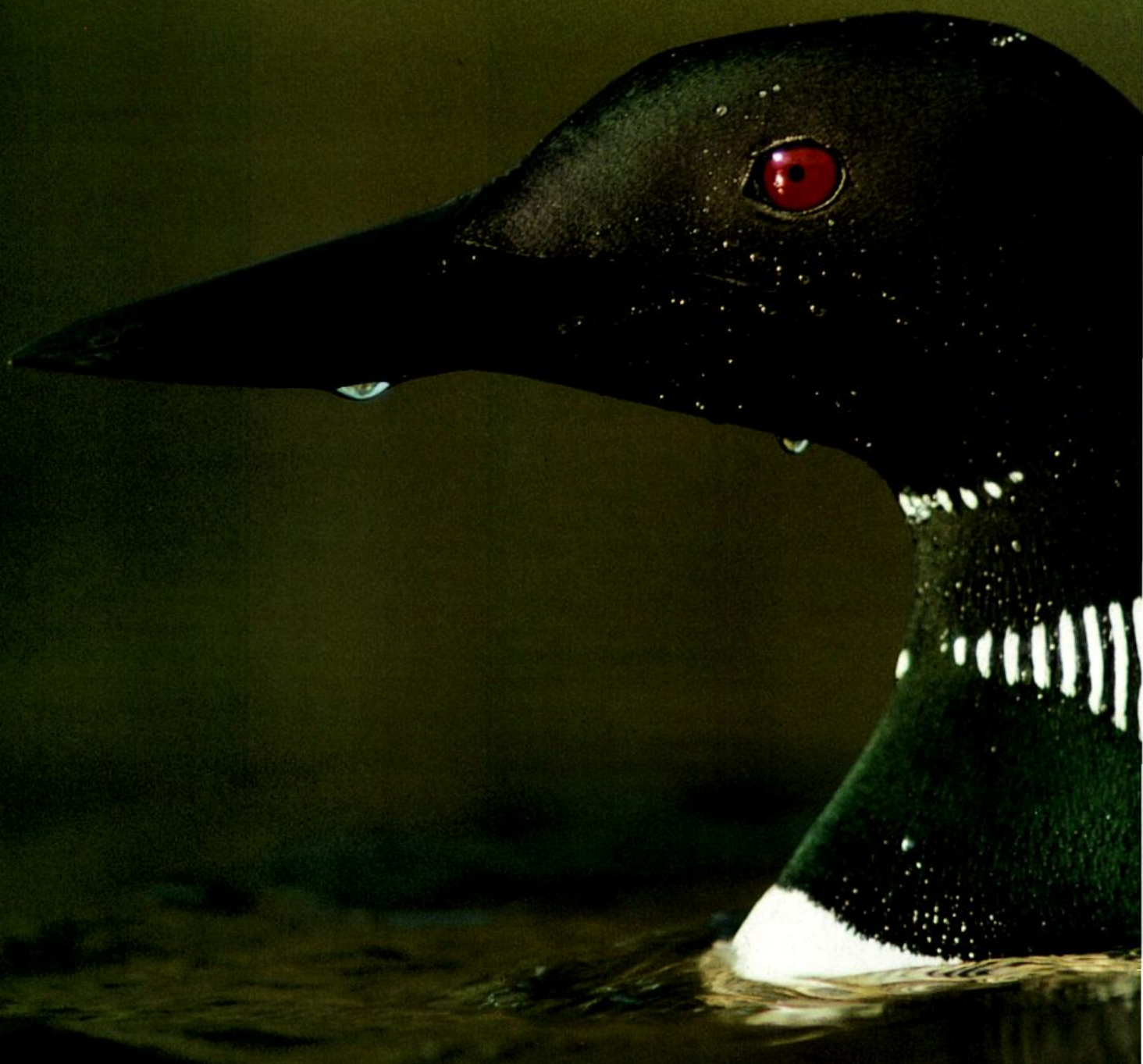


# YODELERS OF



# THE NORTH

THE HAUNTING CRY OF THE COMMON LOON fills the night as wildlife biologist David Evers drifts in the watery dark of Lake Superior. He's playing a rogue loon, the call emanating from his tape recorder.

