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Wisconsin

NATURAL RESOURCES

SEPTEMBER - OCTOBER 1978 • VOLUME 2, NUMBER 5 \$1.00



Little tough guy:

Brown snake (*Storeria dekayi*)

*GEORGE J. KNUDSEN, Chief Naturalist, DNR,
Madison*

One of Wisconsin's smallest snakes, an adult Brown Snake is lucky if it grows to 13 inches! Although common in southern, central and western Wisconsin it is seldom seen because it hides under logs, rocks and boards, or in rotting stumps. Considered beneficial, the Brown Snake eats insects and other very small animals and is non-poisonous. It is tan with a lighter stripe, margined by black dots running down the middle of the back. The belly varies from pink to light brown.

Even though small, it often coils, striking at anyone who disturbs it. If this teentsy, but very "ferocious" snake does grab one's finger, the teeth leave barely visible scratches. A tough little "noodle" that often coils again and again, you can almost hear it say "Disturb me once more and I'll teach ya another lesson." Even the toothpick-sized young, which are born alive, will sometimes coil and strike.

Photo by Dick Vogt from his book *Amphibians and Reptiles of Wisconsin* to be published soon by the Milwaukee Public Museum.

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OWEN GROMME
featuring his art

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Front and back covers are by Owen J. Gromme, featured on pages 4 and 7 as Wisconsin's first duck stamp artist.

Front: Flushed from cover — pheasants. (There is a report on the DNR pheasant program on page 18).

Back: Goshawk and Ruffed Grouse. This Gromme painting will be on display in a show at the Leigh-Yawkey-Woodson Art Museum in Wausau September 9 through October 22. The show will feature about 100 pieces of bird art by some of the best known painters and wood carvers in the world. Roger Tory Peterson will be honored at the event. The show is open to the public.

All Owen Gromme paintings in this issue are by courtesy of Wild Wings, Lake City, Minnesota.

In 1938 we had a rain in August like nobody ever saw. Horicon marsh flooded and by gol, the ducks just stormed in. We wanted a real propaganda picture, so they put me in a blind where we knew there would be thousands of ducks.

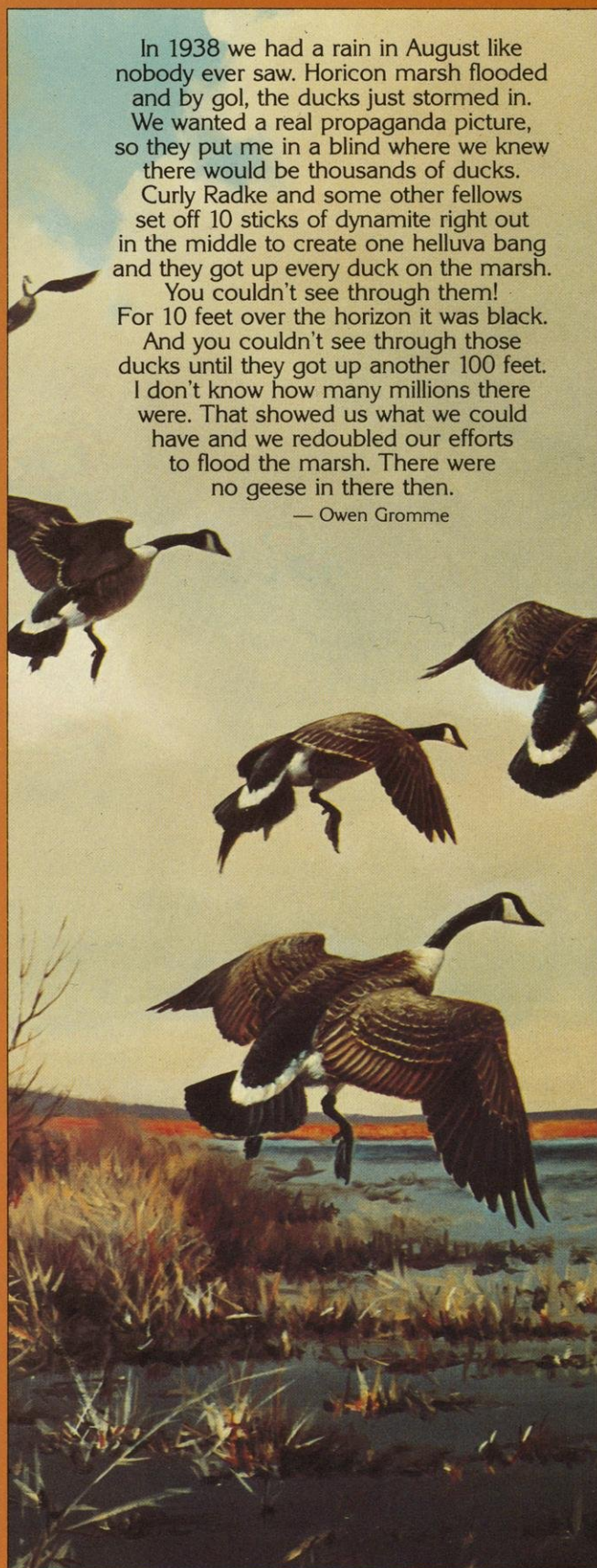
Curly Radke and some other fellows set off 10 sticks of dynamite right out in the middle to create one helluva bang and they got up every duck on the marsh. You couldn't see through them!

For 10 feet over the horizon it was black.

And you couldn't see through those ducks until they got up another 100 feet.

I don't know how many millions there were. That showed us what we could have and we redoubled our efforts to flood the marsh. There were no geese in there then.

— Owen Gromme



Easing In—Canada Geese



Double stamp ducks



The new state duck stamp this fall, combined with income from the federal stamp gives Wisconsin waterfowl habitat development the power of a double whammie. It's worth the extra \$3.25.

RON NICOTERA, *Migratory Bird Management Specialist*

This year for the first time, anyone 16 or older who hunts waterfowl in Wisconsin will have to buy a state waterfowl stamp. Cost is \$3.25. There are approximately 130,000 waterfowl hunters in Wisconsin, therefore, revenue will amount to about \$390,000 per year.

As everyone knows, a \$5 federal stamp is also required. Taken together, the two will create a powerful funding source to benefit Wisconsin waterfowl. Federal stamp money is spent to purchase wetlands and other habitat. It will total more than \$1 million per year by 1979.

The state stamp will finance development and management.

Together they're a real one-two punch—the federal stamp buys land and the state stamp develops it.

One dollar from each Wisconsin stamp (or about \$130,000) will go to

Canada for propagation areas there. Only those parts of Canada that send birds through Wisconsin will get state stamp money. It will be handled by Ducks Unlimited, a non-profit organization, because the Canadian government restricts direct donation.

Wisconsin hunters harvest about 600,000 ducks, 50,000 geese and 150,000 coots annually. Virtually all the geese, most of the coots and 60 to 70% of the ducks are produced in Canada. It makes good sense for us to help with waterfowl production there, especially since Canadian wetlands like our own are rapidly being drained.

Two dollars from each stamp (or about \$260,000) will stay in Wisconsin. This is in addition to what is already being spent here on development and management.

What does all this really mean? To answer, let's first take inventory. Presently DNR manages 41 properties primarily for waterfowl. They comprise 160,000 acres. Another 23 properties with 56,000 acres are partially for waterfowl. In addition, Waterfowl Production Areas have been acquired in

Wisconsin with federal duck stamp money—\$1.5 million was spent in 1974 to purchase 3,500 acres and this year more than \$500,000 will be used. Wisconsin's total waterfowl acreage now comes to about 220,000.

Once land is purchased it must be developed, managed and maintained. Flowages might be built; ponds constructed; fences put up; nesting cover planted; parking and access provided; and signs erected. There are weed and brush control, fire break and road upkeep, dike and spillway repairs (often because of flood or muskrat and beaver damage), structure maintenance to control water levels and other similar projects. Lands must be patrolled to enforce conservation laws. Illegal vehicle trespass, vandalism, and other destructive activity must be guarded against. Wildlife population surveys must be taken to monitor response to management.

For many years DNR has had an active wetland acquisition program. Acquiring vital wetlands is a priority job of extreme importance because the

waterfowl base dwindles more and more each year from drainage, intensive agriculture, urban encroachment and the latest threat—irrigation.

Once purchased, land cannot always be immediately developed for waterfowl. Even so, it must be maintained or possibly lose its original value. A piece of land cannot help waterfowl if it grows up to brush or if its nesting cover deteriorates. Neighbors and town officials become upset if weeds grow or fences fail.

The department has been struggling to develop and maintain these lands with only a handful of field employees—the same number it had 15 years ago—and with the same number of dollars it had five years ago. These dollars—as everyone is aware—have been buying about 10% less each year because of inflation.

Obviously, this new state waterfowl stamp revenue comes at a critical time. Wetlands and the wild creatures that depend on them can now be preserved. During the first year, some 28 projects in more than 20 counties have been selected for immediate attention. Others will follow in the future. The outlook for water birds in Wisconsin is rosy thanks to the new duck stamp.

By any measure, it's worth the extra \$3.25.



Much duck stamp money will go to establish nesting cover.

Photo by John Burckardt

Priority State Duck Stamp Projects

County	Wildlife Area	County	Wildlife Area
Barron	Loon Lake, New Auburn	Dane	Mazomanie, Bad Fish Creek
Vilas	Powell Marsh	Columbia	Springvale, French Creek
Jackson	Dike 17	Fond du Lac	Eldorado, Mullet Creek
Eau Claire	Augusta	Green Lake	Grand River Marsh
Waushara	Poygan	Dodge	Horicon, Mud Lake
Outagamie	Outagamie	Burnett	Amsterdam Slough, Crex Meadows
Calumet	Killsnake	Rock	Storr's Lake
Brown	Sensiba	Taylor	Pershing
Manitowoc	Collins	St. Croix	Ceylon
Sheboygan	Sheboygan Marsh	Several Counties	Waterfowl Production Areas
Jefferson	Princess Point, Rome Pond, Lake Mills		

Owen Gromme: Duck stamp artist “A life that's been a dream.”

*J. WOLFRED TAYLOR, Editor,
Wisconsin Natural Resources*

Wisconsin's first duck stamp is typical Owen Gromme art. It is not a pair of wood ducks, but a trio. Gromme painted one hen for us. But to make the beauty and detail of the male wings, above and below completely explicit, he gave us two drakes. This telltale distinction, coupled with absolute adherence to nature and work that is better than anybody's is the Gromme goal. At age 82,

disciplined and productive, he still achieves it and keeps improving.

Gromme is the acknowledged master among Wisconsin bird artists and many think he is best in the world. Like Audubon, he has become a standard. His *Birds of Wisconsin*, published in 1963 is in its fourth printing. He designed the Federal Duck Stamp in 1945 and this year was named Ducks Unlimited Artist of the year.

It was a foregone conclusion that he would paint Wisconsin's first stamp. When tentatively asked to do so, providing the Governor signed authorizing legislation, Gromme readily agreed, then

Continued next page . . .

“I've done everything a boy dreams of. I pulled the throttle on a locomotive in the SOO Line yard at Fond du Lac. I rode on top of a circus wagon in the Schlitz parade.

I've been in the funnies. I was Mark Trail's pal for a couple of years. Ed Dodd called me Owen Gunn.

I've shot big game in Africa.

I was there when it was real and primitive. A trip like that opens up a whole world of action and adventure to a young man. And I ended up as an artist. An artist has a big advantage over the ordinary hunter. He can study a bird, photograph it, shoot it, eat it, and then by gol, he can paint it and it'll live forever. And now I'm being awarded a Doctorate at Marian College in Fond du Lac. I've lived a life that's been a dream.

If I had it to do over, I wouldn't change a thing. I'd even marry the same woman.” (Gromme and his wife, the former Anne Nielson, celebrated their 50th anniversary last year.)

surprised everybody. A bird in hand might induce a signature in case there was doubt. Therefore, the painting was in the Governor's office in a matter of weeks, long before the law was signed.

It would have been signed anyhow, but the incident affirms two other traits: Gromme works fast. He's also an environmental activist. He has been an activist for more than 50 years.— one of the old time sportsman-conservationist originals referred to in John Reiger's article (page 12). Gromme loved hunting

"I was brought up very self disciplined. Every day for instance now I'll paint a little on one of these pictures, even if its only for 15 minutes. That's a start on what's going to be five cheetahs on the Tanganyika Plains of Africa. This goshawk is from a photograph I took which was the first picture ever taken of a goshawk at the nest. That one is going to be Aldo Leopold's shack to illustrate his marshland elegy. It's going to be some sandhill cranes dancing right at the edge of Leopold's favorite duck shooting place with his shack in the background. And that's just the beginning of it. That barn owl there is my model and so is the leopard skin. All these wings are props. I've mounted them because if someone wants a picture of a mallard, a redhead, a canvasback, a teal or a Canada goose, I've got the wings all here. The most expressive part of a bird is the wing if its flying. Otherwise, it's the eyes. The eye is the mirror of the soul, you know, in man, bird, beast or mammal."

since childhood and it molded the patterns of his life. He learned taxidermy from a fur buyer, and that plus his ability to shoot landed him a job with the Milwaukee Public Museum. There, without a lesson, he evolved into a scientist, administrator and finally an artist. When he retired after more than 40 years he was curator of birds.

