Mackenzie Nature

Observatory

2003

Annual Birding

Report

Mackenzie Nature Observatory
P.O. Box 1598
Mackenzie, BC
V0J 2C0

Executive Committee: President: Ryan Bichon
Vice President: Rob Weaver
Secretary – Treasurer: Vi Lambie
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Federation of BC Naturalist Director: Vida Tattrie

Registered Charity Business Number: 88801 9296 RR0001
Incorporated Society Number: S-36498

Purposes of Society:

- ***To research, conserve, restore and assist in the management of the natural resources found in the Mackenzie, BC area.***

- ***To promote the understanding and enjoyment of nature by providing opportunities for public participation and education in habitat enhancement, restoration and monitoring projects that will provide additional public knowledge regarding nature.***

- ***To encourage and engage in the protection and restoration of threatened and endangered species with special attention to the preservation of essential habitats.***

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1st Boreal Owl we have banded

Acknowledgements
Thanks to all who helped prepare this report – Tyler Flockhart, our bander Aug 30 – Sept 21, Vi Lambie, David Lambie, Matina Frey, John D. Lambie, John A. Lambie, Ryan Bichon and Ulrike Sliworsky

Table of Contents

Migration Monitoring in Mackenzie 1
Location 1
Goal 1
Objectives 1
Banding Permits 1
Bird Committee 1
Canadian Migration Monitoring Network 1
Species Coverage 1
Data Analysis 1
Sponsors 1
Other Donations and Support 2
Volunteers 2
Transects 2
NIVMA Tour Visits MNO Banding Lab 2
Vegetation 3
Fall Banding 4
Netlanes 4
Personnel 5
Banding 5
Top 5 Species Banded at Mugaha During 2003 Fall Banding 7
Plumage 8
Rusty Blackbird 10
Returns 10
On the down side 11
A Special Thanks 11
Looking Ahead 11

2003 September Report prepared by Tyler Flockhart 12
Summary of banding and monitoring (Aug 30 – Sept 21) 13
Moult Card 13
Northern Saw-whet Owl Banding 14
Figure 1 Sightings of numbers of individuals and species per day of banding operations Aug 30 – Sept 21 15
Figure 2 Number of species and individuals of birds banded per day during banding operations Aug 30 – Sept 21 15
Figure 3 Number of owls by age and sex classification 16
Figure 4 Percentage of owls captured defined by age and sex-class 16
Figure 5 Wing and weight of known sexed individuals 17
Table 1 Number of individuals and species sighted and banded at the Mugaha Banding Site 18
Table 2 Number of completed moult cards 18
Table 3 The moult scores and percentage of moult completion in four recaptured birds 19
Table 4 Banding activities for Northern Saw-whet Owls including traps, times and numbers of owls captured 19
Table 5 Number of Northern Saw-whet Owls estimated to pass through the Mugaha site during three weeks of Sept 20

Good-bye 21

Christmas Bird Count 2002 21

Bird Sightings 21

Road & Window Kills – They can be used 22

Banding in Mackenzie 23
Spring Banding 23
Fall Banding 24

Nest Records 24

Loon Surveys 24

Appendices

Appendix 1 Birds Banded at Mugaha 25

Appendix 2 1998 – 2003 Net Capture Rate Totals plus Top 10 Species by Net 29

Appendix 3 Returns from Previous Years 32

Appendix 4 Christmas Bird Count Results 35

Migration Monitoring- by Vi, John & David Lambie & Martina Frey

Location: Our banding station is located at Mugaha Marsh (Latitude 55° 23', Longitude 123° 12') which is 14 km northwest of Mackenzie. We are on the east side of the Parsnip Reach of Williston Reservoir and much of the area where we work is actually in the floodplain of the Reservoir when it is at full pond. Our transects are located at Mugaha Marsh, adjacent to the banding site, at Chichouyenily Creek approx. 2 miles west of Mackenzie and Gagnon Creek approx. 10 km south west of Mackenzie.

Goal: The goal is to monitor changes in the population of small landbirds that migrate through the Mackenzie area, by providing consistent and comparable annual indices of population size and structure, survivial rates, species composition, and migration timing. We are particularly concerned about species not monitored effectively with other methods like the Breeding Bird survey and/or species that have shown declines in other regions.