Within 15 minutes, Evers will lure an entire loon family to his boat. In another five, he'll scoop up the birds with a long-handled net. Before 30 minutes have passed, Evers' exacting work will yield blood samples and body measurements, and a leg band will be crimped on a species that, in the past, has escaped most banding efforts.

**Common Loons face uncertainty.**

Since 1988, Evers has banded 442 loons in Wisconsin, Minnesota, Michigan, and Ontario. It's all part of the international race to learn more about the beautiful and enigmatic Common Loon, the only loon species to nest regularly in the lower 48 United States. Myths abound about the popular diving bird with red eyes and elegant black-and-white plumage. Evers, who works at the Whitefish Point Bird Observatory in Michigan, is one of a legion of researchers who are busting some myths—as well as seeking answers on the status of *Gavia immer*, the not-so-common Common Loon.

The eerie yodeler of northern lakes in the United States and Canada has faced difficult

By Paige St. John

times in recent years. Loss or disruption of habitat, often caused by recreational activities or water projects, has reduced nesting success. Lead fishing sinkers are found in the stomachs of dead birds, and lead poisoning has been confirmed as the cause of death in a number of cases. More ominously, high levels of mercury are being documented in blood samples from loons throughout the Midwest and New England.



The sudden flood of research reports is timely. Common Loons no longer nest in Illinois, Indiana, Iowa, or Pennsylvania (though there have been scattered sightings in the last state). The most southern recorded breeding pair is near Kalamazoo, Michigan. In Michigan,

### **‘We don’t know if the population is increasing, decreasing, or stable.’**

Vermont, New Hampshire, New York, and Massachusetts, the loon is classified either as threatened or endangered.

“We have more members than we have loons,” laments Harry Miller, president of the 1200-member Michigan Loon Preservation Association. Self-proclaimed “Loon Rangers” in Michigan and other states have begun marking loon nests on recreational lakes with special warning buoys. And volunteers across the country are building nesting rafts to protect loons from water level changes that would swamp or strand their shoreline nests.

Fifteen years of such activism has brought Massachusetts’s loon population back to nine pairs, after loons disappeared entirely from the state in the 1800s. Vermont reported 107 loons in 1991; New Hampshire, home of the North

American Loon Fund, recorded 408. Minnesota, with more than half the United States’ nesting population, recorded 12,000 birds in 1992.

But that is not reason to sigh with relief, says researcher Judith W. McIntyre at Utica College in New York. Despite a stable loon population in Minnesota from the 1970s to 1990s, McIntyre found a net loss in the number of lakes hosting loons, portending future trouble.

Adds U.S. Fish and Wildlife Service biologist Keren Ensor in St. Paul, Minnesota: “We don’t know if the population is increasing, decreasing, or stable.”

At the Whitefish Point Bird Observatory, a storm-battered sand spit that serves as last port of call for Canada-bound birds making the Lake Superior jump, David Evers has made some surprising discoveries with his unique banding technique, which makes it possible to recognize individuals among the identically marked male and female birds. For example, forget the mythic monogamy that enshrined the loons in the movie *On Golden Pond*.

“No way, not even close,” Evers says of the populations he has studied. His Michigan observers, voyeurs in blinds, watched 21 pairs of loons ditch their mates for others, sometimes within two days of nest failure. “Rapid-mate switching,” Evers calls it.

In most cases, the extra mate was already hanging around, “sort of waiting in the wings,” he said. His chroniclers have witnessed a *menage a trois* of loons, the three birds engaging in a swimming “circle dance.”

Lest romantics give up on loon fidelity, researchers confirm that the Common Loon appears tragically faithful to place. Birds repeatedly return to the same lakes, whether they were able to raise chicks there or not.

But in the most chilling find, Evers and half a dozen other researchers presented indepen-

dent papers in August 1992 showing mercury in every bird population tested. Mercury killed some birds outright.

Mercury levels in Minnesota and Wisconsin lakes have increased four-fold over the past 140 years, enough to prompt fish-consumption warnings across the Great Lakes states. While most single-point sources of mercury have been regulated out of existence, mercury contamination continues from coal-burning power plants, municipal waste incinerators, and industrial processes. Coal, for instance, contains small amounts of the naturally occurring heavy metal that are released into the air when coal is burned.