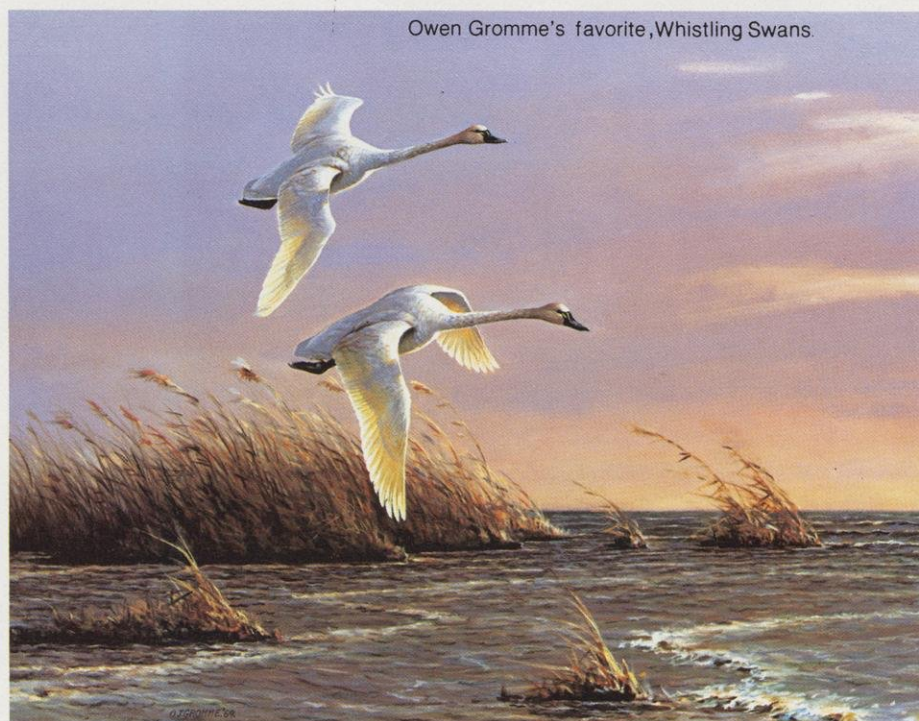
Gromme saw Horicon Marsh drained in 1915 and was outraged. He was one of the principles in a movement that worked for decades to reflood it and even today, any drainage there draws his wrath. He recently did "the first propaganda painting of my career," called Horicon Requiem to help finance opposition to a proposed drawdown on the marsh. Managers thought dropping the water level would help disperse the too-crowded hordes of geese but Gromme felt it to be a repetition of 1915.

He is an octogenarian of rare vitality, eloquent in art and eloquent in talk about life, painting and nature.

All Owen Gromme paintings reprinted courtesy of Wild Wings, Lake City Minnesota 55041



Photo by Jim Escalante.



Owen Gromme's favorite, Whistling Swans.

"This is the way you'd see
a goldfinch within three feet
of your eyes. The background
must be identifiable, but
impressionistic. You have to
know that's a bullthistle."

"When I go to paint a bird,
I read all about it first, where
it lives, why, what it eats and
what makes it go. Then I take
a look with binoculars and
make a few sketches. I always
sketch with the paint brush.
I look up what photographs

I have of goldfinches
and pictures other artists
have painted and try to
benefit by their mistakes and
do mine better. I've always
been a perfectionist in
everything I do."

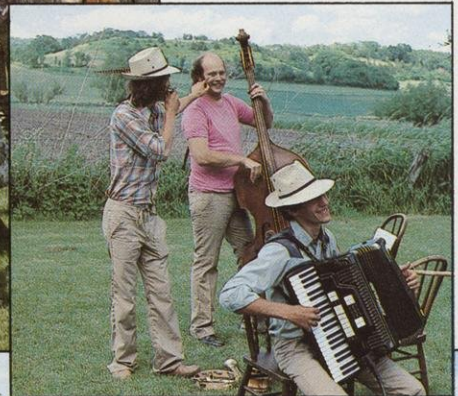


State park road show



The Star Baby audience participates

The ancient magic of nature is always center stage at state parks but a new fantasy about "Star Baby" stole some of the show this season.





JACK J. GUZMAN,
Wisconsin Project for Artists

In a clearing under a canopy of trees on one of those warm summer evenings just gone by a small stage has been assembled. Musicians are warming up nearby. Stray notes mix with voices as a crowd slowly gathers, clustered on the ground in small groups. It's a perfect time of day to sit back, sing, clap hands or just take it easy and enjoy the show that's about to begin.

DNR helped make this scene possible some 30 times in state parks and forests of Wisconsin this summer. The performing artists were a travelling road show of 12 actors, dancers and musicians. They were hired by the Wisconsin Arts Board specifically to bring this type of rare theatrical experience to state residents and visitors as part of the Wisconsin Project for Artists (WPA). Also hired were a tour coordinator to handle sponsoring and scheduling, a technical manager who travelled along to assist with set-ups and a publicist who provided publicity for each stop on the tour.

Rehearsals began in April at the Ladies Hall of the Wyoming Valley Methodist Church outside Spring Green in southwestern Wisconsin. A typical morning in Ladies Hall found performers working in movement classes or polishing tumbling or juggling techniques. In the afternoons work was done on the show itself. From improvisations and plenty of brainstorming by all the group, a script grew up centering on the energy crisis. A writer was hired to help digest the

mountain of ideas spawned during these sessions and put them into logical sequence.

The show became a fantasy based on fact. It told the tale of a space child on Earth who possessed a potential new source of energy carried in a wand. Together with an elderly scientist she had to fight off the power plays generated by the forces of big business and big politics to win the wand for all the Earth. The program was named for its heroine: "Star Baby."

While rehearsals progressed, the tour itself took shape in the Arts Board offices in Madison. Selection of sites was coordinated through Loren Thorson, chief of DNR's Recreation Program Section. Once details like amount of attendance and availability of electricity were determined, the final list of 15 state parks and forests was drawn up. Many park managers were attracted by the popularity of the first year's tour which was also a big success.

Blue Mound State Park was chosen again this year for the grand opening. After eight weeks of classes and rehearsals the troupe were in top condition for the long road ahead. State parks are particularly ideal for this type of road show. They provide beautiful natural settings and readily available audiences. With DNR's concern for energy conservation, the show's theme was especially appropriate. The tour performed in parks from Copper Falls and Pattison in the north to Wyalusing in the south with Potawatomi, High Cliff, Brunet Island and others mixed in. All were visited twice through the summer.

Three station wagons and a trailer piled high with stage sections, costumes and lighting equipment were needed to travel the company. Once on location in a state park everyone pitched in, assembling the stage, hanging lights and making all ready. When set to go, the performers roamed the park passing out flyers inviting people to the show. Afterwards everything was repacked for the next day's travel. The tour began on June 17 and will last until cold weather discourages outdoor performing in mid-September.

With autumn approaching the traveling company will be disbanded, the stage stored, and the records filed away. But the spirit that brought "Star Baby" to state parks across thousands of miles of Wisconsin persists.

The talent and energy of its artists are a natural resource as intrinsic as the parks themselves. They have no dormant season.

Photos by Carol Houser Callahan



A spider might

Tom Walther, Artist, Naturalist

*These are excerpts from a recently published Sierra Club book for children: A SPIDER MIGHT by Tom Walther, 6½ X 6½, 75 line drawings, Charles Scribners Sons, cloth \$6.95, paper \$4.95.**



Spiders can do all sorts of amazing things — in fact, they are some of the most interesting and talented creatures we know of. This book begins by asking you to imagine doing the things spiders do, and tells why they are the way they are. It explains their

scientific names . . . their body parts . . . their habits and habitats . . . how you can find and study them. For anyone who only thinks of spiders as creepy or scary, here is a whole new way to look at them.



If one day while climbing in and swinging through trees, you saw Miss Muffet below eating her curds and whey, would you swing down and give her a scare? Though you wouldn't or certainly shouldn't, a spider might!

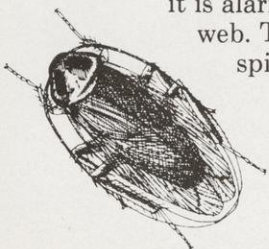
Little Miss Muffet — whose real name was Patience — may have been frightened by spiders, but her father, Dr. Thomas Muffet, enjoyed their company. He studied and wrote about spiders in England, in the late 1500's. Their webs draped the rooms of his house. Dr. Muffet thought spiders could be used as cures for most illnesses. He believed spiders in a house helped to keep away gout, and he gave Patience spiders to swallow as pills when she was ill. The belief that spiders could prevent or cure fevers was common in ancient times and even up to the nineteenth century. People ate them like pills, or carried them in nutshells hung around the neck as charms, or just allowed them to remain around the house. Spider webs have often been used as a dressing for wounds.

When you are hungry and your mother is away, do you ever have thoughts of eating your sisters and brothers? You could not eat them. It would not be polite! You wouldn't even try to. But a spider might!

Some mother spiders feed their young, but many leave their children to provide for themselves. Young spiders, when left without food, will eat each other. The practice of spiders eating spiders is common even among adults. In fact, the spider is the number one enemy of other spiders. Because of this habit, it is not possible to raise the large quantities of spiders necessary to produce spider silk commercially, like people do with silkworms.

When frost appears in autumn, would you climb up and hang like a plaque on a wall? Could you bend your legs back and hang there day after day, until warmer weather came? There is a spider who spends each winter this way.

When frosts come in the fall and early winter, the spider *Pholcus* takes a rigid posture pressed tight against the wall with its legs bent back in an odd way. It remains this way until warmer days return. *Pholcus* or Daddy Longlegs is a house spider. When it is alarmed, it whirls around and shakes its web. This has the effect of making both the spider and the web appear invisible.



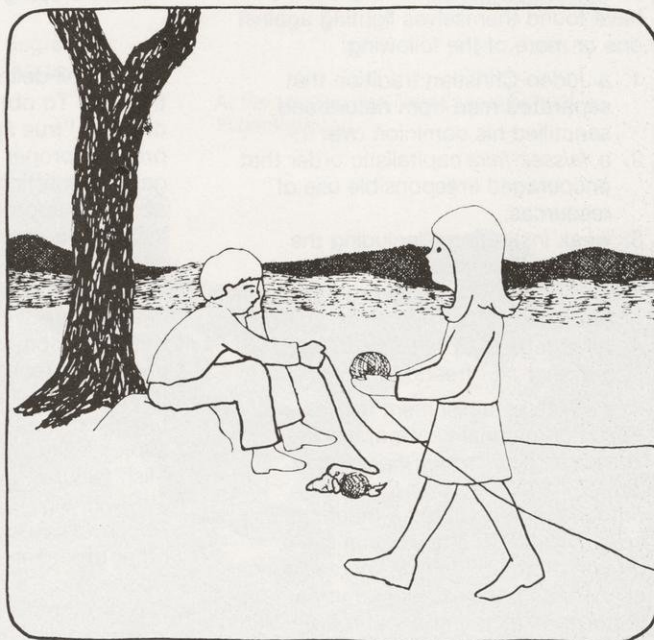
If you left a thread everywhere you went, you would get exhausted and use up a lot of thread, too. Streets and sidewalks would be jungles of thread. Houses and stores would soon be filled. Would it really make sense for you to continually have a thread behind? For most spiders it does.

Most spiders make and lay out a silk thread for use as a life line when they travel. They attach this line or dragline to the surface they are walking on with special attachment disks so that they never have far to fall. Sometimes a male spider will follow the dragline left by a female as a way to locate a mate.

If cockroaches became pests in your home, you could find it hard to put up a fight. They hide in places where you can't get to them, but a spider might!

The Huntsman Spider, *Heteropoda venatoria*, is a valued guest in tropical houses because it catches and eats cockroaches. It is yellow brown in color and grows to 24 mm.

Except for a few who prefer to eat other spiders, all spiders are insect eaters. They are welcomed and valued all over the world by people who recognize that these small creatures help protect their gardens and houses from being overrun by hungry insects. Spiders can catch insects in places and ways that are just not possible for man to do.



American attitudes toward wildlife

Hunters and anglers are not bad guys, never were! Neither are new environmentalists. Both should cooperate, pay their fair share, support wildlife.

JOHN F. REIGER

Before the beginning of the 20th century, the only Americans to express positive concern for wildlife and its destiny were sportsmen, those who hunted and fished for pleasure rather than commerce or necessity.

