

THE THURSDAY SCIENCE CONNECTION



Joan Baez's autobiography reviewed — D5

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Will we always hear this warbler's song?

The tiny Kirtland's warbler is rare even in Michigan, its native breeding ground

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PHOTO BY ROBERT CHASE
OF THE NEWS STAFF

MIO. — Hidden by jack pines and ground scrub, the small birds hopped about like shy performers trying to shake stage fright.

Thirty-three visitors waited, binoculars in hand, hoping the 6-inch-long singers would show themselves. There was no mistaking the Kirtland's warbler's song — "weche chee-chee-chee-r-r-r!" — a sound that was all the more cheerful for its contrast to the low buzz of the mosquitoes and flies so common to these sandy jack pine barrens.

A singing male grabbed center stage first. He shot from the cover, circled and landed on the top branch of a jack pine perhaps 40 feet away. His tail flipped up and down as he sang, a Kirtland's trademark. He faced east and the morning sun lighted his yellow breast. A second male appeared, then a female.

Before the group of onlookers, there on a United States Forest Service tour, flitted a significant portion of the world's Kirtland's warbler population, which numbers only a few hundred.

Named for 19th century Ohio teacher and naturalist Jared P. Kirtland, the Kirtland's warbler is an endangered species, one of those creatures of the natural world, like the whooping crane and gray wolf, that clings to life in tiny numbers.

Its niche is narrow. In summer it congregates in the young jack pine forests centered in Michigan's Crawford and Oscoda counties. Much of its summer range lies on state forest land, some is within the Huron National Forest, and some lies within the Michigan National Guard military reservation near Grayling.

Like many Michiganians, Kirtland's warblers winter far to the south. In 1985 and 1986, a few U.S. Fish and Wildlife Service scientists studied Kirtland's in its wintering grounds in the Bahamas, but found no reason there to account for the birds' no-growth population.

Today there are only 167 male Kirtland's warblers alive in the wild, according to the census of the birds that wildlife biologists took this month. That is down from 210 males last year and the same number as in 1974.

Kirtland's warblers usually are monogamous, so this year's tally of 167 singing males means the total number of adult birds may be 334, although some researchers think up to 20 percent of singing males have no mates. Census takers count singing males. Females, less brightly colored and less vocal, are seldom seen and difficult to count.

The goal of the Kirtland's Warbler Recovery Plan, published in 1976 and updated last year, is to raise the birds' population to 1,000 breeding pairs. The project involves the U.S. Fish and Wildlife Service, which administers the federal Endangered Species Act, the U.S. Forest Service and the Michigan Department of Natural Resources.

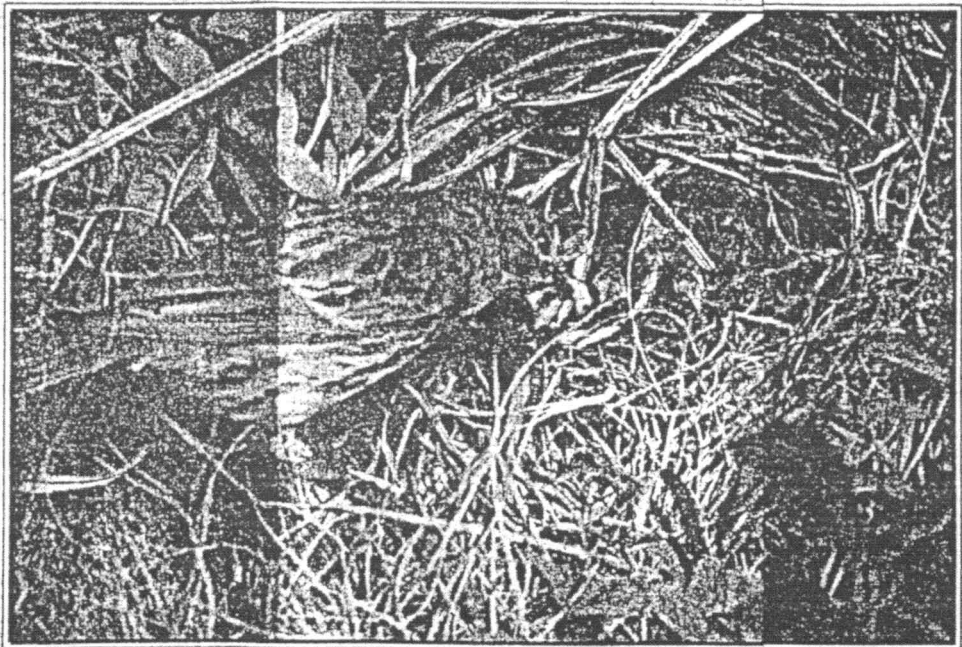
Scientists think the Kirtland's warbler population peaked at perhaps 2,500 pairs in the 1890s, as a result of clearcut lumbering and the uncontrolled fires that so often accompanied it.