These atmospheric mercury particles can travel great distances before settling in lakes during rainfall. Increased levels have been documented in remote lakes in the United States, Canada, Sweden, and Finland. Bacteria in the lake bottom converts the mercury into highly toxic methylmercury, which can then be passed up the food chain, accumulating in greater concentrations each step of the way, from invertebrates to fish to loons.

While scientists do not yet understand all the effects of mercury on loons, some now wonder if the metal was responsible for the die-off as many as 10,000 loons that washed up on Florida beaches 10 years ago.

That winter, wildlife researcher Lawrence Alexander saw large numbers of dead loons in the western Florida surf. Most were adults that died shortly after the onset of their winter molt.

Each year after, Alexander found more loon mortalities on the beaches than all other seabirds combined. The loons were emaciated, their intestines housing staggering numbers of parasites—so many that some simply bled to death.

The loons had contracted the parasites from eating infested blue crabs, not part of their normal diet. Why were the birds dining on crabs? Alexander suspected that mercury, accumulated from tainted fish in northern waters, had insidiously poisoned the loons until they became too feeble to catch fish.

He hypothesized the metal caused little harm until the migrating loons arrived in the Gulf Coast and began the complete molt that

**The Common Loon breeds across northern North America, Siberia, and Europe. Nests can be hidden or rest on rafts in the open. When a loon is frightened or bothered, it engages in classic 'stress' behavior (above, left). The message to humans? Leave.**



reduces them, from September to April, into drab seabirds, flightless and nearly silent.

Alexander suspected the sheer physiological rigor of the molt released mercury from fat tissues or bone marrow in a single dose, damaging nerves, impairing motor ability, and making it difficult for loons to catch the swift fish. Starving, the birds turned to the slow, parasite-ridden crabs.

But he offered no proof for his theory. Alexander chased the mercury riddle for five years—then died of cancer before publishing his work. Today other loon researchers sift through his legacy, encrypted in frozen specimens and raw field notes.

In 1983, the same year as the first Florida die-off, Whitefish Point birders counted only 3002 loons heading into Ontario—less than half the usual number. Evers has found enough mercury in the birds he has banded

Michael Meyers says he is not ready to say what, if anything, the mercury is doing.

“I do have preliminary data that loons have lower productivity,” Meyers says. “However, I’m not ready to say I know why.”

Complicating the picture, Meyers finds that acid rain and acidification of lakes tends to free



more mercury into the biosystem. It is possible that loons on acidic lakes are being hurt not by the mercury, but by lower fish populations.

The mercury-crab tie also gets skepticism from another researcher—Mark Pokras, a wildlife veterinarian at Tufts University. He says he doubts the birds are forced to eat crabs because of mercury poisoning.

“What we’re finding is that the mercury levels in live birds are just as high as they were in the dead Florida birds,” Pokras says. “So I don’t think it was cause-and-effect.”

He cites the hypothesis of Paul Spitzer, an independent researcher working with the National Marine Fisheries Services in North Carolina, who notes that molting loons are captive to whatever food base exists where they shed their feathers.

“Where they choose to spend their flightless period is critical,” says Pokras. “If the fish population should shift, due to temperature or human interference, those loons are left with no food supply. It’s a puzzle with a lot of pieces.”

Yet Pokras’ own New England birds show mercury levels: “It’s scary. Virtually all of the birds have mercury.”

For all of its significance, the mercury issue is riding backseat this summer to another potential killer. Pokras and Tufts coworkers have documented case after case of loon deaths from lead fishing sinkers. A single ingested pellet may kill a bird within a week.