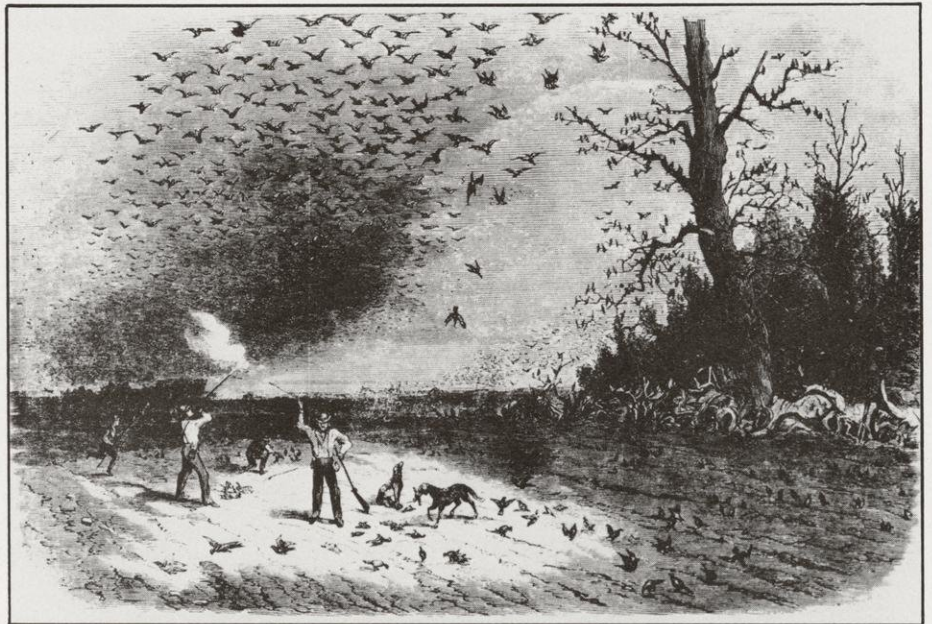
During most of our history as a nation, Americans who have cherished

One had to practice proper etiquette in the field, give game a sporting chance and possess an aesthetic appreciation of the whole sport including a commitment to its perpetuation.

wildlife and endeavored to preserve it have found themselves fighting against one or more of the following:

1. a Judeo-Christian tradition that separated man from nature and sanctified his dominion over it;
2. a *laissez-faire* capitalistic order that encouraged irresponsible use of resources;
3. weak institutions, including the federal government that seemed unwilling or unable to protect wildlife and habitat;
4. a heritage of opposition to any restraint on "freedom."

With establishment in the early 1870s of national newspapers like *American Sportsman*, *Forest and Stream*, and *Field and Stream*, outdoorsmen acquired a means of communicating. There was a rapid growth of group identity. Increasingly, gunners and anglers looked upon themselves as members of a fraternity



Farmers shooting passenger pigeons to preserve their grain fields.

with a well-defined code of conduct and thinking. To obtain membership in this order of "true sportsmen" one had to practice proper etiquette in the field, give game a sporting chance and possess an aesthetic appreciation of the whole sport including a commitment to its perpetuation.

Many sportsmen's clubs and associations were created. While a desire for comradeship was the underlying reason, one need only look at the names and constitutions of these organizations to understand that subjects like "game protection" and "fish culture" were important concerns.

Finally, in 1887, Theodore Roosevelt, George Bird Grinnell and other prominent sportsmen founded the Boone and Crockett Club. Named after two of America's most famous hunters. It was the first private organization to deal effectively with conservation issues of national scope. The club played an all-important role in creation and administration of the first national parks, forest reserves and wildlife refuges.

These were the formative years in Roosevelt's development as a future conservation leader.

The sportsmen's movement in the late 19th century expanded because of new attitudes fostered by the Civil War. Before the 1860's most Americans viewed hunting and fishing as acceptable only when necessary or helpful to gain a livelihood. One pursued game for food or profit. If hunting and fishing were spoken of as "sports" at all, they were usually lumped with diversions, like horse racing, boxing and cock fighting. Back then, as one editor put it, "a man who went gunnin' or fishin' lost caste among respectable people just about the same way one did who got drunk."

Not all Americans, though, thought of hunting and fishing in utilitarian or economic terms. A minority emulated British custom. "Correct" hunting and fishing became a means of distinguishing a "gentleman" in postwar America. In England accepted ways of

taking game came from traditions stretching back *at least* to the time of Izaak Walton in the 17th century. Whether fly fishing an English stream or grouse shooting a Scottish moor, an aristocrat took sport seriously. The prerequisites were knowledge of the quarry and its habitat; familiarity with the rods, guns or dogs necessary to its pursuit; a skill to cast or shoot with precision and coolness that often took years to acquire; and most of all, a "social sense" of the do's and don't's involved.

This last ingredient might be called the "code of the sportsman," and it was particularly important to nobility. Typical was Henry William Herbert, the English aristocrat who immigrated to America in 1831. A friend once said of him: "like all true sportsmen, while fond of following the game in season with gun, dog and rod, he was a bitter and unrelenting enemy to all poachers and pot-hunters."

Other writers of the antebellum period like John J. Brown, William Elliot and Elisha J. Lewis also preached adapting English sporting ethics to the American scene. However "Frank

Forester"—the pen name Herbert used had the greatest influence. He became the model for the rising generation of American sportsmen.

Forester and the other writers did more than merely outline the basics of sporting etiquette; they crusaded against commercial destruction of wildlife and habitat and demanded that sportsmen join together to preserve their recreation. The notion that there was only one correct way to take game and that all other methods were "common," or even immoral, played a key role in forming the conservation movement.

Even in the late 19th century sportsmen and their journals had to fight the national myth of progress. An incredibly rapid physical change, unexcelled in world history, was the essence of the American experience. In the words of one observer "Americans *love* their country, not . . . *as it is*, but *as it will be* . . . *They live in the future, and make their country as they go on.*"

By 1907, in scarcely more than four lifetimes—we had grown from a couple of wilderness settlements into the most powerful nation on earth. Rapid industrialization and urbanization,

development of mass-production and communication and the building of a national railroad all combined to make dramatic alterations in the natural environment. Particularly disturbing to sportsmen was the reduction in what were once thought to be inexhaustible wildlife populations. Previously undeveloped regions were now accessible to all. Improved guns, ammunition and fishing gear were produced in huge quantities and

Sportsmen not only opposed commercial destruction of wildlife, they deeply regretted and fought the loss of hunting and fishing grounds to the insatiable appetite of commerce.

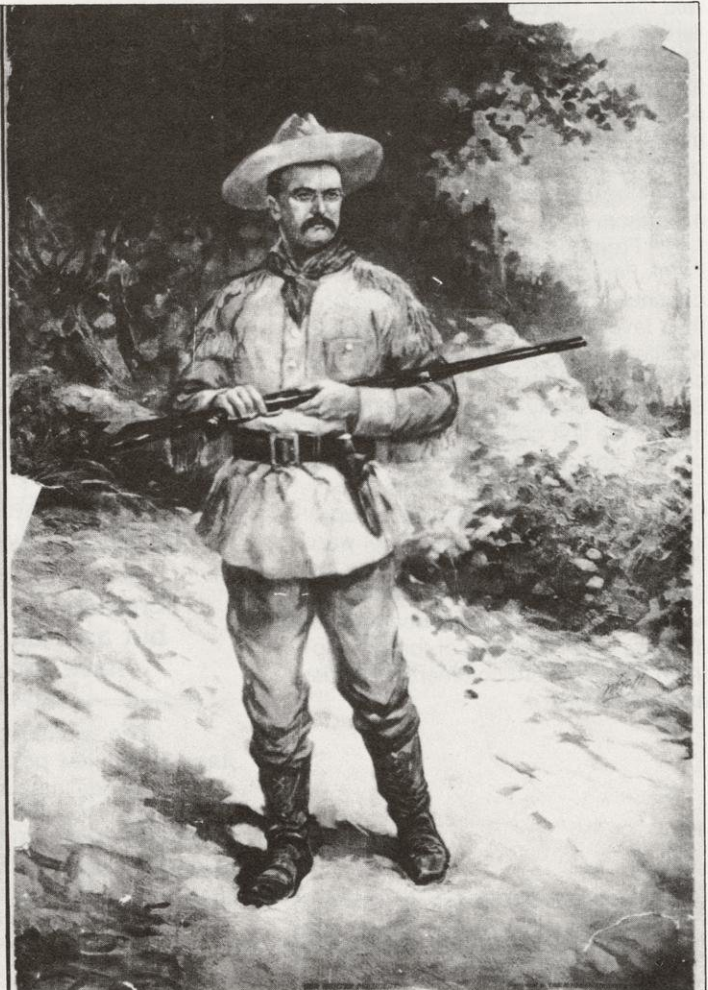
everyone could afford them. Hunting and fishing became not only more practical, but also more profitable.

When *American Sportsman*—first of the outdoor journals—started in 1871, the systematic, commercial

Ding Darling Cartoon courtesy of the State Historical Society.



How Rich Will We Be When We Have Converted All Our Forests, All Our Soil, All Our Water Resources And Our Minerals Into Cash?





exploitation of American animal life was evident everywhere. Industry was on the move, and any natural thing that could be converted to cash was used. Americans found it fashionable to eat wild game. The commercial hunter and fisherman entered their "golden era." They killed big game for hides, waterfowl for flesh, wading birds for plumage, and ocean fish for oil and fertilizer. Quick money, sometimes large amounts, could be made by people like plume hunters who shot the snowy egret almost to extinction.

From the time of Elisha Lewis and Frank Forester in the 1850s, sportsmen continually complained of arriving on their favorite grounds only to find all wildlife killed or driven out by commercial hunters and fishermen. Sportsmen finally defeated the market men in the first quarter of the 20th century and outlawed the sale of game for all except some food fishes. Controversy between the two groups frequently approached a state of war. There were, in fact, some fatalities. Sportsmen of the late 19th century would be little less than flabbergasted to discover that historians of today lump them together with commercial gunners and fishermen.

Appearance of the national periodicals *American Sportsman* (1871), *Forest and Stream* (1873), *Field and Stream* (1874), and *American Angler* (1881), gave new impetus to the sportsmen's struggle. While the nation as a whole remained indifferent, these journals poured forth a steady attack against market men and commercial exploitation of wildlife. They cited specific offenses and preached about ethics and responsibility afield.

Sportsmen not only opposed commercial destruction of wildlife, they deeply regretted the loss of hunting and fishing grounds to the insatiable appetite of commerce. While most other Americans saw land only as a commodity of capitalism, sportsmen viewed it as the necessary context of their sport.

The biological recreational system has worked amazingly well. Not only has a vast amount of recreation been provided, but animals and birds have prospered.

Once sportsmen got organized in the 1870's, their power grew to eventually dominate almost all discussion and policy decisions relating to wildlife. This became especially apparent in the 1930's with Aldo Leopold's development of the science of wildlife management and the

idea that wildlife is a crop that should be managed and harvested.

Other approaches were also offered. Theodore Roosevelt had set aside more than 50 refuges and the system was enlarged when his cousin, Franklin, was elected in the 30's. But

The fact is that sportsmen and women cannot go on almost single-handedly footing the bill for wildlife conservation. Neither can they continue to exercise a near monopoly on wildlife decision making.

even the refuges were opened to harvest when biologists argued that surplus wildlife would be wasted if not used.

After 1933—when Leopold's book *Game Management* appeared—a huge biological-recreational system grew up. It was supported by sportsmen's money (hunting and fishing licenses, duck stamps, taxes, etc.) and staffed by biologists, wildlife management experts, and federal and state game commissioners.

On the whole, this system has worked amazingly well. Not only has a vast amount of recreation been provided, but animals and birds have prospered. Deer are more common today than when Columbus landed, and species like elk and wild turkey, which

seemed headed for extinction have been restored. Just one example is the mourning dove. *Audubon* magazine reported that "200 million doves die annually from natural causes, and 20 million fall to hunters. Yet the dove population remains healthy and stable at 400 million."

Despite its success, the wildlife management system has recently come under fire from what might be called the "new environmentalists." City-bred, well-educated, and convinced of its moral righteousness, this movement often derives its knowledge of wildlife almost completely from television and movies. Many in it have little actual experience with the natural world. They find hunting distasteful, if not immoral, and have even attacked sport fishing for deliberately prolonging a fish's supposed agony.

Despite my dislike for their self-righteous refusal to accept the reality of wildlife dynamics and the fact that certain species do produce surpluses that can be used by the predator, *Homo sapiens*, I am perfectly willing to accept at least one of their arguments. The fact is that sportsmen and women cannot go on almost single-handedly footing the bill for wildlife conservation. Neither can they continue to exercise a near monopoly on wildlife decision making.

I say this even though hunters and anglers still make up the great majority of Americans concerned with wildlife—hunters alone number about 21 million, almost the same as the U.S. black

appear to be growing among the young. If Americans who do not hunt or fish wish to have a greater impact on the conservation of wildlife, they must be willing to pay for it through special taxes on outdoor equipment, songbird stamps (like duck stamps) and similar innovations. The most important development in the whole wildlife field in coming years may be whether these new environmentalists will be able to wrest leadership away from sportsmen and women and their allies.

