



Algonquin Provincial Park



THE *Raven*

Celebrates 50 years 1960-2009



Visitors' Newsletter

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Big Lessons From a Returning(?) Neighbour

Two years ago, naturalists were astounded by an event that occurred just outside Algonquin Park. On Canadian Forces Base (CFB) Petawawa adjoining our eastern boundary, a nest of the Kirtland's Warbler was found for the first time ever in Canada and two young birds fledged a few days later. That success was followed up last year by a repeat nesting involving the same male as the year before and, as we go to press this year, Ontario's environmentalist and wildlife biologist communities are eagerly awaiting news of further breeding that is probably taking place right now.

Now, anybody who looks up the Kirtland's

Warbler in their bird guide will quickly see that it is an attractive enough little bird—bluish gray with black streaks above and lemony yellow below with a few more dark streaks along the sides—but hardly a standout in a family famous for its beautiful patterns and colours. So why, then, is everybody so excited about the Petawawa nestings? We think there are two reasons. First is the obvious thrill of adding or restoring a species to Canada's list of breeding birds. Second, and far more important, if there is a bird with more important lessons to teach us about the conservation of our natural world than the Kirtland's Warbler, we cannot imagine what it is.

We would like to relate some of these reasons in this issue, but first a little background. The first specimen of Kirtland's Warbler was taken only in 1851 and that was a migrating bird collected near Cleveland, Ohio. Back then, of course, no one had any idea where the breeding grounds of this obviously rare bird might be and no breakthrough was achieved until a few singing males and a nest were discovered in the northern part of Michigan's lower peninsula in 1903. For over 90 years all further nests were discovered within just 100 kilometres (60 miles) of the first one and the state of Michigan and local residents became understandably quite proud of "their" special bird. There even developed a minor "ecotourism" industry centred around the Kirtland's Warbler long before the word was invented and the concept extended to cover other endangered species and habitats around the world.

It is just possible, however, that Michigan's claim to exclusivity was not quite correct, at least for a while. In 1916 during the First World War, a respected early Ontario naturalist named Paul Harrington was stationed at the Petawawa military base and found Kirtland's Warblers to be "not uncommon." Harrington returned in 1939, reported another Kirtland's and finally published his observations the same year. Why Harrington's claims were not immediately followed up on by others is a bit of a mystery to us but, decades later, many people, including Algonquin Park staff, have independently come across Harrington's paper, sought permission to survey the military base, and (most of the time) satisfied themselves that Kirtland's Warblers were no longer there—if they ever had been in the first place. One notable exception was in 1977 and 1978 when a lone male was found singing his heart out trying, but obviously failing, to attract a female.

We will probably never know for sure if Petawawa had a small population of Kirtland's Warblers in the early 1900s but clearly, one way or the other, Michigan was the stronghold of the species and, by the mid-1900s, the only place where it survived. Even there, however, its prospects were not looking good. Censuses organized in the 1960s showed that the entire population consisted of fewer than 200 breeding pairs and, worse, that it was trending downwards. One problem was that the birds nest only in clumped stands of Jack Pine (very rarely Red Pine) and even then only when the trees are between 1.4 and 4 metres (5 and 18 feet) tall. With modern fire protection, less and less of lower Michigan's northern sand plains supported Jack Pine in the height class suitable for Kirtland's and the number of nesting pairs was falling accordingly. Even worse, each nesting that did occur was producing fewer young on average than before because more and more nests were being parasitized by Brown-headed Cowbirds.*

To make a long story short, the state of Michigan deserves enormous credit for recognizing how serious the problems were and for taking action to reverse the downward trend. Between 1957 and 1962, Michigan set aside four large areas to be managed specifically for Kirtland's Warblers and gradually increased the total area to about 150,000 acres. They also attacked the cowbird problem by embarking on an ambitious removal program. About 4,000 cowbirds are now trapped in the Kirtland's Warbler nesting areas every year and the

* *Cowbirds do not build nests of their own and instead lay their eggs in the nests of other birds. Many birds, including Kirtland's Warblers, raise the cowbird chicks as their own and almost always at the expense of their own production of young.*

percentage of warbler nests that are parasitized by cowbirds has dropped from about 70% before the program began to about 5% now. There is no doubt these measures are making a big difference. The number of breeding pairs has steadily increased in the main Michigan nesting area and is now over 1500, an almost tenfold increase in just a few decades. Birds started showing up elsewhere as well, including the lone Petawawa male in 1977-78, but also other unmated birds in Wisconsin and Quebec around the same time. Even better, a new Michigan breeding colony was established in the state's Upper Peninsula and it now numbers over 30 pairs. Then, in 2007 for the first time ever, nests were found outside Michigan, not only the Petawawa nest already mentioned above in our province, but also three nests in Wisconsin.