Pokras’ study found 55 percent of the adult



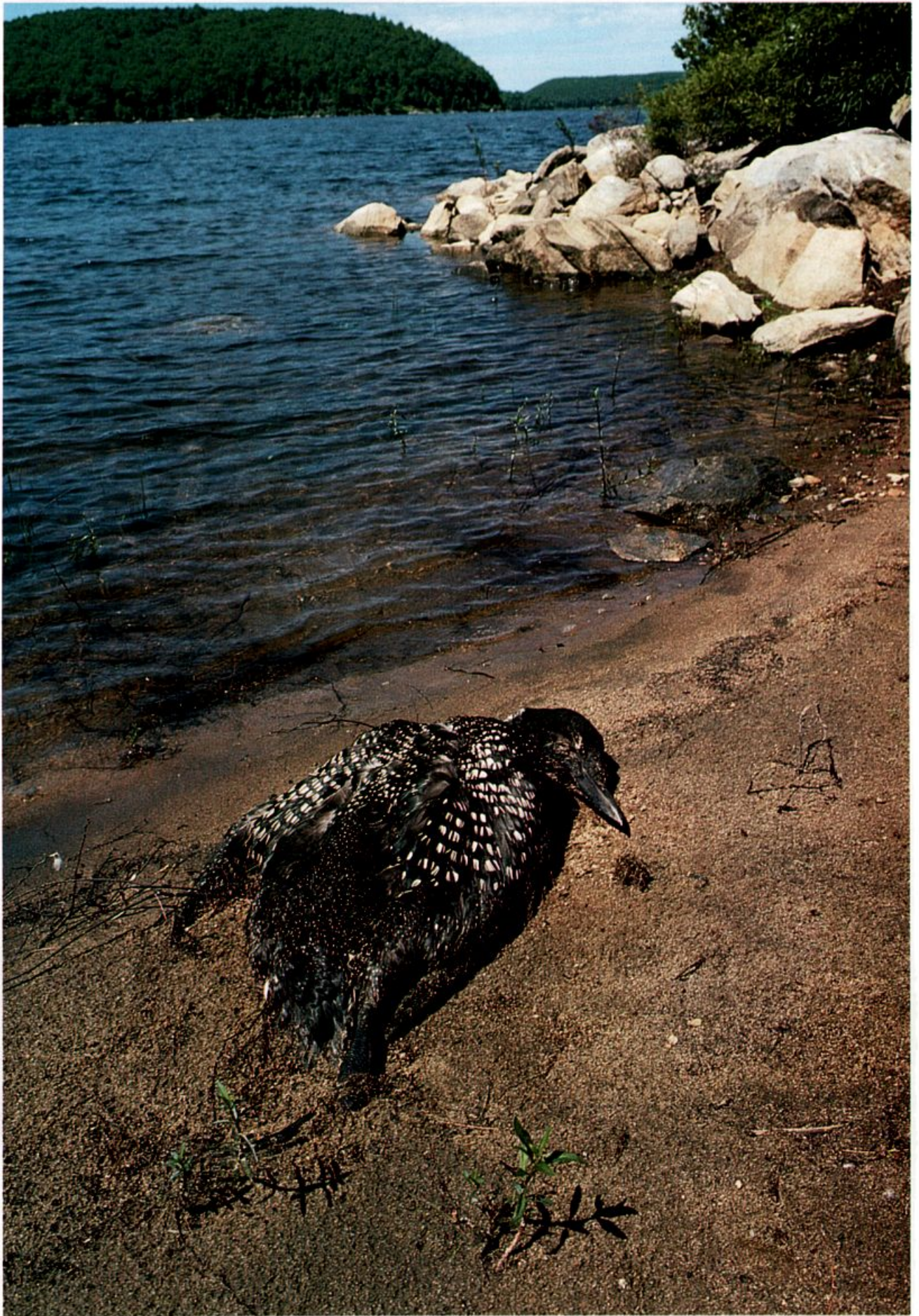
**Human behavior is one of the greatest threats to the Common Loon. Canoes or, more devastating, motorized watercraft come too near. Loons ingest lead sinkers (above) which can be fatal. Opposite page: A loon dead of lead poisoning in Massachusetts.**

to believe he is looking straight into the face of the greatest threat to the Common Loon.

“These birds are really loading down,” he says. “Even the chicks have it, at levels known to affect other birds.”

One bird had 10 parts per million of mercury in its blood, enough to kill it. But Evers’ greatest concern is the effect of lower levels of mercury, which is more difficult to detect and seems more widespread. Research teams are now conducting time-behavior studies, searching for even the slightest impairments or changes that might affect loons’ ability to reproduce.