If, as feared, friction between the two groups continues to grow, further setbacks for wildlife conservation are inevitable. In a country where these two groups are the only major segments of the population that really care about wildlife, it is terribly unfortunate that they should be constantly at each other's throats. While they engage in fruitless battles, massive habitat destruction—which is the real enemy of wildlife—goes on apace. If both antagonists could accept at least part of the other's argument, then a common ground might

be reached. Hunters who break the law with abandon must be apprehended and their hunting rights taken away; it is also true that the federal government has to start spending as much money for songbird habitat as it does for so-called "duck factories." But for their part, the proponents of Cleveland Amory's moral approach to wildlife conservation might try learning something about the ecology of the species they profess to love and accept the fact that in order to live, everyone continually has to kill, directly or indirectly. And this is just as true for the vegetarian as it is for the habitual meat-eater. By coming back to earth, the "new" environmentalists can join with the old fashioned users of wildlife and present a united front against the rest of the country, which cares little or nothing about the destiny of America's wild heritage.

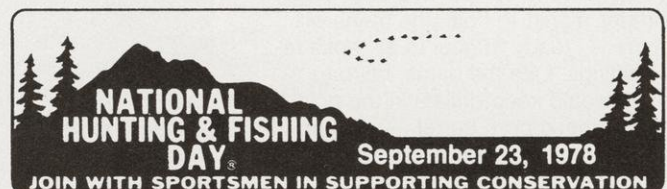
Reiger is the author of the book, *American Sportsmen and the Origins of Conservation* published by Winchester Press. Portions of this article are taken from the book.

In a country where these two groups are the only major segments of the population that really care about wildlife, it is terribly unfortunate that they should be constantly at each other's throats. While they engage in fruitless battles, massive habitat destruction—which is the real enemy of wildlife—goes on apace.



population. If we bring sport anglers into the picture plus members of the National Wildlife Federation and Audubon Society we can see that sportsmen and women still possess the lion's share of the power.

But despite this, the new environmentalists also make up a significant percentage of Americans concerned about wildlife. Their ranks



Editorial:

Befriend &

David Brower, executive director of Friends of the Earth consistently emits new ideas that make perfect ecological sense. In Wisconsin recently to speak at a UW-Madison Aldo Leopold Memorial Colloquium, he propounded this one:

Assign the US Corps of Engineers the job of rebuilding the nation's railroads.

Let them stop constructing all those ambiguous dams, says Brower, and put their "notorious" pork barrel money into a project of critical national importance. The idea is instantly appealing. By now, everyone is fed up but confounded by the problems of proliferating automobiles, trucks and highways that eat up land, make air dirty and use energy like nobody's business. Railroads make sense as an alternative. But in 1946, they hauled 66% of the nation's freight, and today, it's down to 36%. The way passenger service plummeted is common knowledge.

And we all mourn the loss. The golden spike and what it engendered is part of the American mystique, a national folklore. Everybody had somebody who was "working on the railroad." The depth of sentiment, nostalgia and popular support make the demise of the trains seem unreal.

But it happened! And rebuilding has become the end of the rainbow, vastly desirable, but uncannily elusive and complicated. The job is big, will require a giant organizational structure. It's expensive. Brower estimates \$10-billion and up for the roadbed alone. And it's political. Interested parties — pro and con — will need handling.

The Corps, organized in depth, generously financed, powerful and adept politically, qualifies on all counts. Such a new assignment for them, Brower points out, would not only help the nation's rivers by diverting the dam builders, it would also give the corps a new sense of national purpose — something good to strive for. And when the oil crunch finally mandates a shift to coal, the trains will be there — ready to haul to all those remote sidings. Like the dams, railroad building would keep dollars in the politically pragmatic pork barrel — enough to pop the bung, so much needs to be done in everybody's home town.



And Brower emphasizes the urgency, a fleeting opportunity. Track is being abandoned at a steady rate and remaining roadbeds deteriorating fast. Wisconsin alone has lost 1500 miles of line in the past 50 years. Scores of localities have lost the economic potential available only to towns with rail service. DNR, it must be said, has saved some rights of way from permanent loss by creating eight state recreation trails that cover about 300 miles. But if railroads

are to be saved for mass transit and freight, the job has to be on a grand scale and started now.

Brower has been propounding his idea for about three years. So far, nobody in the Corps or anywhere else has picked up on it.

Why don't you?

J. Wolfred Taylor

Books

EARTHSCAPE by John Ormsbee Simonds, 340 pages, McGraw-Hill, \$24.95. This is a plea for sensitive integration of man-built structures with the living environment. Full of quotations from statesmen, philosophers, naturalists, ecologists, poets and planners, the book shows that thinkers everywhere worry about what man is doing to his fragile environment. But Simonds is hopeful. He is a planner (subtitle is *A Manual of Environmental Planning*) graduate of the Harvard School of Design, and former president of the American Society of Landscape Architects. Good planning and follow-through, local, regional, state, national and even world can bring change and a happy environment tomorrow. That's the message.

The bright side of it all, Simonds says, is the "seldom-mentioned saga of national parklands preserved, of lakes reclaimed, of river systems under study, of the comprehensive planning of states, counties and towns, of successful conservation and community improvement programs..."

Chapters cover the earth, air, water, the visible landscape, noise, transportation, the planned community, urbanization and regional planning. Thoughtful discussion and positive recommendations highlight each one.

Simonds thinks America has the technology

to reverse downward environmental trends and wants his book to help point the way.

WILD FLOWERS OF THE NORTHEASTERN STATES by the New York Botanical Garden with text and slides by Frederick W. Case, Jr., 34 pages, hard cover, McGraw-Hill, 1221 Avenue of the Americas, New York, N.Y. 10020, \$18.95. An in-depth slide talk that describes 40 species of wild flowers found along streams, in meadows, tamarack bogs and deciduous and coniferous forests. Most are native to Wisconsin. The slides are attractive and all the old friends are there: adder's tongue, bloodroot, spring beauty, black-eyed Susan, Indian pipe, trillium, pitcher plant, cow lily, jewelweed and many others. Nice!

The readers write

We in Vilas County read with much interest and dismay the article entitled "DNR's Air Corps" in the March/April edition.

Vilas County depends heavily on tourism and recreation for its economic base. The article indicated that only Vilas County in the northeast part of the state has substandard air quality, while all the other counties around us evidently have clean air. We feel that it is only fair that the DNR correct this and present the facts as they actually are. This article gave us a black eye in the minds of many people, one which certainly is not deserved.

FRANCIS DUSSAULT; Vilas County Board Chairman.

The article in the DNR magazine on air pollution is specious, ill-documented, ill-considered and carelessly negates the considerable time and money put into efforts of the Bureau of Tourism to promote northern Wisconsin.

Casual investigation indicates that the article was published prior to completion of the study (*not so*) and that the pollution under investigation is common to all the continental United States.

HELPS CHAMBER OF COMMERCE

An air monitoring station at North Lake Elementary School in Manitowish Waters recorded ozone levels above Environmental Protection Agency (EPA) standards 152 times during summer 1976. Readings were taken every hour.

Although there are no other stations in counties surrounding Vilas, experts believe ozone levels are similar all across northern Wisconsin. The map was misleading only insofar as it failed to show that levels may also exceed EPA standards in many other northern localities.

Most respectfully, I submit that our official Bird of Peace deserves to have its Latin name rendered correctly.

I imagine it is supposed to be something like: *Zenaidura macroura* Linnaeus, subspecies *carolinensis*. . . (*Typos get by! A promotional envelope mistakenly rendered this "carolinensis linnaus."*)

And of course there has to be an authority for the subspecific epithet. I have no idea what that might be. That rustling sound you hear is dear old Carolus himself spinning in his grave, that the state of Wisconsin would misspell his name!

You really must speak harshly to your computer about this; perhaps a threat to pull his plug out would make him more careful about proofreading in the future.

NEIL A. HARRIMAN; Professor of Biology, U-W Oshkosh.

I object to your Department going into the publishing business. Wisconsin taxpayers don't need extra staff to support. DANIEL TEAS; Wisconsin Rapids

The legislature requires that funds to support this magazine come from subscription revenue. Taxpayer money is not used.

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 the editor" should be addressed to Wisconsin Natural Resources magazine, Box 7921, Madison, Wisconsin 53707.

EASY GOING: WISCONSIN'S NORTH-WOODS by Michael J. Dunn, III. 155 pages, soft cover, \$5.00, Tamarack Press, Box 5650, Madison, Wisconsin 53705. This is the fifth in a series of travel guides to Wisconsin and another excellent job. It tells nearly all any tourist could ask about Vilas and Oneida Counties and even provides some new information for the natives. Introductory chapters cover geology, flora, fish, wildlife and the early hospitality industry. Then comes detail on all the well known communities—a brief history, and a where and how breakdown on everything there is to do. Hiking, biking, fishing, shooting, boating, driving, shopping, lodging, camping, special events, entertainment—you name it—are all covered. Twenty different communities are looked at. This is a good book for anyone who wants to either browse around or delve deeply into Vilas and Oneida Counties.

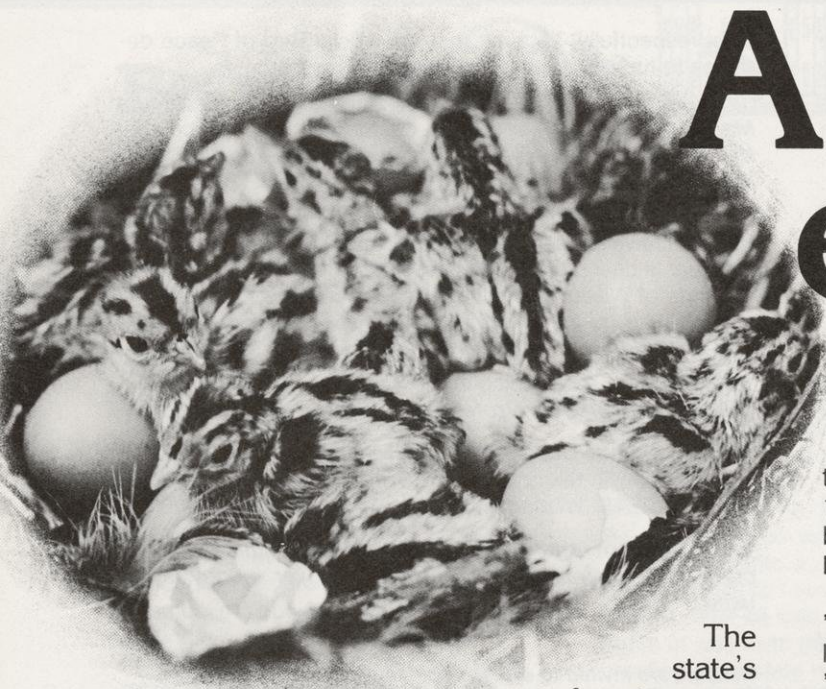
Other books in the Easy Going Series are: The Wisconsin Dells—Devil's Lake Region; Historic Lead Mining Region; Door County, and Madison and Dane County.

BIRD FLIGHT by Georg Ruppell, 187 pages, 238 illustrations, hard cover, \$18.95, Van Nostrand Reinhold, 450 West 33rd Street, New York 10001. Ruppell describes the aerodynamics of bird flight and the complex anatomical features that make it possible. Gliding, soaring, and other techniques are explained. The way wing flapping enables birds to fly backwards and perform other quick movements is analyzed. How they fly up, down, on a curved path; how they achieve instant on-the-spot turns, take offs, landings, vertical flight, and steep downward flight; how the albatross and hummingbird perform their amazing flight maneuvers; and why large and small birds fly so differently are all explained.

The author also describes his high-speed photographic techniques. All illustrations are adequate, a few spectacular, but most seem a little blurred—possible reproduction, focus or paper quality problems. But the scientific facts are great. Flight is examined as an adaption to a variety of habitats, explaining how and why birds developed their extraordinary form of motion.

George Ruppell is a Professor of Zoology and ornithologist at the University of Braunschweig, West Germany.

Wisconsin pheasants: A bird's eye view



The
state's
favorite game

bird has had its ups and downs. The question is why? Here are some answers.

CYRIL KABAT,
Director, Bureau of Research

Wisconsin's gaudy cock pheasant and its plain gray-brown hen were successfully introduced to Waukesha County in 1916 by Gustav Pabst. The birds found the habitat friendly. By 1927, they had increased enough to permit hunting seasons in two counties. By 1942 the harvest was estimated at 600,000 roosters of which up to 100,000 were stocked. In the peak years, from 1942 to 1945, the Wisconsin pheasant population ranged up to 2-million birds. Similar growth was reported all across the United States from New York to Oregon.

The pheasant's ancestors came from Eastern China, Central Asia and Transcaucasia. What were the reasons for its success here and why the drop since 1942?

Studies show Wisconsin pheasants have been most abundant in counties where 55 to 70 % of the land is under cultivation and where more than 20 % of the total area is wetland. By 1942, with the impetus of stocking, pheasants had occupied all but 11 of Wisconsin's northernmost counties. All still have pheasants but only at about 35 to 40 % of the peak in

the early 1940's. Counties with the best populations in 1942 generally still have the highest densities today, but with a difference: birds are not in the same places. Intensively cropped lands lost the most.

After the population topped out in the early '40's, there was a drastic decline in the mid-40's, a leveling off from '47 to '54, a long decline from '55 to '68 (with one period of upswing) and finally, a leveling off over the last eight years.

