it down. Tip-ups too, should be adjusted so that the slightest mouthing pops the flag.

—Experiment with hooking your minnow. When walleyes are stubborn, you can sometimes intrigue a bite by hooking the minnow on the side rather than the back. Often the flashing of a side-hooked minnow will provoke a strike and prevent a "skunk."

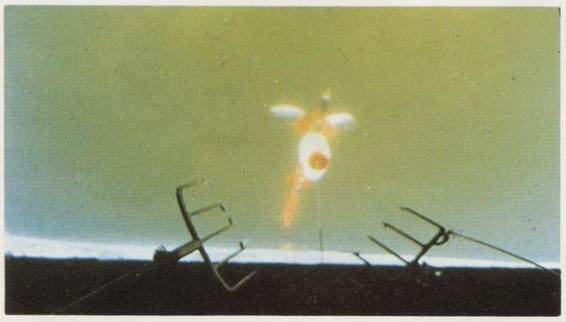
So sharpen you chisel, dust off those tip-ups, grab your long-handled snuggies and boots and join the recruits.

You'll find, like many, that fishing through the ice is nice.

2

3

4



5

1. Home away from home.
2. Palm-sized bluegill—one of millions taken during the average Wisconsin ice fishing season.
3. Waiting for line to start stripping from the tip-up reel! Usually a bite trips the flag and the fish stops to swallow the minnow. While theories abound about when to strike, most fishermen hit when the fish starts to move a second time.
4. Beware of the big, bad expansion cracks which usually form near shore on large lakes. This fellow was lucky.
5. Sturgeon spearer's view down the hole. A "coaxer" or "teaser" is standard gear to attract the big fish.

Vern Hacker photos.

ROBERT E. DREIS, Northwest District, Spooner

If you're over 50, need exercise, and after the first snows come, begin to collect a hard case of TV blahs, cabin fever and nightmares about Florida, I have a remedy for you. Try ski touring!

I did it last year at the urging of my teen-aged offspring and it changed my whole winter lifestyle.

The teen-agers were my teachers and the first time out still elicits hilarity. It was a small hill but a big spill.

Since then, both my wife (who went through it too) and I have decided it is probably best for the beginner to start with less trauma and more elegance. Go to a ski resort, rent an outfit and take a lesson in basic techniques.

Most good ski resorts are now developing cross-country trails designed for "beginner", "intermediate" and "expert". I have seen the very young, the young, the middle-agers, the old and the very old out on these trails.

The basic outfit set me back around $125.00—you can get it cheaper or a lot more expensive. I have light-touring wooden skis, over-the-ankle boots, three-pin bindings, heel pods on each ski and poles. The "sole" or ski-bottoms should be carefully "tarred" once each season. I had mine done at the ski-shop. The ski bottoms are waxed just before each outing and the kind of wax used is dependent on weather and snow conditions. For instance, you apply a different kind of wax for wet snow with temperatures around 30°F. than you do for powdery snow with the temperature around 5°F. You can also buy very fancy clothing but so far I just use the winter things I have.

The first time you will dress too warm. As you gain experience, your personal metabolism and cold tolerance will tell you how to dress. A small backpack with sweaters, windbreakers, extra wool socks, etc., is necessary if you do genuine cross-country skiing. It lets you "layer" your clothing for moving, resting, or whatever. If weather changes clothes too may need a change.

After you become more proficient you may want to break away from crowds and prepared trails. You might take a short loop or travel long and far.

For my part, the yearning for the "back of beyond" is perfectly satisfied by ski touring. Our final family trip last March-just before the big melt is still a fond recollection.

Perk up your winter- try ski touring

Ski touring is a quiet, lifetime sport, exhilarating for all ages and abilities. It's great family fun too, start to finish and opens up a winter landscape you may not have seen.

I stepped into my skis, snapped down the toe bindings, slipped on the day-pack, grabbed my poles and checked out the rest of the "crew". Betty was all set and so was the dog. My son, Pete, 16 years young and full of pep, was already on his way "breaking trail". Our goal was a certain little lake hidden in a range of hills formed as one of the terminal moraines by the great glaciers 12,000 years ago.

Feeling good, breathing deeply and listening to the swish-swish of the skis I follow Pete's trail to the top of a rise waiting for Betty and the dog. I catch my breath then kick-off downhill. Fast and silent, we move at a higher velocity than Pete and soon catch up to him. Pete is finding out that "breaking trail" is a lot of work.

OOPS! The old man takes a spill-"wiped out", Pete says and everyone laughs. The dog thinks it's a game and bites my jacket. Nothing hurt except dignity and we are on the way again.

In the swamp, sign indicates wintering deer. We know the lake is not far ahead. Sure enough! We burst out onto the lake—a white prairie in a new world. We are alert for signs of water under the snow. Slush really grabs ski bottoms and makes movement almost impossible.