Objectives: The objectives are: (a) to count the individuals (observed and captured) of each species and subspecies, in or passing through, a specified area each day during migration; (b) to determine the age and sex composition of migrant populations; (c) to augument public interest and local knowledge of environmental concerns through involvement; (d) to compare key riparian sites for their potential to access long-term population trends of landbirds, particularly forest species; (e) to determine the importance of riparian habitat for migration of these species; and, (f) to determine if migration monitoring can be used to measure the productivity of forest birds.

The project was designed by Rhonda Millikin of Canadian Wildlife Service and we have continued to work with CWS. Wendy Easton has been our main contact and while she was away on maternity leave this year we worked with Shawna Pelech and Kevin Fort .

Banding Permits:
Federal 10365 & 10709
Provincial: P012578 & P012543

Bird Committee:
Vi Lambie, Martina Frey, David Lambie, Ulrike Sliworsky, Linnea Cross-Tallman, John Lambie, Ryan Bichon

Canadian Migration Monitoring Network
Our station is one of the member stations of the Canadian Migration Monitoring Network that is coordinated by Bird Studies Canada.

Species Coverage:
Appendix 1 (page 25) lists the birds we have banded at Mugaha since we started the station.

Data Analysis:
The Canadian Wildlife Service is responsible for analyzing the data on a regional basis and Bird Studies Canada is responsible for doing it on a national basis.

Sponsors
A big Thank You to all our sponsors.

BC Hydro Peace / Williston Fish & Wildlife Compensation Program continues to be our main sponsor with a contribution of $7000 to the program. Their contribution is so very important as they allow us to use it to pay the bander. A qualified experienced bander is essential to the program because it allows us to have more volunteer involvement.

TD Friends of the Environment Foundation, Prince George Chapter gave us a grant for $2500 enabling us to purchase new mistnets and the equipment needed for owl banding.

The Canadian Wildlife Service in Delta holds the Master banding permit for the work we do at the station. Kevin Fort, landbird biologist with CWS was up in June to help chose our netlanes for 2003. In August Kevin and his assistant, Carmen Holschuh, were up to do the vegetation sampling for our site. Rhonda Millikin from CWS is working on analyzing the transect data, but is currently on sick leave. Throughout the year Shawna Pelech and Kevin Fort, who were filling in for Wendy Easton while she was on maternity leave, were very helpful in addressing any of our concerns. Wendy Easton returned to her position in October and we look forward to working with her again. MNO has a contract for $3500 with CWS for collecting the banding data, to date we have received $3000.

The James L. Baillie Memorial Fund of Bird Studies Canada gave our station a migration monitoring grant for $2000 We have received $1600 to date.

The Baillie Birdathon is a fund raiser coordinated by Bird Studies Canada that helps groups raise money for birding projects. Our thanks to all the people who did the Baillie Birdathon and named Mackenzie Nature Observatory as the one they wanted a % of the funds to support . In 2002 participants raised $1234.90, of which Mackenzie Nature Observatory (as a Canadian Migration Monitoring Network member station) received 50%. In 2003 we have received our first payment ($576.75 half of the $1153.50 that we raised) from the Baillie Birdathon. The final payment comes early in 2004. At the recent Canadian Migration Monitoring Network meeting BSC informed us about some changes to the Birdathon for 2004. CMMN stations will receive 60% of funds raised up to the first $2000, for amounts between $2000 and $4000 they will receive 70% and for amounts over $4000 they will receive 90%. This will benefit us more, especially if we can get additional people to do it on our behalf. The down side of this announcement is there will be no more J.L. Baillie Memorial Fund grants for CMMN stations.

Other Donations and support

The Mackenzie Elks donated a couple used bikes for the station and we received a mountain bike that was turned in to the **RCMP** and not claimed. The Elks also gave us some parts to repair a bike we had. These bikes save so much time when we are doing net rounds as some of our nets are a fair distance down the road.

The College of New Caledonia in Mackenzie loaned us an additional optivisor to help with the banding when it was busy as the club only has one.

Volunteers

Our program relies heavily upon volunteers – they not only assist with the project – doing the visual surveys in spring and helping at the banding station in the fall, but spend many hours doing site and equipment maintenance. They are responsible for hiring a bander and long-term volunteers. At the end of the season volunteers must check the data to be sure that the banding data, the retrap data and the data entered in the Estimated Totals program agree – if they don't they work at it until the discrepancies are found. They are responsible for doing the fund raising for the project. They put together this report on the club's birding projects. They are a very dedicated group and we thank them all!