Requirements for an abundant pheasant population are: secure nesting sites, winter cover, year round food, a relatively abundant breeding population, and the production of a crop of young birds that exceeds the annual mortality. Weather has to be favorable because it always takes a toll of pheasants just as it does of all other species and is generally responsible for short-term changes in population. A series of back-to-back, wet, cold springs, snowy cold winters or occasional catastrophic events such as blizzards, floods and ice storms are very damaging.

One reason for Wisconsin's drop in pheasant populations is that the number of successful nests in hayfields is down drastically. Success decreased from 50 % in the '40's to as low as 18 % in the 1960's. Why? Because in the '40's hayfields were cut late, after most nests had already hatched. In the '60's, however, agronomists learned that less mature hay and early maturing varieties have extra high nutritive value. Harvest dates were then changed. The target now is to cut when only 10 % of the alfalfa is in bloom or even earlier if insects are high. In the '40's, cutting occurred much later when the bloom was full. In addition, today's harvesting equipment operates at higher speeds and allows fewer hens to escape than in the 1940's.

Loss of wetlands through draining and filling is another reason why pheasants are down. The loss has amounted to about 1 % annually from mid-1940 to 1978, with the best nesting wetlands hit hardest. This figures out to more than 30 % of all Wisconsin wetlands and reduces total nesting sites by that amount. It means that hens which once nested in

wetlands now have to move, primarily to hayfields where success is lower and hen mortality highest.

These two nesting losses, hayfields and wetlands, add up to nearly a 50% drop in production from the mid-40's until now (18 plus 30%). Actually the relationship is not scientifically precise because my analysis here compares different areas which used different study techniques and not every pheasant evicted from a wetland really nests in a hayfield. But in general, the picture is accurate.

To make the discussion complete, there are added factors; the conversion of agricultural land to urban development, highway improvement, loss of food, loss of winter cover and stocking.

For food, pheasants depend primarily on farm crop seeds such as corn and also on weed seeds and insects. Since the mid-40's cleaner cultivation practices, more fall plowing, corn picking rather than shocking, harvest equipment that leaves less waste grain, herbicides that reduce weed crops, and greater insect control have all combined to significantly reduce pheasant food.

The need to reduce nonpoint water pollution resulted in another pheasant setback. Barnyard wastes which were spread in winter, supplied food but also ran into lakes and streams in large amounts. This pollution will have to be stopped.

Hedgerows along fences and roads have almost disappeared in Wisconsin. Along with wetlands, their loss has also proportionately reduced both winter and nesting cover.

Hatchability, brood size, the percentage of hens with broods, and disease losses are generally about the same today as in the early '40's. However, the annual survival rate appears lower now than in the past because of higher predation and reduced winter cover and food. Predators hit especially hard in winters with prolonged cold and snow.

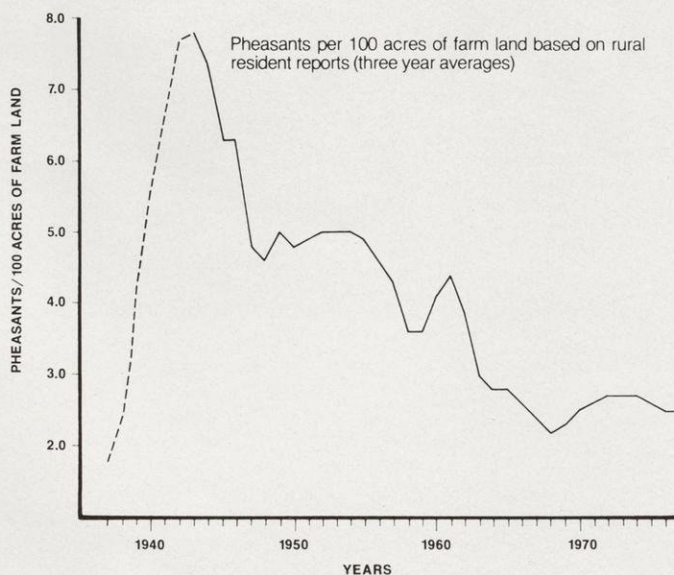
What about the impact of hunting? With the exception of two years, 1946 and '47, when hens were legal in 10 northwest counties, Wisconsin has

harvested only cocks. Even though up to 80% of the male population is taken annually, there is no evidence of too few cocks for successful mating. This unique characteristic means we can have a season every year without harm as long as illegal kill of hens remains low and does not reduce breeding potential. In fact, the *annual harvest* of pheasants in Wisconsin has declined only about 40% since the peak year in 1942 whereas the *overall population* is down by about 60%.

The value of stocking to establish a population is a matter of record. But does it pay to continue? Many states stopped soon after wild populations developed. Wisconsin began stocking in 1929 with release of 3,100 birds. This increased yearly to a peak of 246,000 in 1942. Anywhere from 150,000 to 220,000 were put out annually. At first equal numbers of hens and cocks were stocked but today up to 90% are roosters. Around 50% of all cocks stocked are shot by hunters. Of the total harvest of about 300,000, some 28% is pen-reared.

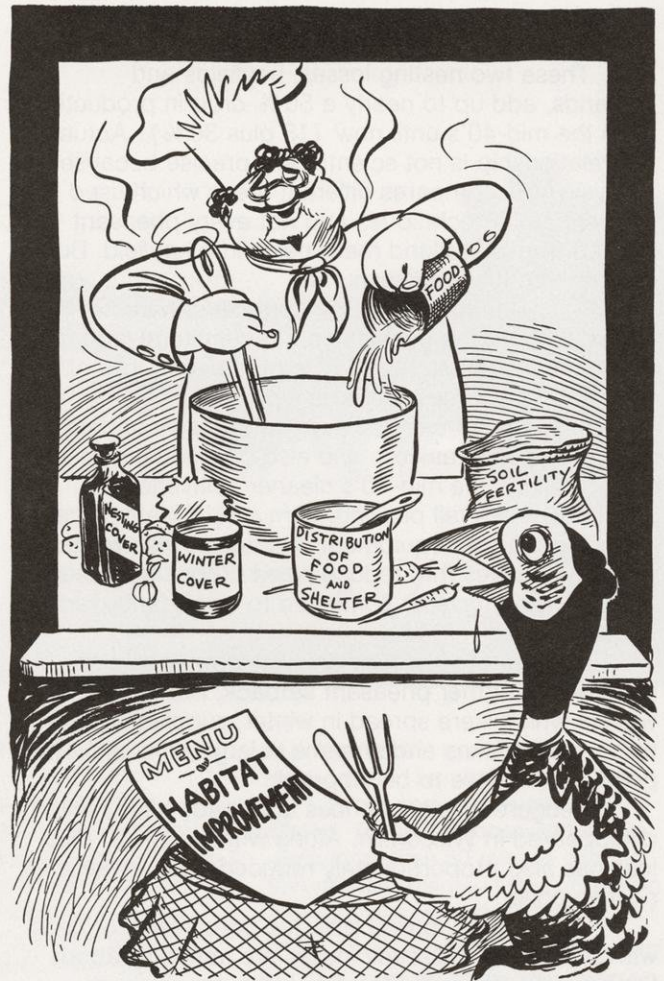
The long-term decline from the '40's to the '60's as well as the current stability of Wisconsin's pheasant population are both clearly related to changes in agriculture, urban encroachment and wetland losses. For the time being these land use changes seem to have taken their toll. However, it's not over. Many of the same forces persist and will likely cut into future population levels. Climatologists tell us future weather patterns may be less favorable and this, too, could be negative. Can stocking offset these declines? It can add as many as 84,000 birds per year to the current harvest of 300,000. But stocking is costly. It can lower the sporting ethic by concentrating hunters at release sites. However it's also very popular and is compatible with the public hunting ground concept. Stocking is likely to continue if it pays its way but don't count on it to replace natural birds. That's not in the cards.

On the bright side, if dairy farming continues at present levels in Wisconsin, we'll have pheasants. This



is in contrast to midwestern grain states where populations have declined very sharply because of changes in methods of growing the crop. Here in Wisconsin the DNR program will be to fine tune present management practices for optimum production. We will try to find more secure upland nesting cover. We will identify and preserve the best wetlands and find incentives for landowners to do the same. And we will work to find favorable agricultural practices that are economically possible for farmers. The pheasant will respond to whatever improvements are made but the fact is that there is a limited supply of birds and sportsmen will have to adjust to this. Meanwhile the fall hunt in Wisconsin seems secure. If there's one thing the research program has proven, it's that the bird doesn't just automatically come with the land. It needs constant attention and management.

Illustrations by Oscar Warbach



Marathon run at Sugar River

This state trail is a natural. It's flat, scenic, marathon distance, comfortable underfoot and fast. A runner could make Boston.

BEN MILLER, Editorial Intern

One way to view the countryside of Southern Wisconsin in late autumn is to take a walk on the Sugar River State Trail near New Glarus.

Another way is to take a run. You can do it at the third annual Sugar River Trail marathon on Sunday, October 22nd.

If you enter, you'll start in New Glarus with about 450 other runners. According to Meet Director Earl Elmer, it looks as though you'll have to cover the 26.2 miles to Brodhead in under 2-½ hours to win. "The marathon keeps attracting more runners and the winning times keep getting faster," said Elmer.

It started in 1976 with 200 entries. The idea for a race on the trail came from the Madison-based Vilas Running Club. Club Director Lloyd Bostian, a U-W Madison Agricultural Journalism professor said the location

was a natural: "We needed a cool weather marathon and were looking for a lovely place to hold one. Most of our board had used the Sugar River Trail for biking and hiking and many knew it because of our summer 'fun runs' held there in Albany. Once it was proposed we all quickly agreed, if something could be worked out with DNR."

Something was. The principal concerns were for supervision and safety of the entries and that there be no inconvenience to the general public. A formal agreement spells out details. The date chosen is during the lull in general use after summer, but before the hunting season. The state trail fee for each runner is paid by the club from entry receipts.

Last year 308 people finished the race. There were 373 registered. Janesville's Bill McBride was the winner in two hours, 31 minutes and 11 seconds. "It's an excellent trail for a marathon," said McBride. "It's not very hilly and the weather at that time of year is ideal for running."

Although facing 40 degree temperatures in a pair of shorts doesn't

appeal to most people, runners think it's great. They also like the course and the organization of the race. "The crushed gravel surface is excellent. It's soft and flat, so it's comfortable to run on, as compared to a street or sidewalk," said McBride.

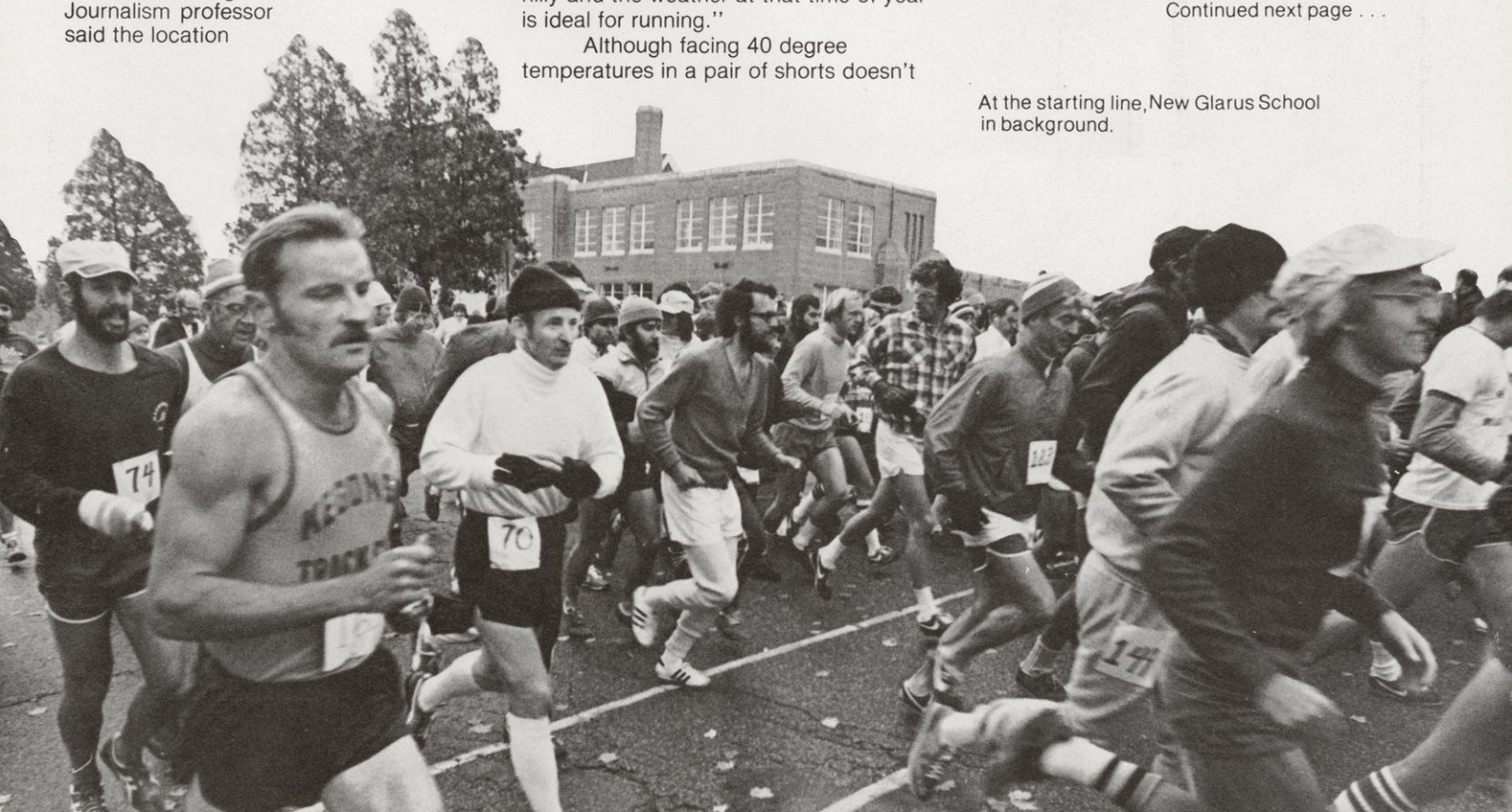
Club Director Bostian, however, says there's a little "slippage" on gravel which might prevent "really fast times." But he points out that the average runner can do much better than usual at Sugar River. "It's not only scenic and enjoyable, it's fun to go through Monticello and Albany and see 50 or 60 people at each major crossing," he said.

