

St. Andrews Bird Banding Station 2004 Fall Migration-Monitoring Report

The St. Andrews Bird Banding Station has successfully completed its third full fall migration monitoring season. This would not have been possible without the financial support of the NB Wildlife Trust Fund.

The majority of the funds from the NB Wildlife Trust Fund grant were used to train, supervise and support volunteers, without whom this project could not operate. This year, an extra volunteer was brought in to learn how to band. This person was a novice with very limited experience and always worked with either myself, or one of the experienced volunteers. Learning how to band birds is a trial of patience for both the trainer and trainee. It takes the right combination for it to work and this year we had that combination. Funds were also used to cover computer data entry, tabulating the data, and report writing.

Summary of 2004 Fall Migration

The Station's mist nets are located in low second-growth vegetation in and around semi-open old fields. Site HMA, which has eight nets, is at the top of the "hill" surrounded by tall spruce trees, and site HMB, which has six nets, is at the bottom of the "hill" on the shores of the St. Croix Estuary. Both sets of nets were opened on a total of 53 days from 26 August until 1 November. This is slightly down from 57 days in 2003 and 61 days in 2002, due to inclement weather. Quite a few days were lost due to windy and rainy conditions in the middle of September and October, and again towards the end of October.

The standard Canadian Migration Monitoring Network (CMMN) protocol, which requires nets to be opened and closed in the same order every day, was followed. All birds were brought to a central banding "station" which was located at HMA. The same procedure as other years was followed with all birds receiving a Canadian Wildlife Service band and then being aged, sexed, weighed, measured, fat scored and checked for signs of moult. The date, net number and time of capture were also recorded. For every day that the nets were open, a Banding Log sheet was filled out. Here we summarized the number of each species captured, which set of nets they were captured in, as well as information about which nets were open, when they were opened and closed, the weather conditions at opening and closing time, and sighting data.

Each day we estimated how many birds of each species were in the banding area (daily estimated total, DET) and then distinguished between those that we thought were migrants (probable known stopovers, PKS).

A total of 1223 birds, representing 57 species were banded (Table 1). Sixteen individuals banded in previous years were recaptured, and 12 Ruby-throated Hummingbirds were caught and released. 128 birds were retrapped, these are

individuals that have been banded earlier in 2004. A Ruffed Grouse was also captured and released unbanded.

The largest daily catch was recorded on 13 October when 63 birds were banded, 34 of these were American Goldfinch. Fifty birds were banded two days later on 15 October, 22 of which were goldfinches. Other days that kept the crew busy were 21 September when 44 birds were banded and 22 September when 40 new birds were captured. The highest diversity of species was seen near the end of September when mixed flocks of warblers were moving through. Twenty-one species were recorded on 21 September, and 20 on 22 September and 19 September. On the other hand we had days of less than ten birds. These usually considered with stretches of clear blue skies. Migrating birds tend to move with and concentrate behind weather fronts, so constantly changing weather patterns provide the best netting conditions.

The most commonly banded bird in 2004 was White-throated Sparrow, followed by American goldfinch (Table 2). Black-throated Green Warbler were back in the top ten after five years of low numbers. This species is a common local breeder and maybe had a good breeding year. Both species of kinglet were back in the top ten after they failed to move through in any numbers last year. Chickadee numbers were well below those seen in 2003.

Table 2: The ten most commonly banded fall species 2002 - 2004

2002	2003	2004
Golden-crowned Kinglet	American Goldfinch	White-throated Sparrow
White-throated Sparrow	White-throated Sparrow	American Goldfinch
American Goldfinch	Song Sparrow	Black-thr Green Warbler
Song Sparrow	Black-capped Chickadee	Song Sparrow
Common Yellowthroat	Common Yellowthroat	Common Yellowthroat
Ruby-crowned Kinglet	Blackpoll Warbler	Magnolia Warbler
Red-eyed Vireo	Myrtle Warbler	Golden-crowned Kinglet
Magnolia Warbler	Magnolia Warbler	Ruby-crowned Kinglet
Myrtle Warbler	Red-eyed Vireo	Nashville Warbler
Nashville Warbler	Slate-coloured Junco	Myrtle Warbler

Highlights

The highlight of the fall migration-monitoring season was the Station's first Scarlet Tanager, though this individual was green. Other uncommon species captured included two Indigo Bunting and a Yellow-breasted Chat.

Recaptures

Sixteen birds were recaptured. Table 3 summaries the species recaptured and

the year they were originally banded. Seventy-five percent of the birds recaptured were banded in 2003.