Transects

Since 1994 our group has been conducting visual surveys on weekends on 1 km transects during spring migration. Rhonda Millikin from CWS was having the data analyzed, but she is currently on sick leave. In April when we were in Delta we met with Bob Elner, Shawna Peleck and Kevin Fort to discuss our programs. We were somewhat surprised when they told us that transects were the preferred to point counts for doing Migration Monitoring. They asked us to continue doing them and our devoted group of volunteers made a real effort to get all weekends covered. This was a challenge for us as two long time members of our group left this year. The data from our spring transects has not been entered to date. Volunteers who did transects this spring: Ryan Bichon, Martina Frey, David Lambie, John A. Lambie, John D. Lambie, Vi Lambie, Rob Weaver and Betty-Jo Weaver. Thanks to everyone who helped!

NIVMA Tour Visits MNO Banding Lab

By Ryan Bichon

Each year, NIVMA (Northern Interior Vegetation Management Association) chooses a different location in northern BC to host a two-day summer field tour. Foresters from all over BC get together to view a variety of local sites and discuss issues related to vegetation management and forest management practices. Mackenzie was chosen as the location to host the NIVMA Tour for summer 2003 and the Mackenzie Nature Observatory (MNO) was asked to do a presentation on Birding Opportunities at Mugaha Marsh. The presentation would be delivered at Mugaha Marsh and serve as a stop-of-interest during coffee break. In preparation, the Lambies (Vi, John, & David) cleaned up the banding lab and set up a display of birds and bird-banding equipment (including one of the mist nets). Ryan Bichon delivered two picnic tables to the site and prepared a short presentation.

On the morning of June 25, the tour arrived at Mugaha Marsh and about 70 people spent their coffee break wandering through the banding lab and viewing the sites at the marsh. Ryan gave a brief presentation to the group from the tailgate of a pickup truck. The presentation summarized birding activities, discussed issues around vegetation management at the marsh, and highlighted some interesting captures and recaptures from banding. The group of foresters was urged to avoid using stringboxes wherever possible to prevent birds from getting tangled up in discarded string. The use of handheld GPS units was suggested as an alternative measuring device for some situations. The group was also urged to consider birds when planning forestry operations - due to the high potential for destruction

Photo of Ryan making his presentation

of bird nests during harvesting and vegetation management activities. It was pointed out that destruction of bird nests is illegal under the Wildlife Act, providing potential ammunition for extreme preservationist groups to interrupt forest management activities in the future. The group was encouraged to demonstrate excellence in forestry by voluntarily managing for birds in addition to timber. It was suggested that destructive activities, such as harvesting and brushing, could be scheduled for times other than peak nesting season for birds - especially in riparian areas which seem to contain a higher than average number of nests.

Vegetation

As part of the Canadian Migration Monitoring Network and BC's Regional Migration Monitoring Program we are encouraged to manage the vegetation at our banding sites if possible. Ryan Bichon with input from MNO members and Wendy Easton from Canadian Wildlife Service had drawn up a management plan for our site, but we never got to implement it because of the flooding in 2002. This year we wanted to see what would happen as a result of the flood. The beaver had done some of his own management at netlane 4 and we did some minor pruning of the netlanes.

As our site falls into the upper edges of the floodplain of Williston Lake it is of special interest to people at BC Hydro as they are looking for species that may be able to tolerate flooding like we had in 2002. Perhaps some of these types of plants could be used in attempts to establish vegetation in other areas on the upper edges of the floodplain in sheltered parts of the reservoir. James Rowed from BC Hydro visited the site in the spring to check what had survived. The first time he came we visited different sites Mugaha, Gagnon, Causeway, etc . On the second trip on July 5/03 James was accompanied by Brent Wilson, a biologist, and two ladies from Ingenika. They collected samples of vegetation for identification. On Aug 17 when Kevin Fort from the Canadian Wildlife Service and his helper Carmen Holschuh came up we let James Rowed know and he came up to lend a hand with the vegetation sampling at our netlanes.

The analysis of the data that was collected has not been done to date. I will however attempt to list some of the more obvious impacts of the flood in 2002 on the vegetation in the marsh.