McBride describes the course as picturesque. "You can see for a long ways through the branches of the trees. You can see farms and old bridges. It's a change from running in city streets."

Last year's winner also says the monotony of running 26 miles is broken up by the cheering at highway intersections, which are manned to

Continued next page . . .

At the starting line, New Glarus School in background.



protect the runners. "It's great when you get to Brodhead," said McBride, "to see 100 people lined up on the streets cheering you to the finish."

Club Director Bostian expects a big turnout of spectators this year if weather is right. In '76 and '77 it was fine for running but too cool to stand around and watch.

Elmer says the race comes off smoothly because of great cooperation from DNR, the Green County Sheriff's Office and CB radio operators who guard intersections. "The local CBers really make the whole race possible. They're also a big help relaying information about runners who have problems—a sprained ankle or a pulled muscle."

The race's first two miles are run through New Glarus, and after thinning out, the next 23 go down the trail. The final mile is in Brodhead.

Elmer says the field of entries has doubled in the three years since the marathon started. "We can handle up to 600 runners before we get crowded. The

trail gets narrow at some points and may eventually limit us."

National advertisements in the magazine, *Runners World*, have helped build interest. Long distance runners come from all over. They appreciate the date. It's a late season chance to get a sub-three-hour clocking that qualifies for the Boston Marathon, the dream of every runner.

"With hardly any hills and the great weather, many get their first sub-three marathon, fast enough to get to Boston," said Elmer.

Since it's run in October, heat and weather are discounted. The race doesn't start until nine in the morning (summer marathons usually begin around 7 AM to avoid sun and high temperatures) and there aren't too many problems with runners dehydrating or being otherwise affected.

Even though cool is comfortable for running, Club Director Bostian points out that weather so far has also hindered, "Both years, '76 and '77, we had a southeast headwind, which is unusual. It slowed everybody down. If we get a prevailing northwest wind, you'll see some very fast times."

The race draws men and women, young and old, all tempted by the

opportunity to exceed themselves on the stop watch. Each entry gets a tee-shirt for finishing and after the race, there's a party at a club member's house where marathoners talk over how good or bad they feel.

At a party or on a trail people who love to run have a natural affinity. And they become addicted. The club itself began rather casually in 1970 when Bostian started a children's fun and fitness program at Vilas Park in Madison. At first only the youngsters ran, but pretty soon mothers, fathers and friends were doing it too. A serious running club finally evolved that sponsors several competitive events. There are 1,100 members.

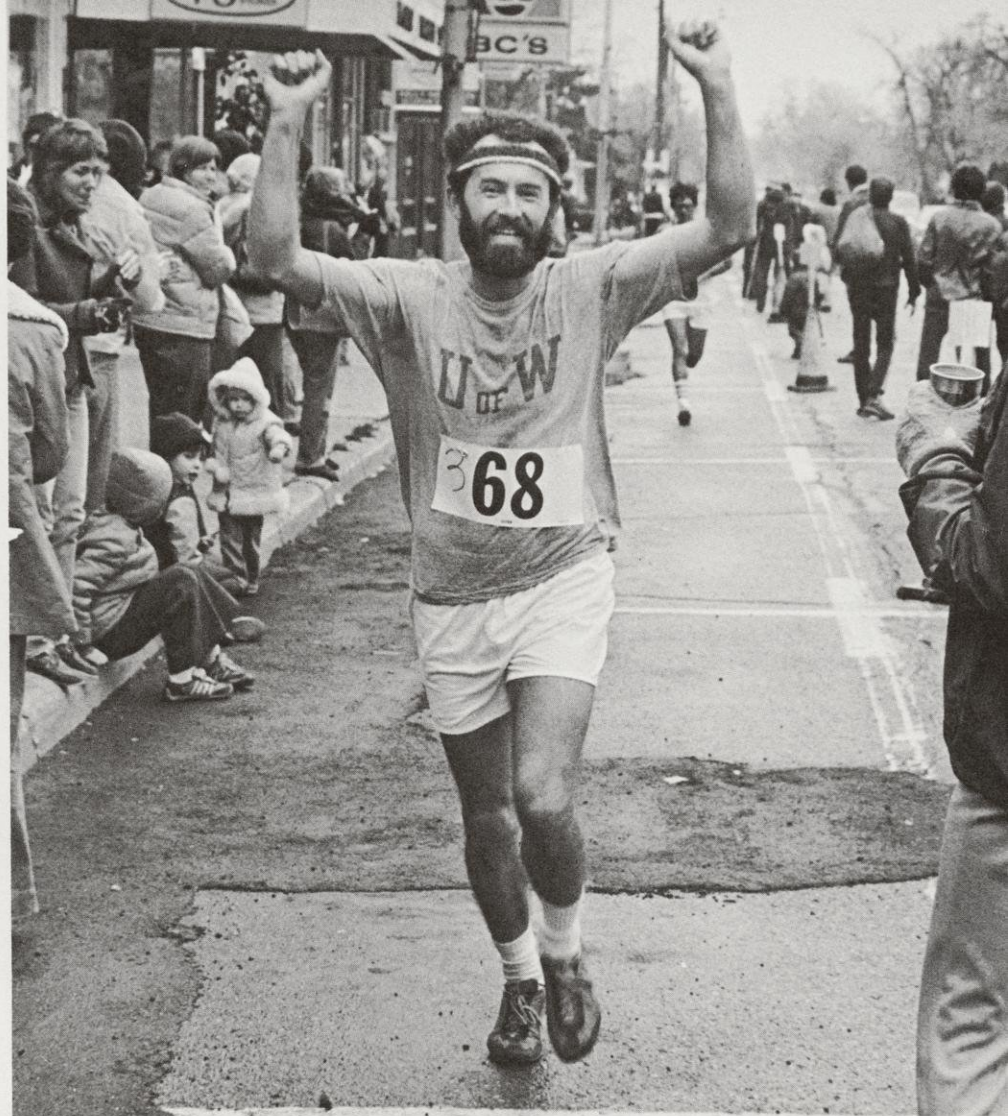
This year, anyone who wants to forgo Sunday football for a 26.2 mile endurance outing can join in by contacting the Sugar River Trail Marathon Corporation, Box 781, New Glarus, WI 53574.

Photos by Tom Mitchell

Terry Cooley, organizer of the first marathon, runs the race.

Happy finishers





Right:
Bill Wartenweiler of Monroe finishes his first marathon.

Bottom:
Bill McBride of Janesville wins.



Orienteering: map, compass and family fun

WILLIAM C. TAUBMAN, Shell Lake

Orienteering is kind of like a treasure hunt. Participants navigate cross country with map and compass to find control markers. Its history can be traced back to the late 1800's in Sweden. While much early orienteering was associated with military training, it also developed as a highly competitive event for the best European outdoorsmen and athletes. During the past four decades there has been international competition in many countries and a ski orienteering event is planned for the 1980 winter olympics.

Competitive orienteering requires top physical condition, skill with topographic maps and woodcraft. But we do it in a kind of informal way up here in Washburn County where orienteering becomes an exciting day of outdoor fun and exercise for entire families. At our home near Shell Lake we have an annual fall event that just keeps growing and growing in popularity. Last year there were 80 participants who hiked 200 acres of woods looking for 10 different control points.

In our fun-adaptation, the orienteers work in teams, not alone, and each is given a scale map with all points identified rather than having to prepare their own.

They also get a written clue for each control point. And they don't have to hit each one in order.

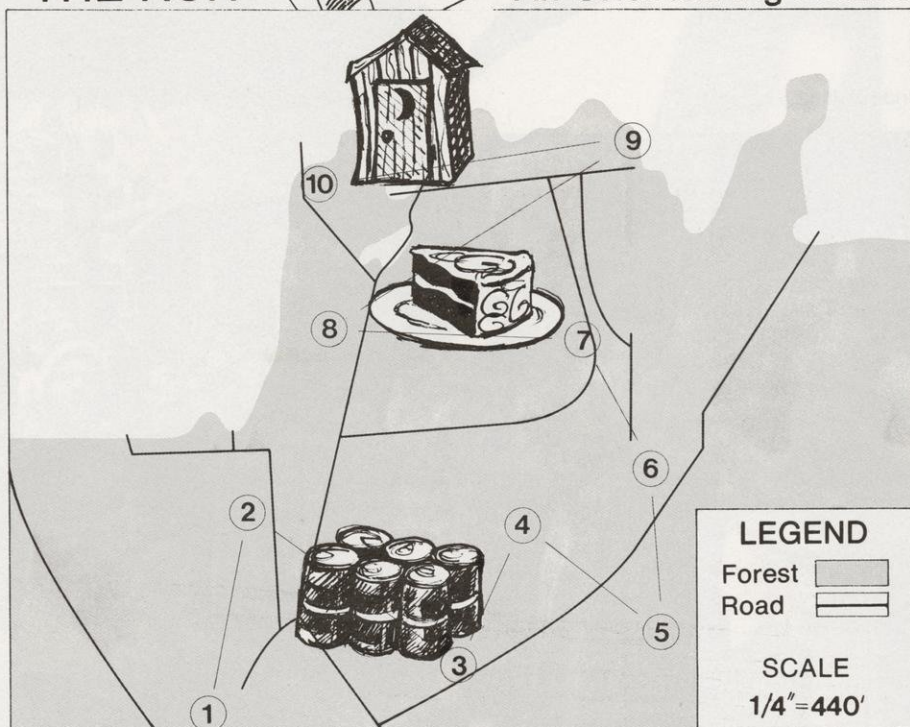
Armed with maps, clues, compass and ruler, teams head for the trees. The winner has to locate all 10 points and return in the shortest time. We make sure there are a few incentives too—a jug of wine here, a 12-pack there, a piece of cake, a box of candy. One year, the last place finishers consoled themselves by consuming the entire jug before emerging at the finish line in very relaxed condition. Even though our version is tailored for fun, success depends on ability to navigate accurately and efficiently over unfamiliar terrain. The autumn woods, fresh air, healthy exercise and companionship make it a day to remember—a new dimension in outdoor enjoyment.

If it sounds good and you want to know more, write American Orienteering

1. On the 40 line.
2. On the hill crest.
3. Look beneath the towering red pine.
4. All the way to the bottom.
5. Find pink ribbon and go 75 yards on 225 degree heading.
6. and on July 4th the winds blow.
7. "A piece of cake."
8. Tie a yellow ribbon around the old oak tree.
9. The squirrels love this one.
10. Find the throne 75 yards at 273 degrees.

"THE RUN"

An Orienteering Course



Service, Department FS, 308 West Fillmore, Colorado Springs, Colorado, 80907. Ask for their booklet, "So You Want to Know About Orienteering!"

Other sources of information: U.S. Orienteering Federation, P. O. Box 1039, Ballwin, Missouri 63011; Silva Company, 2466 State Road 39 North, La Porte,

Indiana 46350; Be Expert With Map & Compass, Bjorn Kellstrom (Scribner's, 1976, \$6.95); Orienteering for Sport and Pleasure, by Hans Bengtsson and George Atkinson (Stephen Greene Press, 1977, \$5.95).

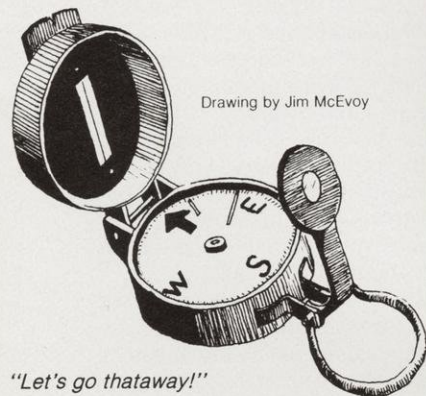


Clockwise from left:
The terrain has both beauty and challenge.
The children go in groups.

