



Rescuing A Warbler

By Harold F. Mayfield

The Kirtland's warbler is uniquely Michigan's bird. It nests nowhere else but in the jack pine plains of northern Lower Michigan, and but for the timely aid of Michigan people, it would now be on the verge of extinction.

The Kirtland's warbler has always been a rare bird. For a century after its discovery in Cleveland on May 13, 1851, it was known as "America's rarest songbird." Today, hundreds of people journey from all parts of American and from foreign countries just to see this beautiful bird that is almost impossible to find in migration or on its wintering ground in the Bahama Islands. But even before its discovery, for thousands of years it probably has teetered along the brink of existence.

Its fundamental limitation is its extremely restrictive nesting requirements. These inevitably confine it to a tiny and shifting summer range. The bird nests only in large expanses of young jack pines. Such tracts occur naturally only after forest fires, and then the suitable habitat endures only for about 15 years, when the trees are about eight to 23 years old—Christmas tree size. When the trees get larger, the warbler abandons the area. Also, the bird requires low ground cover, adequate to conceal the nest but not tall and luxuriant, and sandy soil providing a dry base in rainy weather for the nest imbedded in the ground. Apparently all these conditions come together only in one place and on one soil type, Grayling Sand, in a few counties of north-central Michigan.

So the Kirtland's warbler has always been subject to the capricious accident of forest fire. In former times, fires of vast extent were started again and again by lightning and by Indians, and they ran their course unchecked. They were most frequent and most sweeping at the height of the lumbering of the pines in the 1870s and 1880s, when slashings were allowed to lie where they fell and no effective means of fighting large fires existed. Significantly, in this period the Kirtland's warbler was more numerous than before or since, if we may judge from the specimens collected on the wintering ground in the Bahama Islands. Consequently, if no other problem had cropped up, the Kirtland's warbler would have been threatened by advances in fire control. Nowadays with more visitors in the woods, the number of fires has increased, but usually they are contained

within areas too small to be acceptable to the warblers. Indeed, there appears to have been some shrinking of prime habitat in the last 20 years.

But a new problem did arise. This, too, was caused indirectly by man. In the middle of the last century, agriculture crept northward into Michigan, finally reaching the poor soils of the pine country, where it was sustained as long as the farmer could sell his hay for the lumberman's horses and his wife could sell her chickens and eggs for the bunkhouse crews. The pastures grazed by farm animals duplicated the grasslands of the West, where the brown-headed cowbird had been at home following the herds of bison. The opening of the Eastern forests allowed the cowbird to expand its range from the Midwestern prairies up to the Northwoods. The cowbird builds no nest of its own, laying its eggs in the nests of other birds, usually those smaller than itself. The Kirtland's warbler, meeting the cowbird for the first time, proved to be the perfect host.

By the time Norman Wood of Ann Arbor found the first nest of the Kirtland's warbler near the Au Sable River in 1903, the cowbird already was

established there. My studies, heavily weighted with data from the 1940s and 1950s, showed that with about half of Kirtland nests entered by cowbirds, the loss was about 40 percent of potential production of young birds from this one agent alone. The cowbird does its damage by removing warbler eggs from the nests it uses, by stealing the heat of incubation from the smaller warbler eggs and by eliminating newly hatched warblers as a result of trampling under the larger cowbird nestlings, which usually hatch two days earlier than the warblers and get a precious head start. This toll taken by one agent seemed particularly ominous because the "predator" was not "density dependent" like most enemies; that is, it did not let up when the "prey" became scarce.

In 1960, when reporting my results, I expressed concern about the capacity of the Kirtland's warbler to sustain such losses year after year. Yet, a complete census of Kirtland's warblers in 1951 and 1961 allayed our fears somewhat by indicating that the population was holding nearly constant at about 1,000 birds. Censuses were then scheduled at 10-year intervals. Then the census of 1971 confirmed our worst fears by revealing a decline to 400 birds, 60 percent less than a decade earlier. Now the population had collapsed back into the center of its range and was restricted almost entirely to three counties, whereas it had occupied portions of nine counties a decade earlier.

Alarmed, a group of friends of the warbler, representing conservation societies and public agencies, met in Ann Arbor in the fall of 1971 to discuss the

Barn Owls Disappearing In Michigan

You may not have noticed, says the Department of Natural Resources, but the little barn owl so common to farms during the 1930s has all but disappeared from the Michigan scene.

"In fact," says DNR Wildlife Division Chief David Jenkins, "the helpful little rodent catcher sometimes called the 'monkey faced owl' is so hard to find that we've placed it on our threatened species list. Although the extreme southeast part of Michigan once was heavily populated with barn owls, there are now only a few left in the entire state.

The DNR is asking farm families to help it with a barn owl census. It hopes farmers who have seen any of the birds recently in their vicinity will write about it to: Wildlife Division, Michigan Depart-

ment of Natural Resources, Box 30028, Lansing, Mich. 48909.

"We need to know the number of birds and information as to whether they are nesting," Jenkins says. "Informants need not give us the exact location of the owls, but we'd like to have farmers' names and addresses so we can contact them later."

The birds are unusual among owls in that they traditionally have lived and nested close to humans. The small towns and family farms of early settlement days provided their favorite nesting place in church towers, silos and barns. The birds are vanishing as the Michigan countryside changes.

(For more about barn owls, see "Nature's Flying Mousetraps," *Michigan Out-of-Doors*, April 1977.)

