General Field Notes

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Two Sight Records of Kirtland's Warbler from North Carolina

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Kirtland's Warbler (Dendroica kirtlandii) is a critically endangered species, the warbler with the lowest population currently known to breed in the United States or Canada (Dunn and Garrett 1997). North Carolina lies directly between the breeding grounds, centered in northern Michigan, and the wintering grounds in the Bahamas. Although there is some evidence to suggest that North Carolina is on the normal migration route (Potter and Radovsky 1992), there are only a handful of sightings from the state; the majority of reports are from farther south, from South Carolina to Florida (Dunn and Garrett 1997). This paper presents details of two sightings of Kirtland's Warbler from the North Carolina mountains in 1995, with notes on other reports from the state and the current status of the species.

Spring Sighting

On 20 May 1995 Chris Eley, Lori Moilanen, Doug Shadwick, Julia Shields, and I were driving down the Blue Ridge Parkway through the Great Balsam Mountains (southwest of Asheville, N.C.), in mixed deciduous/sprucefir forest at about 1615 m elevation, looking for typical high-elevation birds. Around 11:15 am we were a short distance past milepost 426, between Rough Butt Bald Overlook and Haywood Gap in Jackson County, N.C., when our trip leader, Doug Shadwick, thought he heard a Blackburnian Warbler (*Dendroica fusca*) song. We pulled to the shoulder, got out, and soon found the Blackburnian. In short order we also saw a Canada Warbler (*Wilsonia canadensis*) and a Blue-headed Vireo (*Vireo solitarius*). Then we noticed a bird fly across the parkway and land on a branch of a 10-meter tall, fairly open Northern Red Oak (*Quercus rubra*) tree right beside the parkway shoulder. It posed nicely for us in the sunshine as it bobbed its tail continuously. At first Doug called out that it might be a Palm Warbler (Dendroica palmarum), but as we got a better view, we became puzzled and began calling out field marks, since we realized it was something none of us recognized. I had seen 37 species of warblers in various plumages in North Carolina, but this one resembled nothing in my experience.

The bird was about the size of a Blue-headed Vireo, with the shape of a Pine Warbler (Dendroica pinus) and the tail-bobbing behavior of a Palm Warbler. Its underparts were washed with yellow, except for the white vent and undertail coverts and brighter yellow throat. The flanks were finely streaked with dark gray-brown; the streaking extended across the breast creating a necklace effect, much finer and less bold than on a male Canada Warbler. As the bird sluggishly foraged 8 meters up in the oak tree, it turned so we could get a good view of the upperparts. They were mostly gray-brown from head to tail, including the rump, except for the back, which was streaked alternately grav and brown. The tail was notched. I thought I saw a hint of a white spot in the tail, but the bird never fanned its tail for us. Wingbars were not noticeable. There were thin, pure white crescents above and below the dark eye and a hint of a darker line through the eye. The bill, legs, and feet were black; the bill was average sized and shaped for a warbler. The bird made no vocalizations. We studied the bird in the sun and shade at a distance of about 8 meters. After perhaps 4 minutes we lost the bird; we could not relocate it later in the day.

After the sighting we had our suspicions that the bird might be a Kirtland's Warbler, but the description and paintings in the field guide we had with us (National Geographic Society 1987) still left us unsure, since there was not an illustration or description matching exactly the bird we saw. We remained unsure until we consulted Curson *et al.* (1994), which has an illustration and description of first-year female Kirtland's Warbler (plate 11, figure 31c) that matches the bird we saw very closely.

Fall Sighting

On 23 September 1995 I was birding alone at Mahogany Rock, near the Mahogany Rock Overlook on the Blue Ridge Parkway (milepost 235), in Alleghany County, northwestern North Carolina. It was foggy and there was little bird activity in the mixed pine/hardwood forest on top of the hill, at an elevation of about 1160 m. At noon I heard a loud, low 'chip' and looked up to see an oddly familiar bird perched 2 meters up in a short Virginia Pine (Pinus virginiana) tree, 3 meters away from me, bobbing its tail. This bird looked almost exactly like the one I had seen on 20 May, so I immediately recognized it as a Kirtland's Warbler. Then panic began to set in, as I realized I was the only person seeing this bird and the North Carolina Bird Records Committee had not yet made its decision on the first sighting. They would never believe this one! I began rushing back to the parking lot, but realized I should probably get a longer look at the bird and make sure I had seen all the field marks I could. I returned to the bird, which was still sitting in the same spot, and studied it for about a minute until I was convinced it could not be anything else. I then proceeded to run down to the parking lot to alert others and have them confirm my identification. Fortunately this was the weekend of the Carolina Bird Club meeting, so there were plenty of birders around, and the bird cooperated, staying in the same general area through 24 September. About 50 people saw this bird, including most of the N.C. Bird Records Committee. Unfortunately, the bird was not photographed.