Some go through—some around.
These decisions determine whether you win
or lose.

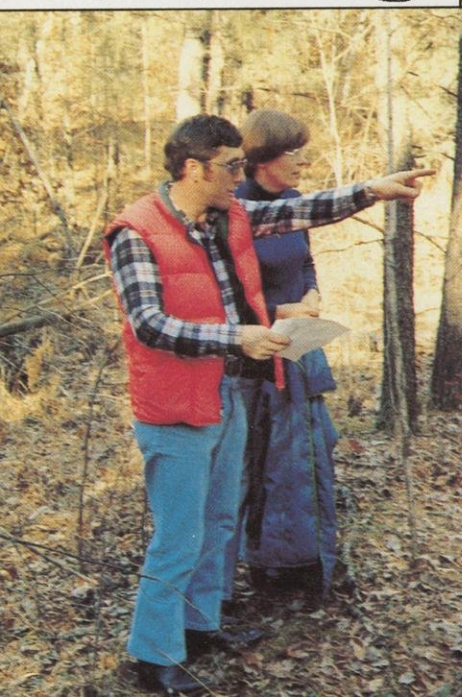
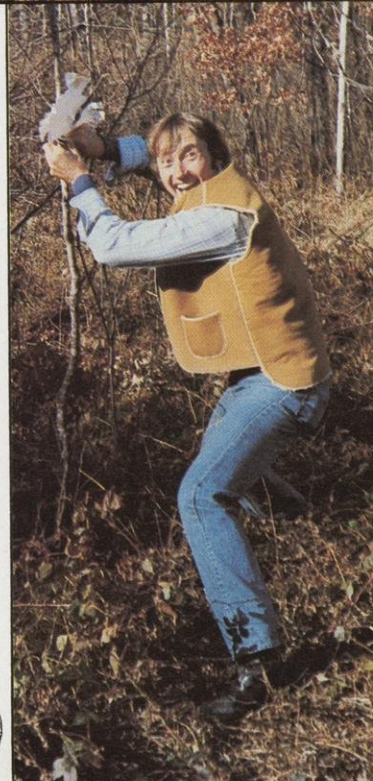
A pot luck picnic comes afterwards.

Finding a control point can be a
happy occasion. A numbered tab torn
from the perimeter of a paper plate
identifies the site. Contestants must show
it as evidence.



Drawing by Jim McEvoy

"Let's go thataway!"





Purple loosestrife:

beautiful exotic, or unwanted weed?

This plant has been growing wild in Wisconsin since 1928. In some northeastern states it has taken over cattail marshes and wiped out wildlife values. So far so good in Wisconsin, but the change takes a long time to happen. How will it go here?

**NOEL J. CUTRIGHT, Senior Ecologist
Wisconsin Electric Power Company**

"Exotic" is a word of many meanings. "Alien or foreign" is the basic connotation, but "strange," "interesting" and "desirable," or even "fearful" may also be implied. Purple loosestrife (*Lythrum salicaria*), is an exotic. A Eurasian emigrant, it has become an unwanted weed in freshwater marshes in the Northeast and is becoming more common here in the Midwest including Wisconsin. It has been recorded as far west as Minnesota and Manitoba, Canada. In my travels, I have observed purple loosestrife throughout southeast Wisconsin and north into Sheboygan and Waushara counties. There is plenty of it in Klétsch Park in Milwaukee and it should be in bloom right now. A substantial population has been observed as far north as Ashland

and Bayfield counties. It's also in Jefferson, Waukesha, Dane, La Crosse, Langlade, Waushara, Lincoln, Brown and Marinette counties.

European plants that became established early in America can be termed "anthropochorous", a Greek word that means "dancing in the footsteps of man," indicating that these plants came accidentally and unpreventably with man's belongings, seed supplies, and livestock. Deliberate introductions began later in America and typically were undertaken for man's benefit. Several of these introduced species have not worked out as intended and have become pests, destroyers of habitat, or unwanted competitors of native species.

Decisions that are required prior to the introduction of a foreign species are complicated for the ecologist and administrator. Among questions that must be considered are: What effect will the newcomer have on existing plant and animal communities? Will all its habitat requirements be met in its new "home" or will it have to be "supported" artificially? Will it compete to the detriment of native species? Is it harboring some disease or parasite that might spread to other species? How will it affect agricultural crops? If it becomes a nuisance, can it be controlled?

As early as 1916, 2,294 separate varieties or species of plants entered the United States through the Office of Foreign Seed and Plant Introduction alone. Sometimes failure of an introduced species to establish itself on the first attempt led to repeated efforts by dedicated individuals. The success of introductions is shown by our dependence on many exotics that we now take for granted; these include cattle, chickens, potatoes, and tomatoes. Through controlled breeding over generations, man has changed organisms to fit his ecosystem. Once-wild plants and animals that originally

possessed a wide range of adaptations and survival characteristics, now require cultivation and husbandry and could no longer compete successfully in the wild.

Purple loosestrife is beautiful — a whole field of it is breathtaking. Plants grow in clumps four to five feet high, sometimes reaching six feet. Typically, each stalk is covered along more than one-half its length with opposite leaves that are two to four inches long and oblong or spear-shaped. The top one-fourth of the stalk bears flowers, each about one-half inch across, arranged in spikes like a snapdragon. Flowers are a striking magenta color.

Considerable variation occurs within this botanically-odd species. Some flowers have five petals, others six. Though the leaves and stalks are generally somewhat hairy, one type is smooth and another is quite woolly. Flowers themselves range from a vivid dark purple-rose through a pale magenta; even an albino strain has been observed. More remarkable than differences in texture and in petal number and color within this species is the existence of two colors of pollen and of three lengths of flower parts. Pollen may be either bright yellow or a bright emerald green. Stamens and styles, the pollen producers and receivers, may each be found in three lengths. This triple type of "heterostyly" was noted by Darwin, who wondered at its importance as an evolutionary adaptation.

Large-flowered forms with rose or rose-purple flowers are offered for sale as ornamentals. Apparently, nurseries have hybridized *L. salicaria* with its closest relative, *L. virgatum*, which also hails from the Old World. The three other species of *Lythrum* that occur in northeastern North America are more delicate in appearance.

Purple loosestrife is a well-known honey plant. Several articles appeared in

the *American Bee Journal* between 1947 and 1966. A typical title is "Purple loosestrife for bees — a good honey plant to naturalize in marshes and along streams." How much this aspect has led to its spread in the United States is unknown.

With all its beauty and botanical uniqueness, why am I concerned about exotic plant species? Planted in a dry upland or garden situation, it causes few problems. But once allowed a foothold in moist soil or even shallow water, it can spread rapidly by creeping stems and by seeds, choking out competition. Since purple loosestrife can survive for years even in water more than a foot in depth, it is especially threatening to cattail, a valuable emergent aquatic plant. Other native plant species valuable to wildlife also may be crowded out. Dense stands of purple loosestrife do provide some shelter and escape cover for wildlife, but its overall value is much lower than that of a typical cattail marsh.

Purple loosestrife may even shorten the life of a marsh. Debris that collects amid its decay-resistant stalks slowly raises the ground level, making water shallower and depriving cattail and other aquatic plants of water.

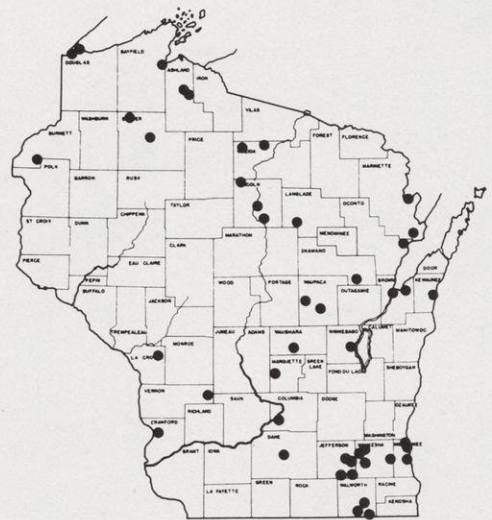
Chemical control experiments have been conducted in New York marshes since the 1950's. Although control has been obtained through the use of various herbicides, eradication has not been possible. Also, such

practices have been costly, have provided only temporary control, and have a major impact on non-target plant species. Other unsuccessful control attempts have included manipulating water levels and burning dead loosestrife clumps at or below the surface. Hand pulling is considered feasible only for scattered plants.

There are colonies of purple loosestrife at Horicon Marsh in Dodge County and DNR people keep an eye on them. Horicon property manager Jim Bell says to date there's been no spreading but calls them "bad news" anyhow. At Horicon, rather than invading the wetland they seem to do best on drier sites. This is in spite of frequent drawdowns that leave exposed mudflats which might invite spreading. In the East, the plant often invades marshes rapidly following a drawdown.

Although much is known about the botanical structure and growth habits of purple loosestrife, no studies have been conducted on its life history and ecology. Recently, Cornell University in Ithaca, New York has proposed a study designed to describe its development and phenology, determine its impact on a marsh ecosystem, and investigate alternative methods for its control. Even though purple loosestrife has been in the United States since the mid-1800's, its persistence and abundance in shallow, freshwater marshes is only now becoming a concern to wetland managers. It is a beautiful example of an exotic species that seemingly had desirable characteristics (floral beauty

Purple loosestrife (*Lythrum Salicaria*) distribution map



Places in Wisconsin where purple loosestrife has been reported. The earliest was 1928 in Milwaukee county. Since 1970 it has been spotted in Bayfield, Sawyer, Shawano, Kewaunee, Vernon and Columbia counties.

Map from UW-Madison Herbarium, Hugh H. Illis

and a honey plant), but in the long run became a serious pest and unwanted weed.

Wisconsin, thankfully, has been spared so far. We may be lucky and be outside the climatic range that can cause trouble. But the plant is here. It bears watching!

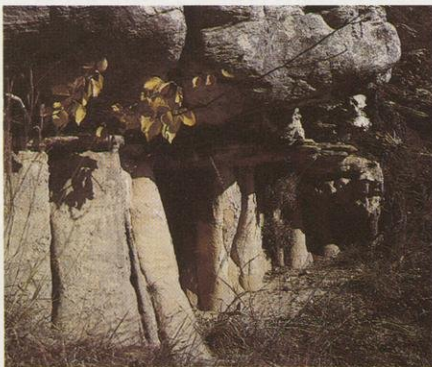


Mississippi bluffs:

between a rock and a hard place

The limestone bluffs that line Wisconsin's western border are rugged, beautiful, wild, unique and threatened. Nothing about them is ordinary, except perhaps the threat.

Ghostlike, an American egret lifts off a bluff-country slough.



JEFF SMOLLER, Director, Bureau of Information and Education

The Mississippi River bluffs began as tiny organisms deposited at the bottom of an ancient sea 500-million years ago. In time, they emerged to be sculptured by the elements into the splendid shapes that exist today, 400, 500 or 600 feet above the water.

The first Copper Culture inhabitants of the Upper Mississippi and all natives who followed, respected and often revered the bluffs. So did the early white explorers, Fr. Louis Hennepin and Pere Marquette. And so did U.S. Government explorer Zebulon Pike whose 19th century travels on the bluff-cradled Mississippi inspired these breathless entries in his journal:

"On the right, we saw mountains which we had passed in the morning, and the prairie in the rear, and like distant clouds, the mountains of Prairie de la Crosse. . . . It was a prospect so variegated and romantic as one may scarcely expect to enjoy more than twice or thrice in the course of this life."

A trip along or down the Great

River today continues to inspire boaters, hikers and motorists. Most of the time.

There are places, however, that no longer inspire because the bluffs have been encroached upon or scarred. There are stories, too, of million dollar land deals to accommodate the demands of wealthy home-buyers. And if the first big land deals are profitable, more developers and buyers will come. That would not be surprising because it is easier to get to the Great River today than even 10 years ago. And the heightened awareness of "God's Country" throughout the midwest has helped turn around the once declining populations of large and small towns alike.

So the increasing threat to Wisconsin's 130 miles of dolomite outcropping could have been predicted. It is obvious, too, that the bluffs can be their own worst enemy in the struggle to survive. True, their towering crests offer dramatic views. But they also present a prime development opportunity for brokers and builders sensitive to the "big money" purchasers from Minneapolis, Madison, Milwaukee and Chicago. True, their tons of limestone are a crowning mantle for the layer upon sandstone layer that reaches below the river's bed. But that limestone mantle is also a profitable building material for highways and homes. It is quarried and mined. Other threats exist: hillside agriculture that encourages erosion; creeping commercialism sandwiched between



river and bluff face; utility line and highway encroachment, insensitive to even the most scenic ridges.