"One of the reasons why Kirtland's warbler is endangered is because of our modern fire-control techniques," said Michael E. DeCapita, a U.S. Fish and Wildlife Service biologist. "In other words we put out forest fires. DNR is very good at that. Natural events for Kirtland's warbler depend on fire to produce habitat."

The warblers love what fire does. They prefer to nest in young jack pine forests whose trees are 8 to 18 feet high. The warblers dislike mature stands of trees that shade out ground cover.

Jack pines' cones are sealed with a flammable, resinous "glue." The cones seldom disperse seeds until a fire sweeps through a stand. Fires also clear undergrowth and open the way for the kind of ground cover Kirtland's likes.

It takes at least a half dozen years for jack pines to reach the height warblers like. The stands



A nest brought back by Norman A. Wood, former director of the University of Michigan Museum, is part of the Exhibit Museum's Kirtland's display. The display shows a female Kirtland's bringing a grub to her nest to feed her four fledglings.

remain good habitat for eight to 20 years.

Kirtland's warblers build their primitive nests on the ground, beneath young jack pines that offer cover from natural predators such as the blue jay and the flying ground squirrel. Their habitat preference has changed little since University of Michigan Museums director Norman A. Wood described the breeding area 85 years ago:

"Scattered burnt and dead stubs reach above the younger growth (mostly jack pine) which is from three to 10 feet high... The ground is covered by a more or less luxuriant growth of sweetfern, three varieties of blueberry, trailing arbutus, and the wood lily. Here also grows the dwarf morning glory and the golden-rod just ready to bloom."

The scrub growth, however, offers little protection against brown-headed cowbirds, a prairie bird that followed farmers' furrows into these barrens late in

the 1800s. The farmers moved in after lumbermen cleared the land. The cowbirds — which scientists call "social parasites" — take warblers' eggs from Kirtland's nests and replace them with their own.

Kirtland's warblers have evolved no defense against cowbirds. So they incubate the interlopers' eggs and then raise the young cowbirds, which often starve any warblers that remain in the nest.

Cowbird activity was affecting "about 70 percent" of warblers' nests when biologists began trapping the cowbirds in 1972, said USFWS' DeCapita. Trapped cowbirds are killed and used as feed at raptor rehabilitation and treatment centers. Cowbird activity now is "practically nil," but trapping has to continue each year, he said.

For a long time, the location of the birds' breeding ground was a matter of speculation. It wasn't until 1903 that the first Kirtland's nest was found — by the Univer-



The Kirtland's has a narrow niche in the United States: jack pine forests in Michigan's Crawford and Oscoda counties.

sity of Michigan's Wood. He had to row 60 miles along the Au Sable River system and bushwhack into the jack pine barrens before he could begin to follow the same bird song that recent visitors heard.

Although Wood quickly spotted male warblers, it took him six days to find a nest. He was in Oscoda County, working his way through a burned-over area, when he spotted a male Kirtland's with a worm in its mouth.

The bird dropped from a tree to the ground.

"I started to go there, when just south of the tree I flushed the female from the ground and after a close look, saw the nest," Wood recalled for the Michigan Ornithology Club bulletin in 1904.

The nest held "two young birds, perhaps 10 days old, and a perfect egg," he wrote. It was built in a depression in the

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