The description in my field notes of this bird is nearly identical to that of the May sighting, with only minor differences. This bird appeared to be a large Dendroica warbler, with a bulky, long-tailed shape like a Pine Warbler. The forehead, crown, nape, ear coverts, side of neck, rump, uppertail coverts, wings, and tail were mainly a drab medium brown. The wings and tail were perhaps darker brown to blackish. The head was plain brownish above with thin white eye-crescents, nearly forming a ring but broken in front of and behind the eye. The back was streaked with dark gray longitudinal stripes, contrasting with the brown background. Two thin, buff to white wingbars were present. The tail was moderately long and held slightly fanned (flared out towards the tip), though not fanned out far enough to permit a view of the spot pattern in the tail. The underparts were washed with pale yellow, except for white vent and undertail coverts. The breast sides and flanks had fine brown longitudinal streaks. These streaks extended across the upper breast and onto the throat. The bill was mostly blackish, slightly paler near the gape, straight, and medium-sized for a Dendroica warbler. The legs and feet were blackish. The bird had a constant, vigorous, deep tail-bobbing and relatively sluggish foraging behavior. The only vocalization heard was a repeated loud, low, cardinal-like 'chip.' Colored leg bands were not detected on either the spring or the fall bird. Biologists have placed these bands on many individuals of the known population; their presence has even been postulated as a field mark (Dunn and Garrett 1997).

Elimination of similar species

Immature female Kirtland's Warblers are not the most distinctive birds, so it was important to eliminate several somewhat similar species before settling on the identifications. Other *Dendroica* warblers that may potentially be confused with Kirtland's include Magnolia (D. magnolia), Pine, Prairie (D. discolor), Palm, and Cape May (D. tigrina). Following are some of the differences between these species and the two Kirtland's described here. Immature fall Magnolia Warbler is slightly similar, but has a yellow rump, conspicuous white bands in the middle of the tail (which is frequently fanned), and a gray head contrasting with olive-green upperparts. They are active foragers, do not habitually bob their tails, and are smaller. Pine Warblers have olive-green upperparts, an unstreaked back, a more contrasting face pattern, indistinct streaking on the sides, yellow or buffy eye-crescents, a large bill, and do not habitually bob their tails. Prairie Warblers have a strongly contrasting face pattern, olive-green upperparts, back not streaked with black, center of breast and throat not streaked, and yellow patches above and below the eye. They are active foragers, are smaller, and wag their tails much less vigorously and with more of a side-to-side motion. Palm Warblers have yellow undertail coverts, a contrasting face pattern with buffy or yellow supercilium, an oliveyellow rump, a dark malar stripe, and a weakly streaked back. Adult Cape May Warblers have a strongly contrasting face pattern, a yellow rump, and more prominent wingbars. They do not bob their tails, do not have white eye

crescents, and are smaller (Curson *et al.* 1994, Dunn and Garrett 1997, personal observation).

Other North Carolina reports and current status

These two sightings are the second and third records for North Carolina accepted by the North Carolina Bird Records Committee (NCBRC), moving the species from the Provisional List to the Official List (NCBRC 1996). The first accepted record is a sighting from Iredell County on 29 August 1982 (Weisbecker 1987). In addition to the three accepted records, there are four unaccepted reports. While the description in Potter and Radovsky (1992) of a bird seen on Ocracoke Island, Hyde County, on 28 September 1991, is consistent with that of a Kirtland's Warbler, this report was not accepted (NCBRC 1992, NCBRC 1993). Three reports with sparse details from a single observer in Rocky Mount between 1936 and 1941 (Potter and Radovsky 1992) were also not accepted (NCBRC 1992).

The critically endangered Kirtland's Warbler is one of the success stories of endangered species recovery (Solomon 1998). The first two censuses of singing male Kirtland's Warblers on their breeding grounds in Michigan in 1951 and 1961 found 400-500 males, but the third census in 1971 found a precipitous drop to 201. In annual censuses from 1972 on, the number of singing males remained steady at about 200 through 1989, despite the implementation of Brown-headed Cowbird (Molothrus ater) trapping and some efforts at habitat improvement. Without these efforts, Kirtland's Warbler could have become extinct (Solomon 1998). Kirtland's Warbler numbers are generally believed to be limited by the availability of suitable breeding habitat, which is restricted to stands of young (6-20 year old) Jack Pine (Pinus banksiana) (Sykes and Clench 1998). By 1990, the efforts to increase the amount and quality of suitable breeding habitat began to pay off, perhaps combined with an increase in suitable wintering habitat (Haney et al. 1998). The population of Kirtland's began to climb steadily beginning in 1990 to an all-time high of 765 singing males in 1995 (Solomon 1998). Knowing this, it is not quite so surprising that 1995 was the first year that Kirtland's Warblers were seen in North Carolina in both spring and fall. The population of singing males remained fairly steady at 693, 733, 805 from 1996-1998, but increased to 903 in 1999 (United States Forest Service 1999). I hope the two sightings presented in this paper are a sign of things to come.

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Bob Wood served as editor for this note.

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