All these perplexing problems face local governments, the states of Minnesota, Iowa and Wisconsin and the Minnesota-Wisconsin Boundary Area Commission. The commission recently issued an alarming report that described "a surprising attitude of complacency" regarding bluffland protection. It declared the Upper Mississippi bluffs "an outstanding, irreplaceable natural feature of regional significance worthy of special use policies, management and preservation." But it also reported there exists no comprehensive effort to assure wise use, development and protection of the bluffs and, further, that local attitudes about the bluffs' value "vary widely."

One opinion that river people almost universally express, however, is that bluff protection should be a local responsibility. The challenge, therefore, is formidable. Bluff protection along the Minnesota-Wisconsin border will involve decisions in two states, 10 counties, 27 incorporated municipalities and 39 unincorporated towns. Information is needed on where major trends are developing to alter the bluffs. And technical assistance should be offered local officials responsi-

ble for whether bluffs are quarried, developed, otherwise used or protected.

Some — albeit modest — protection already exists through local or state efforts. The City of La Crosse has purchased famous Granddad Bluff, still scarred by early stone mining. But La Crosse County had less luck when a compromise quarrying ordinance was defeated following heated debate. Only one community, Winona, Minnesota, has a specially-designed bluff protection ordinance.

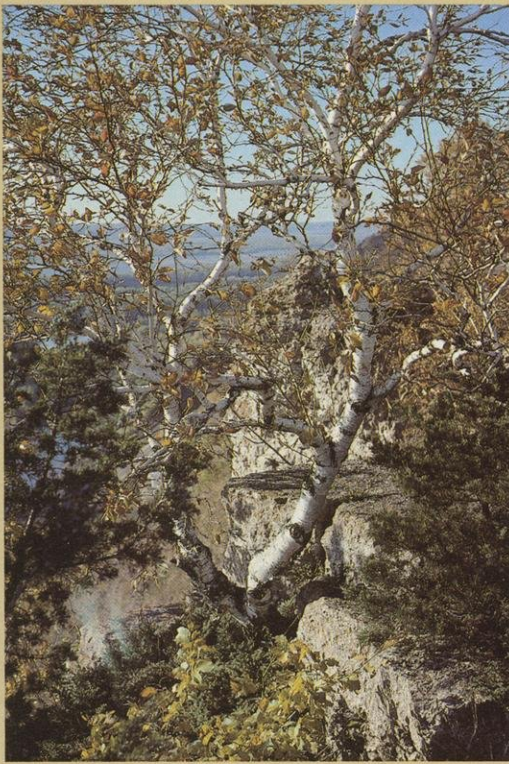
There is local support for a state plan to protect bluff ridges through a scenic trail and parkway. Organizations such as the River Rats and local "save the bluffs" committees have voiced support for this and similar efforts. But some local feeling is negative. One hillside dweller says warnings about potential bluff destruction come only from "bureaucrats on the public payrolls and people on welfare." Generally speaking, though, there are many thoughtful officials and citizens who want proper bluff use and protection.

In Minnesota, the Environmental Quality Board may ask that bluffs be declared a "critical resource," meriting special funding and protection. In Wisconsin, the Transportation Department purchases scenic easements along the Great River Road, limiting billboards and unsightly development while still allowing

private landholding. The Mississippi River Regional Planning Commission serves several Wisconsin counties. It helps communities with studies, rules and ordinances for local bluff protection.

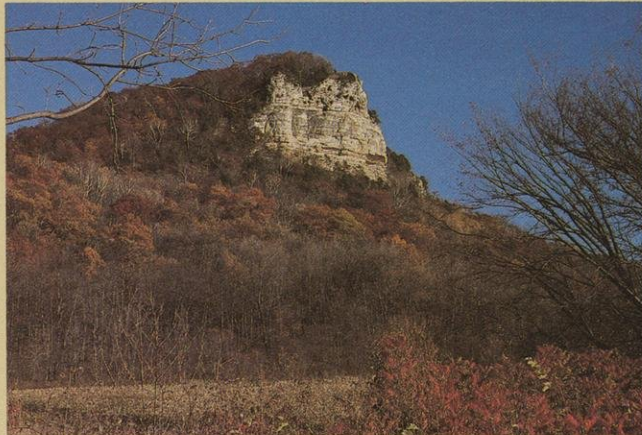
In city and town halls up and down the river, many concerned citizens and officials recognize that they alone can stop bluff destruction and exploitation. They realize, further, that if the situation gets out of hand, arguments for local control could be viewed with skepticism.

To avoid that, the boundary commission recommends public education to encourage more enlightened local decisions. But eight highly publicized meetings on the bluffs held last year attracted only 200 people. So officials worry, but many people remain indifferent and the scenic wonders that inspired Hennepin, Marquette and Pike remain endangered. Public apathy can dissolve even the hardest rock. It is a bad omen for the bluffs and may be their undoing.



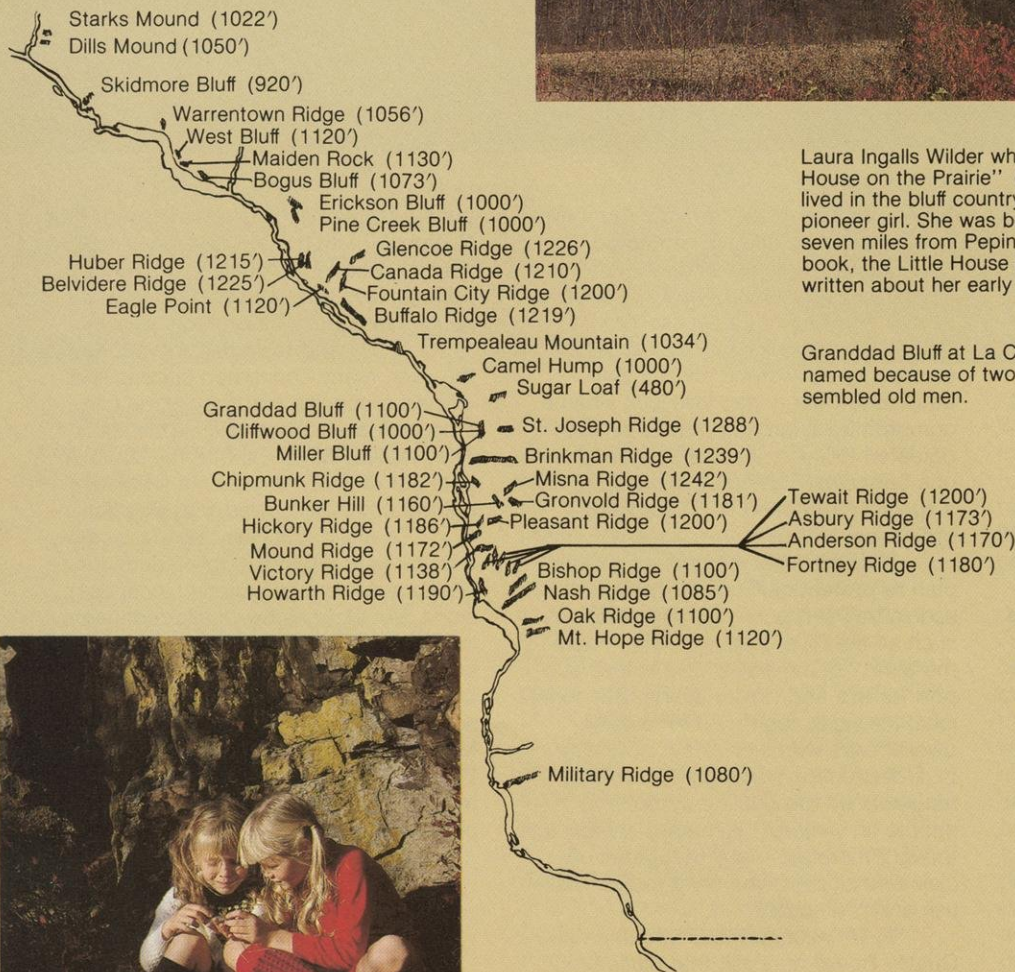
A chest full of coin and other valuables is said to be buried in "Treasure Cave" on a bluff in Wyalusing State Park. Legend has it that in the 1820's the treasure was shipped by keel boat from Fort Winnebago en route to the paymaster at Ft. Crawford. When the fort was threatened by hostile Indians, the captain buried the treasure in the bluff cave to keep it safe. Another version says the treasure was taken by robbers who buried it before they were caught. Subsequently, the story goes, a landslide covered the entrance and the chest has not been found to this day. "Treasure Cave" at Wyalusing park commemorates the folk tale.

Trempealeau mountain, most historic bluff. (See Perrot Park - the Golden Year; July-August 1978 issue.)



Laura Ingalls Wilder who wrote "Little House on the Prairie" (now a TV show) lived in the bluff country around Pepin as a pioneer girl. She was born in a log cabin seven miles from Pepin in 1867 and her book, the Little House in the Big Woods is written about her early years there.

Granddad Bluff at La Crosse was so named because of two rock profiles that resembled old men.



The story of Maiden Rock is probably the source of "lover's leap" legends everywhere. The Wisconsin version is an Indian Romeo-Juliet tale. Winona, beautiful daughter of a Dakota chief, secretly loved a Chippewa named White Eagle. But Dakota warriors killed White Eagle and her father promised her in marriage to a Dakota brave. Forelorn, she climbed the bluff, sang her death song and plunged 180 feet to the river below.

Michael Brisbois became part of river bluff folklore when he had himself buried on top of one so that he could always look down on his enemy "King" Joseph Rolette. Rolette controlled the early fur trade in Wisconsin and was a partner of Hercules Dousman who built historic Vilas Louis at Prairie du Chien. Brisbois had a favorite niece who was only 14 years old. And Rolette, 48, married her. This cradle robbing earned him the eternal Brisbois evil eye.

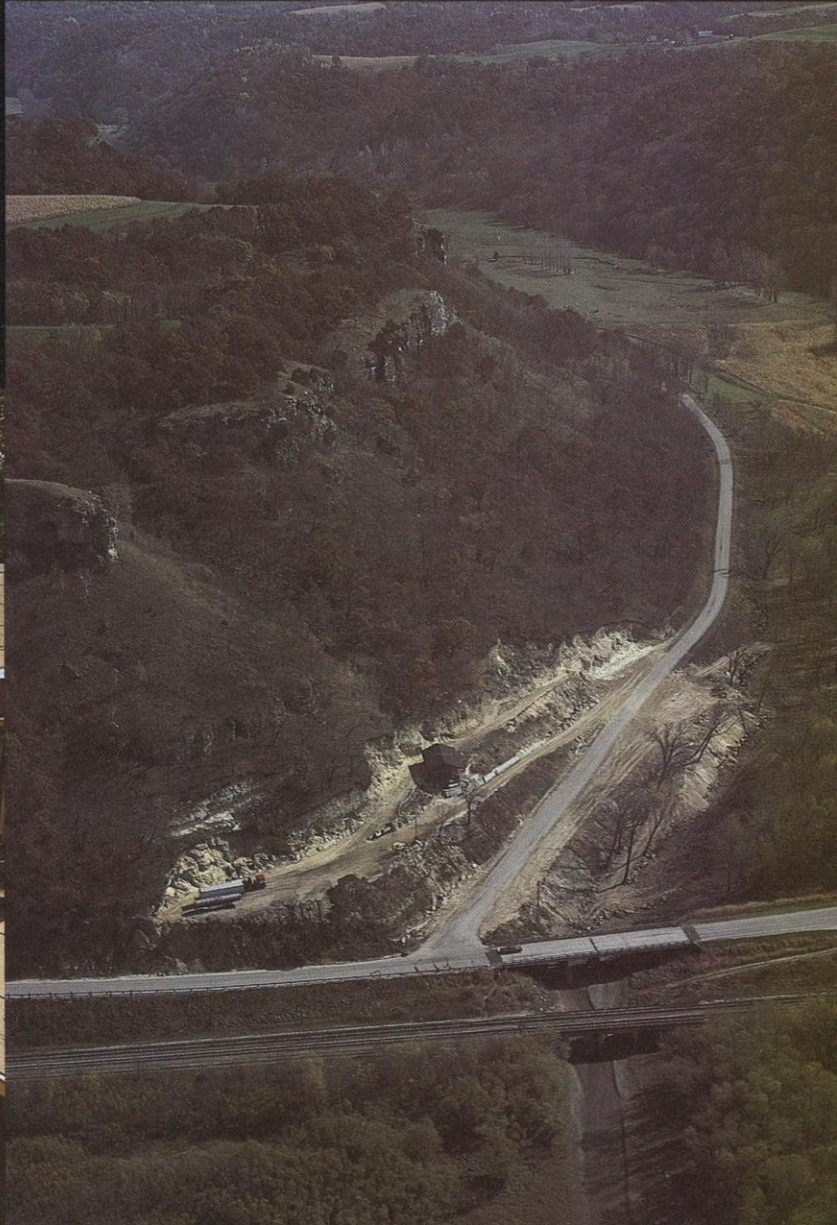
Mississippi River (630' - 700')





"THE BLUFFS ARE THREATENED BY..."

Erosion
Highways
Quarries
Housing





Department of Natural Resources
Box 7191, Madison, Wisconsin 53707

SECOND-CLASS
POSTAGE PAID
AT MADISON
WISCONSIN