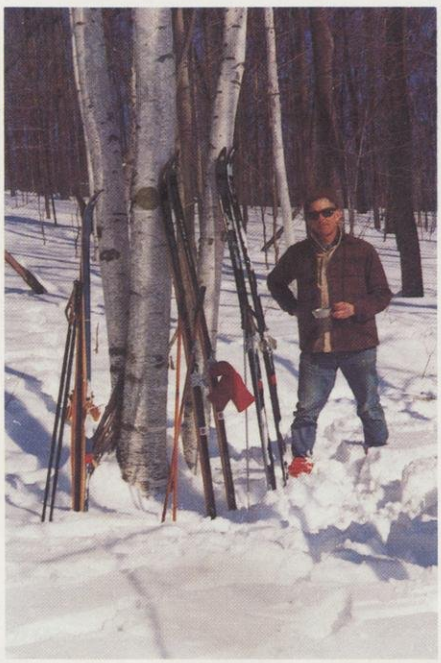
Across the lake we find the campsite from our old backpacking trips. Now exactly where is the fire-ring? I think back to October and color-splashed woods and rocks laboriously gathered . . . all is buried under more than 30 inches of snow.

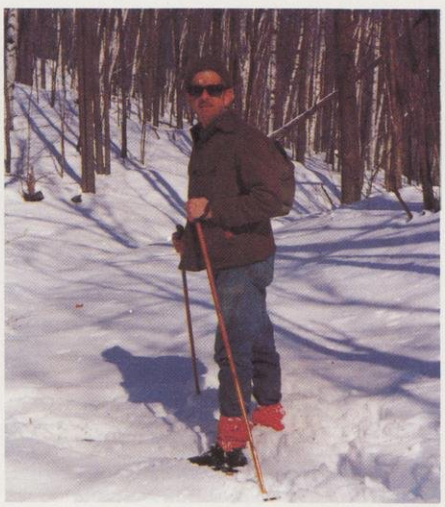
We stack skis and poles, tramp down the snow and soon have a roaring fire. Lunchtime is welcome and my pack yields coffee, some wine (for "Snow-Snake" bites), hot dogs, hunks of cheese, bread and candy bars. Sitting on a log feels good and common fare tastes far better here than it ever does back home.

A campfire in winter woods is altogether different in mood from a summer one. Talk is free and easy and no one seems to be in a hurry. Much later we squint at the sun, check wax on the skis and head back.

Travel out is fast and a lot of fun. We now have our very own groomed trail, with uphill and downhill reversed. One last long glide and all too soon we are back at the car.

The sun is just touching the horizon. It will be dark by the time we get home. Temperature is dropping. It is still a long drive out on the fire lane.





Top left: The basic outfit-skis, poles, boots and bindings.
Center: The boot fastened to the ski. The "heal pod" keeps the heel of the boot from slipping off the ski.
Right: The three holes at the tip of the boot soles engage the "pins" on the ski bindings and hold your foot on the ski.
Bottom left: The skis are "stacked", an essential operation. When left down in the snow a crust adheres to the soles. It can be quite a job to remove out in the woods.
Center: All set for a day's outing.
Right The "secret" lake.

Herring Gull

LEROY J. LINTEREUR, Area Wildlife Manager, Marinette

The ordinary gull that graces our larger lakes and streams is an easily recognized cosmopolite of the northern world. Given this range it has a variety of names. In my hometown, Two Rivers, we called them "Seagles". A minor linguistic problem of my youth was searching for this non-existent word in the dictionary. Throughout the Great Lakes region, they are known as sea gulls, and their proper name, herring gull, is found only in the bird books. By any name they are a striking bird but particularly at this time of year when there is so little life on our larger bodies of water.

There is something classic about a gull tacking into a freezing December wind. There is nothing classic about the same gull fighting with its fellows over a frozen orange peel in the city dump, but this is what enables them to stay in the north when other gulls and terns have flown south. Food to them is where you find it and a city dump is as good a place as any.

Gulls over the water and gulls in garbage are but one example of the double life these birds lead. A sea gull sailing in a blue sky or sitting on a pier embodies quietness and peace. Yet every gull entered this world in a rookery that for ear-shattering din and sheer murder is almost without equal in nature. The most important enemies of young gulls are old gulls, and any fledgling straying from its parents' territory into that of another is risking a frightful beating or even death. I've observed adults following straying young into the water and dispatching them with a blow from their bills.

Once they reach adulthood most gulls are assured of a long life, but those first two months are rough ones to hurdle. If you doubt this, count the number of brown birds—they retain this color for the first year—in any flock of birds. Herring gulls have certainly benefited from civilization. After all, what with all the dumps and refuse, things are probably better for them now. The Indians didn't leave much fish lying around, not in winter anyway. To a gull, fish are fine, but when the chips are down anything will do. They are tough, hardy birds who even in the bitterest cold have no particular shelter requirements.

Close up, with their efficient bill and cold alert eye, they can have a somewhat sinister appearance. I once observed a gull dispatch a fish duck that popped up through a hole in the ice. And I cannot forget their savagery on the nesting grounds.

In the air, they are entirely different—carefree, flying for the fun of it—removed from all reality. In nature, too, the shadow can be more important than the substance.

Gull, eating garbage,
also
Sings of eternity.
Haiku

Photos by Jim Harris, Sumner Matteson and Leroy Lintereur

Department of Natural Resources
Box 7191, Madison, Wisc. 53707

Second-class permit
pending at
Madison, Wisconsin