Others do not accept Alexander’s hypothesis. After compiling several years of data, Wisconsin Department of Natural Resources researcher



**There is some good news for the Common Loon. Its popularity has led people to understand and protect the bird. And loons also appear to be adapting to human presence on populated lakes.**

loons autopsied at Tufts were poisoned by lead sinkers—16 of 31 birds. He cautions that all of the studies combined have tracked only about 100 loon deaths caused by sinkers, which may not seem significant. Other studies of loon deaths in 18 states—including Florida, North Carolina, Virginia, Wisconsin and Michigan—put the poisoning at 14 percent, behind deaths by boat propeller collisions, fishing line entanglement, and gunshot.

“Is this one of those situations where we’re overstating the problem? I don’t in fact know,” Pokras says. “But I have a feeling it is really a very serious problem throughout its range.”

While Pokras admits that the lead sinker data is preliminary, and the numbers small, environmental heavy-hitters have picked up the cry. The Environmental Defense Fund (EDF) has called for a national ban on lead fishing weights. Short of that, the organization has petitioned the U.S. Fish and Wildlife Service to outlaw lead sinkers on up to 30 national wildlife refuges where there are loons and Trumpeter Swans, also vulnerable.

In addition, EDF has filed a lawsuit against the United States Environmental Protection Agency, asking that lead sinkers be sold with warning labels advising of the dangers to waterfowl. The court action was suspended after the federal agency promised to take action on lead sinkers by January 1994.

“The published studies are very likely just the tip of the iceberg,” says EDF attorney Bruce Manheim. “The loon and the swan already are in a precarious situation. I don’t think lead sinkers may be the major threat, but in combination with habitat destruction and other problems, it is the last thing they need.”

Pokras adds: “A lot of other scientists have been through the argument on lead shot. We know lead is toxic. There are plenty of good reasons not to put a toxic material into the environment.”

The sinker debate has an appealing side: It appears winnable. Great Britain has already set the stage. Lead sinkers of a certain size have been banned since 1988 because of a similar poison threat to Mute Swans. Exempt are





sinkers small enough to pass through birds, and those too large to be ingested.

“Mercury is a bigger, much more insidious problem,” Pokras says. “But lead is a lot more visible, and it’s a very simple problem. You can see the sinker. You can see the dead animal.”

Environmental groups, researchers, and fishing tackle manufacturers met in Washington, D.C., in March to discuss the sinker issue. Manufacturers already have started casting about for alternatives to lead.

What does seem apparent is that people *are* willing to cooperate to protect the Common Loon. And there is preliminary indication that loons may also be prepared to coexist.

Last year Maine loon watchers set out across 130 lakes to note the differences in nesting success between loons on remote lakes and loons on populated lakes. They found no difference.

“We were very surprised,” says Sarah Stockwell, wildlife program manager for the Common Loon Protection Project with the Maine Audubon Society. “It’s a good sign.”

## ‘The spread of information has helped to change people’s behavior.’

She suspects two things: Loons are adapting to people and learning to live with them, or natural selection is favoring loons that can tolerate a little human interference.

“There’s a lot of people who are concerned about loons. They help post signs at public boat ramps, look out for loons, are careful not to disturb them. The spread of that information has helped to change people’s behavior.”

This summer, the Loon Project will deputize Loon Rangers in several states—volunteers who police loon lakes with boats, warning posters, and, sometimes, sheer gall. Wisconsin’s Michael Meyers says: “We hear they’re driving away people with brooms, if boats get too close to nests.”

Minnesota enacted a personal watercraft law last year, requiring jet ski operators to slow down through marshy areas and setting \$700



fines for chasing wildlife.

Still, the voice in the wilderness is in a delicate position. Loons lay only one, sometimes two eggs per nest, and do not breed until at least five-years-old. That makes recovery not only slow, but precarious.

“I think all [the problems loons face] are man-induced issues,” says Keren Ensor in Minnesota. “I think all of those factors are interacting together.”

On Whitefish Point the loon migrations are nose-diving again. They had rebounded to 9100 loons by 1990—then slipped to 4100 in 1991 and 3800 in 1992. David Evers stops before the blackboard that takes up one wall at the Whitefish Point Bird Observatory, where field workers have chalked the daily totals of loon flights across the bay this spring. He is ready to add up the season’s total. After a long silence, Evers speaks.

“3700,” he says. “Down again.” 🐾

—Paige St. John is an environmental writer for The Detroit News.