Kirtland's Warbler Finally Finds Lots of Burned Forest to Call Home

By LES LINE

Nine years ago, the Kirtland's warbler, one of North America's rarest songbirds, appeared to be on the ropes. A survey of its nesting grounds in northeast Lower Michigan turned up only 167 singing males, which translates into a roughly similar number of breeding pairs.

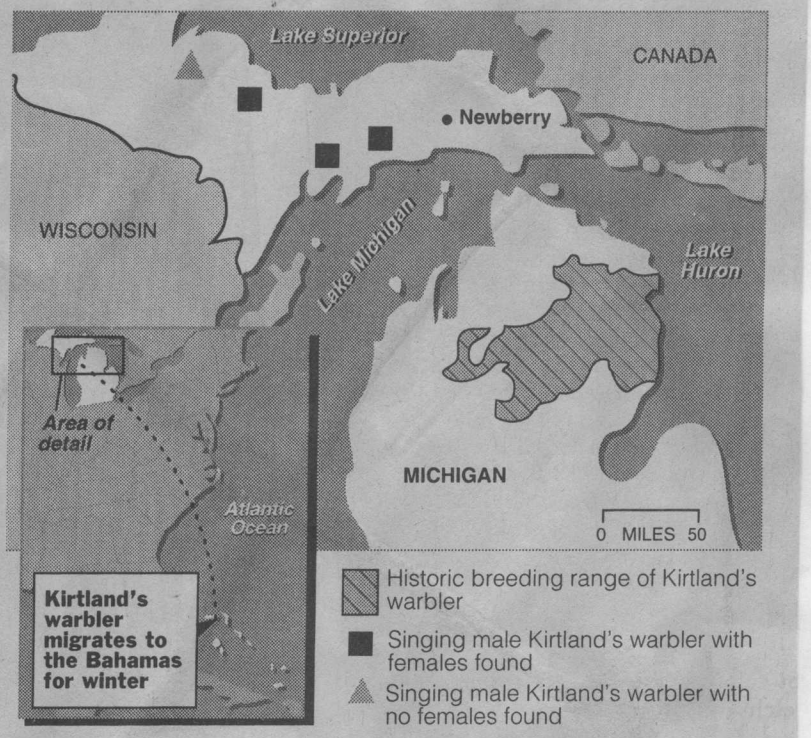
"We didn't know what it would take to bring the species back," said Harold Mayfield, an ornithologist in Toledo, Ohio, who is an authority on the bird. "I had my doubts about its survival."

But the warbler has come back in spectacular fashion after a forest fire created thousands of acres of the bird's specialized habitat: Christmas tree-size stands of jack pines. Now there are so many Kirtland's warblers that adult birds looking for nesting places have leapfrogged Lake Michigan and are apparently breeding in the state's Upper Peninsula. A census this summer counted 678 singing males, the second-highest number ever, in Lower Michigan. The survey also turned up 14 male warblers in four northern counties in the Upper Peninsula. At least six of those birds had mates, and observers saw adult birds carrying food, a sure sign that nestlings were being fed.

The sightings raise the possibility of a significant expansion of the species' breeding range, which has historically been confined to a few counties in Lower Michigan where there are large expanses of jack pines.

"We've got state and national forest lands with the right kind of ground cover that can be managed to favor Kirtland's warblers," said Ray Perez, a biologist with the Michigan Department of Natural Resources in Newberry in the Upper Peninsula. He noted that warblers had been found both in jack pine plantations and on tracts burned a few years ago by wildfires.

Mr. Perez said scientists would try to net and band the young warblers before they migrated to their winter range in the Bahama Islands late this month.



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Mr. Mayfield cautioned, however, that "exploratory efforts by birds to colonize new nesting areas often fail." He added, "I wouldn't be surprised if we can't find Kirtland's warblers in the Upper Peninsula three years from now."

Kirtland's warbler is a handsome bluish-gray and yellow bird about six inches long. It has a ringing song that can be heard for some distance, which is a big help to the biologists and volunteers who count the birds. The species is named for Dr. Jared

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A forest fire has created thousands of acres of the favorite habitat of the Kirtland's warbler, one of North America's rarest songbirds, prompting the birds to expand from their territory in northeast Lower Michigan to begin breeding in the Upper Peninsula. The bluish-gray and yellow birds will nest only where jack pines are about the size of Christmas trees.

P. Kirtland, a 19th-century Ohio physician and naturalist. The first specimen was collected on his farm near Lake Erie in 1851. But the bird's breeding grounds in the sandy, fire-scarred plains near Michigan's Au Sable River, a world-famous trout stream, remained a secret until 1903, when the first nest was found in a tract of jack pines that had been burned a few years earlier.

The jack pine is a northern tree that reaches nearly to the Arctic, but Kirtland's warblers nest only in the southern portion of its range. Jack pine depends on fire to propagate; its cones open and spread their seeds only after they are exposed to intense heat. The warblers appear about six years after a fire in areas where new pine growth is especially dense and the trees are five to six and a half feet tall, with live branches that reach the ground, Mr. Mayfield wrote in 1992 in his monograph on the warbler for "The Birds of North America" (American Ornithologists' Union and the Academy of Natural Sciences).

The warbler nests are built on the ground and hidden by shin-high vegetation, but the birds will abandon a site after about 15 years, when the slow-growing trees are 10 to 15 feet high and their lower limbs begin to die. "The females have very high real-estate standards," Mr. Mayfield said. "If the trees are too tall for a Christmas tree, they're too big for the warblers."

The extent of the Kirtland's warbler habitat and its population probably peaked in the 1880's and 1890's, Mr. Mayfield said. In 1871, he noted, an unchecked wildfire, fed by clear-cutting from logging operations that denuded most of Lower Michigan, burned one million acres in the heart of the bird's breeding range, converting the original white pine forest to jack pine. But by 1951, when conservationists took the first census, decades of fire suppression had reduced the amount of suitable habitat.

Moreover, brood parasitism by brown-headed cowbirds, which lay their eggs in the nests of other birds, had reduced the production of warbler fledglings to a critically low level. In one study, 70 percent of the warbler nests had been parasitized by cowbirds, and only two fledglings survived out of 29 nests.

Workers from the United States Fish and Wildlife Service, however, have killed more than 100,000 cowbirds from warbler breeding areas since a trapping program began in 1972, and parasitism has dropped, affecting 3 percent of the nests. State and Federal foresters, meanwhile, have used clear-cutting, seeding, replanting and burning to replicate the effects of wildfires and create Kirtland's warbler habitats.

But biologists say the biggest help for the warbler came from a fire in 1980 near Mack Lake in Huron National Forest; that created 15,000 acres of new jack pine habitat. In recent years, nearly half of the breeding warblers have been found in the Mack Lake burn. Those trees, however, have reached a size where the birds are beginning to abandon the area. That is why this year's census was down from the all-time high, reached in 1995, of 759 singing males in Lower Michigan.

Foresters are planting 4,300 acres of jack pines this year in a scramble to make up the difference. Mr. Mayfield compared the drop in the number of breeding birds to a "bobble in the stock market."