Table 3: Original banding years of birds recaptured in the Fall 2004

Species	2003	2002	2001	2000	1999	1998	Total
Purple Finch	1						1
American Goldfinch	1						1
White-throated Sparrow	1	1					2
Black-&-White Warbler		1					1
Nashville Warbler	1						1
American Redstart	2						2
Brown Creeper						1	1
Black-capped Chickadee	5	1					6
Hermit Thrush	1						1
Total	12	3	0	0	0	1	16

The most interesting recapture was the Brown Creeper (1930-66813), which was originally banded 26 September 1998 - age unknown. It was recaptured 11 October 1999, not seen in 2000, recaptured 6 September 2001, not seen in 2002, recaptured 26 October 2003 and last seen 28 October 2004. This individual is at least six years old and the only Brown Creeper the Station has ever recaptured.

Trends

The Station now has three years of fall data when the nets were open on a daily basis. Before that (2001 and earlier) nets were opened whenever possible or not all nets were open on any given day (Table 1). The number of birds captured per 100 net hours (birds/100nh) of effort had dropped slightly from 38.10 birds/100nh in 2003 to 36.77 birds/100nh in 2004. This is still above the 30.70 birds/100nh recorded in 2002, but well below the previous year four- year average of 61.26 birds/100nhs (Table 1)

Comparing trends for individual species will become clearer as more data from years of "daily operating" is gathered. For now we can group the species into those that show a upward trend (each year higher that previous), downward trend (each year lower that previous year), a general upward trend (when both 2004 and 2002 are higher that 2003) and a general downward trend (when 2004 and 2002 are lower than 2003). Only species with at least five individuals banded in a year were used in this comparison.

Upward Trend (2004 higher than 2003 which is higher than 2002)

White-throated Sparrow, Cedar Waxwing, Northern Parula; Black-throated Blue, Magnolia and Black-throated Green Warbler; Red-breasted Nuthatch. The number of birds/100nh for Northern Parula, Black-throated Blue, Black-throated Green and Red-breasted Nuthatch are also above the seven-year average. While White-throated Sparrow, Cedar Waxwing and Magnolia Warbler show a recent positive trend the number of birds /100nh in 2004 is below the seven-year average.

Downward Trend (2004 lower than 2003 which is lower than 2002) Yellow Warbler, Brown Creeper.

The number of Brown Creeper and Yellow Warbler /100nh continue to go down and are below the seven-year average.

General Upward Trend (both 2004 and 2002 are higher than 2003)

Downy Woodpecker; Savannah and Song Sparrow; Black-&-White, Nashville, Yellow Palm and Wilson's Warbler; Common Yellowthroat; Golden-crowned and Ruby-crowned Kinglet.

Bird/100nhs for many of these species still remain below the seven-year average, but with the recent upward trend the outlook maybe more positive.

General Downward Trend (both 2004 and 2002 are lower than 2003)

Alder Flycatcher, Blue Jay, Purple Finch, American Goldfinch, Slate-coloured Junco; Lincoln and Swamp Sparrow; Red-eyed and Blue-headed Vireo; Myrtle, Chestnut-sided, Blackpoll and Canada Warbler; Ovenbird, Northern Waterthrush, American Redstart, Gray Catbird, Black-capped Chickadee, Veery; Swainson's and Hermit Thrush, American Robin.

Bird/100nhs for most of these species remain below the seven-year average.

The results from this comparison don't show a very positive picture for many of the species captured. One factor that is a tremendous influence on the number of birds captured at a banding station is weather. While we basked in the sunshine and enjoyed a clear calm Indian summer, the weather did little to concentrate flocks of migrating birds in the netting area. When the wind did blow, it was usually from the south, again not ideal for migrants. Our biggest days were usually after or as a weather system was moving through. How many years of data are needed to reduce the yearly weather effect? I don't have an answer to this question, but truer trends will become more apparent as the database grows.

Data

The raw data from the 2004 banding season has been entered into the BandManager computer program and is ready to be submitted to the Canadian Wildlife Service. A summary of the fall banding project has been sent to Bird Studies Canada as part of the Canadian Migration Monitoring Network and will also appear in the Atlantic Flyway Review - Northeast Region article of *North American Bird Bander*.

Public Education

Banding demonstrations were given to school students and interns visiting the Huntsman Marine Science Centre. Students from Ashbury College spent a whole morning with the banding crew learning how to identify birds and how complicated it can be to age and sex some species. The highlight for the students was letting the birds go.

Acknowledgements

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