The willows that had been previously attacked by weavils seemed to die as did the one species of

willow that has larger, longer leaves and regrows rapidly when pruned. The smaller leafed willows seemed to tolerate the flooding. Most of the tall aspen went over and some that did not die are growing at an angle. The flooding plus a wilt that attacked the aspen caused some aspen trees that had been pruned backed to die, but in most cases these were not right at the netlanes. Most cottonwoods survived the flooding. In 2003 some of the cottonwoods and some large willows were attacked by weavils.

Most if not all the alder that had long periods of flooding died. Prior to the flood we had had a large amount of young alder coming in on some netlanes in addition to what had existed – all alder on netlanes 15, 16, 3, 4 and 11 died out. Most conifers that were flooded for the prolonged period of time died including most pines on 3, 4 and 11.

Pink Spirea - photo by John D. Lambie

The pink spirea (hardhack) on netlanes 11, 12 and along the path into netlane 3 survived. It wasn't totally covered with water, but it certainly had wet feet. It actually was healthier this year than it had been for a couple years. The large clump of twin berry on netlane 11 died out.

Plants like paintbrushes were absent this year in the area that was flooded in 2002 where as in previous years there had been lots of them in some parts, particularly near netlanes 13, 14, 15 & 16 and the open area between them. Blue joint, horsetail and beaked sedge were some of the most common plants that survived flooding. There was a bluegrass (probably fowl bluegrass) on some of the netlanes plus some had wild mint.

Pond smartweed had established near netlane 12 during high water and it continued to grow this year although it wasn't always in the water.

We took photos of the netlanes we were using this year and will try to do so in following years – we have a binder of photos showing the netlanes on different years and we have tried to document factors affecting vegetation.

There have been reports of the Mountain Pine Beetle getting into the forest south of the Mugaha Sensitive Area, and one block had to be logged in March because of it. Hopefully the beetle won't get into the Sensitive Area. Abitibi had proposed a cutblock that would have come very close to the station, but at our request the boundary of the block was moved back some – to date it has not been logged. Some aerial spraying was done on the area south of the marsh, but they did leave a good buffer by the marsh and avoided some of the better berry areas that are used by both people and birds in the fall.

Fall Banding

Netlanes

In June Kevin Fort from CWS came up to have a first hand look at the site to help us choose our netlanes for the fall season. David compiled a listing of what was captured (both numbers and species) and the number of hours each net was open from 1998 – 2002. Kevin suggested we stick with as many of our old netlanes as possible.

Kevin was agreeable to dropping 5 & 6 if the data David had compiled showed that we wouldn't miss any of the species we normally captured. Netlanes 15 and 16 under went the most significant change in vegetation as all the alder had died and Kevin suggested we not use them. Netlanes 13 and 14 were still too wet to use without a lot of boardwalks. Netlanes 3, 4, 9, 11, 12, and 17 were all useable when the boardwalks, which provided access to a couple of them, were repaired. In addition to these netlanes we chose 28, 19, 20, 21 and 26 from 2002. The 12th net was to be either 25 or 27.

On July 20th when we set up our nets our new bander asked that we use both 25 and 27 and drop netlane

Photo of netlane 11 taken in July during banding hours – our best net in 2003 (585 birds banded from net 11 for 2 birds per nethour.)

11. As 11 had always been one of our better netlanes and it was one that Kevin asked us to use I said no. She then asked that we use 13 netlanes. I couldn't authorize this and asked Kevin for advice. He said we could use 13 netlanes. In hind sight we made a bad choice as this only increased the workload for our new bander – we had what was probably the best nets from all years.

Personnel

Cindy Cartwright was our bander for the first part of the fall. Local volunteers ran the station four days when we were between banders and Tyler Flockhart was our bander for the last part of the season. Laird Law and Sandra Kinsey were long term volunteers early in the season and Jillian Johnston was our long term volunteer in September. Cindy Cartwright and Tyler Flockhart had paid positions. Long term volunteers Sandra Kinsey, Laird Law and Jillian Johnston received a perdiem for the time they spent at the station.

