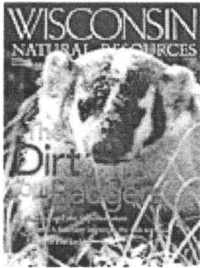


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This rarely seen mail Kirtland's warbler was spotted in 2008 at an Adams County pine barren.

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April 2009

A warble from the barrens

Kirtland's warblers are slowly gaining a foothold in scrubby jack pine country.

Kim M. Grveles

On a windless June morning in a dewy pine barren, a tiny, colorful bird adds its song to the typical chorus of Wisconsin's shrubland birds. Amid the melodious notes of vesper sparrows and bouncing calls of field sparrows, a distinctive chip chip che-way-o announces the presence of a rare, elusive species – the Kirtland's warbler. The male's song is followed by chipping calls from the female. She alights on a pine branch and is photographed, marking the first time a female of this species has been seen in Wisconsin. Careful scrutiny leads to another first discovery on this fine morning. Concealed among grasses under a pine branch is a Kirtland's warbler nest containing five eggs!

In recent years, many Wisconsin birders aspired to be the first to observe Kirtland's warblers breeding in the state. But it was New York environmental consultant Dean DiTomasso who was in the right place at the right time. His discovery, though historic, was not completely unexpected. Decades of conservation and management made conditions ripe for this rare warbler to expand its range from Michigan into neighboring areas in the upper Great Lakes.

Rarely seen in few places

Affectionately known as the "jack pine warbler," the Kirtland's warbler (*Dendroica kirtlandii*) was first discovered in 1850 on a farm in Ohio during spring migration. A male bird was collected and sent to the Smithsonian Institute in Washington, D.C. for study and comparison to other specimens. Smithsonian bird curator, Spencer F. Baird, described the species the following year, declaring it distinct from previously known warbler species. It was later named after the property owner of the farm, Jared T. Kirtland, who was a naturalist and the first to develop a checklist of Ohio birds.

Over the next 50 years, Kirtland's warblers were observed on only a few occasions in states east of the Mississippi, and only during spring or fall migration. During that same time period, over 70 specimens were collected during winter from the Bahamas and nearby islands leading scientists to conclude that this bird has a small wintering range confined to the islands of Bahamas, Turks, Caicos and Hispaniola.

The Kirtland's warblers' breeding range remained a mystery until 1903 when a nest was found by Norman A. Woods in jack pine habitat near Oscoda, Mich. along the Lake Huron coast about midway between Saginaw and Alpena. By 1950, ornithologists believed the birds' entire breeding range was limited to a small area within 60 miles of the spot where that first nest was found. However, one other birder had observed adult Kirtland's warblers feeding immature birds in southern Ontario in 1940. Given that one record and reports of sightings during migrations, it's possible this species had nested in jack pine forests of Wisconsin and elsewhere in the Great Lakes region, though they had never been accounted for outside of their small breeding territory in Michigan.

Their breeding cycle habits

Kirtland's is a wood warbler in the family Parulidae. The Kirtland's measures just 5 ½ inches long and weighs just under a half ounce. The male has a bluish-gray back with

strong black streaks that also flank the sides of its bright yellow breast. Black eye lines and a black patch between the eyes and bill form a thin horizontal mask on the face dividing prominent white eye-rings. Females are duller overall, sometimes appearing brownish rather than bluish, with faint streaking on the sides of a pale yellow breast. The black mask is absent on the female, but broken white eye-rings are visible.

On a calm day, the male Kirtland's warbler's loud and lively song carries about a quarter-mile and has been described as a combination of low, sharp notes followed by slurred whistles. Singing peaks in morning, wanes in afternoon and may pick up again in evening, but can cease altogether in hot weather or on cold, blustery days.

Male Kirtland's warblers arrive on the northern breeding grounds in mid-May and immediately begin territorial displays. Females arrive one to two days later and form pair bonds with males about a week later. Pairs are usually monogamous through the nesting season. Occasionally a male will mate with a second female after the first nest cycle.

Nesting begins as early as May 16 but more often occurs around the first of June. A nest of grasses, sedges, pine needles and leaf parts line a small depression in the ground. These tiny, open-cup structures are typically hidden among grasses in understory plants or are protected by a low-hanging branch of a young jack pine. Egg laying takes five to six days, usually during the first week in June. Only the female incubates, beginning the day before the last egg is laid and continuing for up to 14 days.

Crooked pine trunks with closely packed branches and short, green needles in groups of two define young jack pine forests that these warblers prefer. Jack pines are adapted to growing on these sandy outwash soils called pine barrens that depend on wildfires to regenerate. Heat from the fires opens their cones, releasing seeds to sprout on the fertile detritus. Suppression of wildfires in the last century took a toll on jack pine stands. In the absence of fire, cones don't sprout and as the trees age their lower branches self-prune opening up the protective cover under which Kirtland's warblers nest. By the 1960s, most of the jack pine stands in the upper Great Lakes aged beyond their usefulness for the bird's nesting, and new stands were not regenerating. To bolster the declining Kirtland's warbler population, humans needed to assist them.

A two-pronged approach to recovery

A census of singing male Kirtland's warblers on their Michigan territories was repeated in 1961 and 1971 to estimate the population size. The 432 males counted in 1951 had declined to 167 birds by 1971. Since then, counts have been performed annually by volunteers coordinated by the U.S. Fish and Wildlife Service (USFWS) and the Michigan Department of Natural Resources. The tally provides a means of gauging the effectiveness of conservation and management activities during the last 48 years.

The Kirtland's warbler was listed as a federally endangered species shortly after such protection was signed into law in 1973. Three years later a recovery team formed and its

