

WINDMILLS AND WARBLERS

As energy advocates eye the North Shore for wind turbines, bird counters map migration patterns



Bird researcher Anna Peterson listens to a bird chirping last week along the Superior Hiking Trail near Crow Creek and Castle Danger. She is mapping migratory bird patterns for the [Natural Resources Research Institute](#). *Derek Montgomery / derekmontgomery.com*

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CASTLE DANGER — A quick flutter in the tree-tops, then a chirp or short song is all it takes to get Anna Peterson to make a mark on her clipboard.

She pauses on her walk through the woods, checks her GPS and tallies another

“unknown warbler.”

Peterson experiences this nearly every morning in early fall; tiny songbirds unseen among the leaves or flying too fast for most people to identify. But the Natural Resources Research Institute researcher usually can hone in on their songs.

“Sometimes we run into flocks of 100 or 200 all grouped

up together,” she said. “It’s incredible to watch... if you’re a big, huge bird nerd like me.”

When the morning sun rises during late August and early September, tens of thousands of songbirds, mostly warblers, bring their southward migration to a screeching halt, refusing to cross Lake Superior once



they see it in the daylight.

The little birds turn around and head back into the North Shore's forested hills to spend a day or two eating insects and rapping with local birds. Their exhausting trip from northern Minnesota and Canada to Central or South America stalls for a little rest and relaxation — until a north wind blows some night and they start the trip again.

These little birds will work to fly around Lake Superior instead of over it. It's a quiet migration of millions of songbirds through the Northland each autumn that happens mostly at night, little-known compared to the famous daylight migration of thousands of hawks and eagles that take the same route.

"You see them at sunrise, always flying away from the lake," Peterson said on a windy morning last week, this time surveying near Crow Creek. "They seem to hone in on where the local birds are ... they even seem to talk to each other. I suppose it's because that's where the food is [insects]. But there may be other reasons, like habitat. We don't know yet."

It's along these North Shore hills, however, that energy advocates are eyeing wind turbines to create electricity.

Several sites already are being tested to determine the best location.

So NRRI researchers like Peterson are here to study where the migrating birds fly most often. Once they know, they can advise the energy people on areas to avoid.

Researchers are in the woods at dawn for a "below canopy" survey, right along the lakeshore, and also 3 and 6 kilometers inland to see how far the migrating birds travel from the lake. They also are watching "above canopy" migration of hawks and other birds that generally fly well over

the trees.

It's expected that the most birds will be found closest to shore and nearer Duluth, as they funnel around Lake Superior. But the surveys extend nearly to Canada just to make sure

The project started in 2008 and is expected to be funded through 2010. After three years of gathering data, researchers hope to have a good picture of the most-used North Shore day and night migration routes.

"It's a balancing act between green energy, which everyone supports, and this amazing phenomenon of bird migration," Peterson said. "The hope is to have a migration map to put next to a wind map and see where and where not to put wind turbines."

A DEADLY WHIRR?

Wind turbines can pose several problems for birds, and also migrating bats. The whirling blades can be deadly, and many of the birds are moving along the North Shore at about the same level as the blades would be spinning — from 50 to 350 feet above ground.

The towers themselves can be an obstacle. And the footprint left by access roads, construction sites and power lines can destroy habitat that might be critical. Tower lights also can confuse birds and cause problems, especially on foggy nights.

Wind turbines have become another in a series of manmade killers that include radio tower guy-lines, windows, vehicles and pet cats. And some migrating species, especially ground nesting birds, already have declined enough in recent years to become official species of concern.

Jerry Niemi, an NRRI ornithologist, said he was

inspired to look at North Shore migration routes when he learned the University of Minnesota Duluth was considering erecting a wind turbine at its farm property along Jean Duluth Road. Since then, other groups, including the Cook County Local Energy Project, have begun pin-pointing areas with the strongest, most consistent winds along the North Shore.

"I thought we needed to get out ahead of this and try to give the [wind energy advocates] some good data on areas they should avoid," he said. "If we race into this and put up wind turbines that are killing thousands of birds and bats each fall, how green is that, really?"

Niemi points to Altamont Pass in California, where wind energy advocates saw howling gusts as a green power source some 30 years ago. But the giant, 5,000 turbine wind farm also has been a killing field for thousands of golden eagles and red-tailed hawks; more than 1,000 each year. No one bothered to check to see which birds frequented the area before the turbines went up, Niemi noted.

In other areas, thousands of bats are dying as they migrate through wind farms — not from collisions with turbines but because of internal bleeding caused by the rapid pressure differential as they fly into the wash of the whirling blades.

Now, the U.S. Fish and Wildlife Service generally demands three years of bird data before allowing wind projects. Niemi hopes to have the North Shore survey published before the first wind generator project gets off the ground.

"We know we have a globally significant raptor

migration route here that [wind turbines] could have a serious impact on if not done correctly," Niemi said. "But we also have these hundreds of thousands, per-

haps millions of passerines [small birds] that come through here at pretty much the same time that most people don't even know about. We have to look out for them, too."



A yellow-rumped warbler perches in a tree. *File / News Tribune*



Bird researcher Anna Peterson records data last week along the Superior Hiking Trail. She is working with the University of Minnesota Duluth's Natural Resources Research Institute in Duluth to map the flight patterns of migratory birds. *Derek Montgomery / derekmontgomery.com*



A yellow-rumped warbler perches on a tree branch. *File / News Tribune*