Clearly, in a day and age when news about wildlife is mostly about declines and extinction, the Kirtland's Warbler story is a welcome exception. But it is also much more than that. We said earlier that the Kirtland's Warbler had an impressive number of lessons to teach us about wildlife conservation and we would like to round out this article with a list of some of those lessons.

1. First, some wildlife species have very specific habitat requirements. To our eyes, "bush may be bush" but, to Kirtland's Warblers that nest only in young Jack Pine 5 to 20 years old, nothing could be further from the truth.
2. Even then, it may be very difficult for us to see all the important factors determining



whether a given area is suitable for a certain species. We know that Kirtland's Warblers require young Jack Pine alright, but Jack Pine occurs in a huge range right across the boreal forest from Alberta to Quebec whereas the Kirtland's Warbler is confined to a small part of Michigan and, now, a couple of toeholds in neighbouring jurisdictions. No one has come up with anything like a convincing explanation for why the warbler is so picky.

3. It is very fashionable nowadays to talk about how important old growth forests are for wildlife but the Kirtland's Warbler shows quite dramatically that, for some species, "new growth" forests are what really matters.

4. Along the same lines, for years many environmentalists have held that disturbing natural forests is bad for wildlife, especially when the disturbance comes in the form of logging or forest fires.

The Kirtland's Warbler is a fine example—and not the only one—of a species that contradicts this conventional wisdom. Before Europeans arrived in North America wildfires would have been absolutely necessary to keep enough Jack Pine forest in the young stages required by the warbler. Now, humans must actively and consciously intervene to replace wildfires if we are to prevent the Kirtland's Warbler from going extinct.

5. Another popular current in modern public opinion is that it is bad to kill or control any form of wildlife. But what about cowbirds? They are a natural and legitimate part of North America's wildlife but they were originally confined to the prairies where laying eggs in other birds' nests made a great deal of

evolutionary sense for a bird that had to keep up with migrating bison (because the birds were adapted to feeding on insects stirred up by the advancing herds). Cowbirds spread east to places like Michigan only because we humans cleared the forests and introduced bison substitutes (cows) and in so doing made much of the east resemble the cowbird's western habitat. The trouble is many eastern birds, including the Kirtland's Warbler, have had no exposure to cowbirds and, unlike many western birds, have never evolved ways to defend themselves. We obviously aren't going to reverse the process by letting the forests grow back up again and do without our crops but does that mean we should sit back and let cowbirds drive rare birds like the Kirtland's Warbler down to extinction? Personally, we think Michigan made the right decision, even if it does mean the state-sponsored killing of a few thousand cowbirds every year.

6. Many people would be appalled to learn that large swaths of forest had caught fire and been destroyed by our military as they trained in the use of various weapons and munitions. Well, that sort of thing has happened over and over on the Petawawa military base and, as far as Kirtland's Warblers are concerned, it was almost certainly a very good thing. If Kirtland's Warblers did persist at Petawawa until the early 1900s as claimed by Harrington, it was almost certainly because of the military's (admittedly unintentional) actions in keeping significant portions of the base in young Jack Pine suitable for the bird. And, by the same token, if Kirtland's Warblers spilling over from Michigan have stumbled across the young Petawawa Jack Pine stands and are obviously finding them suitable, it is once again the military we have to thank—both for starting the pre-requisite fires in the first place and also for failing to stop the fires until they had

prepared large expanses of future Kirtland's habitat.

7. And it is here that we can draw an interesting contrast with Algonquin Park just next door. In managing the Park we have obviously aimed toward the suppression of fires and especially toward avoiding the creation of Jack Pine barrens that would be attractive to Kirtland's Warblers. But now the apparent arrival (or return?) of this remarkable bird to Petawawa raises the interesting prospect that it could also spread to areas with suitably aged Jack Pine within Algonquin itself. And who knows, if Kirtland's Warblers once occurred naturally at CFB Petawawa, maybe they once occurred on our side of the park-base boundary as well. If so, the unfolding local story of Kirtland's Warblers would not only be that of a returning neighbour but also that of a returning "native son"!

You will forgive us for being excited by such a prospect. We will be content cheering from the sidelines if we have to but, given the lessons we have already learned from the Kirtland's Warbler, we would be particularly honoured to lend a direct hand in the continuing recovery of this exceptionally instructive member of North America's wildlife if we should have the chance. It would force us to confront some well entrenched ideas about wildlife conservation but it would also be in the finest tradition of great parks around the world.

The set of twelve 2009 Ravens will be mailed free in the fall to Friends of Algonquin Park members. Mailed also for \$3.00 to non-members (cheque/money order to The Friends of Algonquin Park, Box 248, Whitney, ON, K0J 2M0 or cash at the Visitor Centre). Free sets may be picked up at the Visitor Centre, Logging Museum, or main gates after September 15.