Our Local Volunteers are a dedicated group that works together to keep this station going. We encourage others to join and help our efforts. Words can not convey how grateful we are for the efforts they put in to help with this project. Volunteers at the banding station were Ryan Bichon, Josh Dunbar, Linnea Cross-Tallman, Martina Frey, Paulett Gillett, Robert Groseth, Jessica, Kelly, Sherry Joubert, Rod Knowland, Sean Knudson, David Lambie, John A. Lambie, John D. Lambie,Vi Lambie, Mike McCanty, Denise McGowan, Andrew Ellis, Dave Sherman, Karin Schmidt, Ulrike Sliworsky, Alf Tallman, Vida Tattrie, Betty-Jo Weaver, Rob Weaver, and Jeanne Wysoski. They put in an excess of 1200 volunteer hours at the station and besides numerous hours doing related work for the station.

We have no bander's summary for the first part of the year as we did not receive one when we released Cindy from her contract, but we did receive a summary from Tyler for the period he was our bander. We have endeavored to cover the highlights of the season and Tyler's report follows ours.

Banding

We banded birds for 53 days between July 20 and Sept 21. Some days were lost to rain, and some due to changes in station personnel. The daily census was done on 63 days during this period. Although census was often done right at opening so more of us would be able to help with the banding, we did record 109 species on census. Observation coverage was not as good this season. Early in the season with the high capture rate we were kept busy trying to avoid backlogs of birds in the lab, leaving less time for observing. The total species listed in our Estimated Totals (combination of birds banded, recaptured, censused and observed) was 131. We simply did not see the numbers of geese and ducks like we usually have. Soras were seldom heard this year. We saw American Pipits in the cutblocks this fall, but few were seen at the marsh or heard flying over. Also noticeably absent were the Lapland Longspurs which we normally hear flying over – only a couple sightings this fall. We heard some shorebirds, but most of us weren't confident in identifying them by their flight calls. We did record as many as we

could: the first Least Sandpipers (2) on July 31, good numbers of Greater Yellowlegs (8) and Lesser Yellowlegs (7) on August 1, a Pectoral Sandpiper on August 6, Semi-palmated Sandpipers (2) on August 9, Short-billed Dowitchers (2) and a Semi-palmated Plover on August 11. Solitary Sandpipers, Killdeer and Common Snipe were observed several times, but some of these may have been residents. A few of the other sightings of special interest include: A Pileated Woodpecker on July 20 and August 25; a Red-throated Loon on August 3 and August 6. The first sighting of a Great Blue Heron was on July 23 with several sightings during the rest of the season. While I was doing the census on the July 23 I had a male Oregon Junco put on quite a display. It scolded then fanned its tail and fluttered its wings as it ran down the trail in front of me. I assume it must have had a nest nearby – but as I was on census I couldn't stay put and watch as I would have liked to have done. A pair of Sandhill Cranes were often heard flying over or calling south of Mugaha. A Cooper's Hawk was observed and heard calling on August 19 and August 31. Tyler has covered the September observations in his report.

If we just look at numbers we had a pretty good season. We banded 3346 birds of 59 species , and recaptured 490 birds of 30 species of which 53 birds were returns from previous seasons during standard banding. Northern Waterthrushes were our number one species banded (411), Ruby-crowned Kinglets were second with 377 banded and Pine Siskins were a close 3rd with 373 banded, American Redstarts were 4th with 343 banded and Common Yellowthroats were 5th with 181 birds banded (see chart on following page). For a complete list of birds banded please refer to Appendix 1 (page 25).

During non-standard banding (our owling) we banded 86 owls of 2 species and recaptured one. See Tyler's report for more details

On seven days we banded over 100 birds – July 28 (116), July 30 (119), August 3 (101), August 7 (166), August 8 (160), August 14 (101) and August 15 (101). On 18 days we banded over 20 species of birds with the highest number of species banded being 28 on July 31 and August 14. August 7 and August 8 were true Pine Siskin days with large numbers hitting the close nets. We are so grateful to the CNC Forestry students who made numerous trips between the netlanes and banding lab – taking birds to the lab and bringing out more bird bags. They closed empty nets for us to save us time. The nets were furled oh so tightly – a beautiful job, but we had not yet shown them that when closing nets you furl the net into the top panel so it was a bit of a challenge to open them. Their instructor helped with the scribing enabling us to deal with the large volume of birds.

On July 21 we banded 7 Western Tanagers (this is a good number for our station) and recaptured a beautiful male from 1997, which had been banded as an AHY bird. That same day we recaptured another bird that had been banded as an AHY in 1997 – a Swainson's Thrush. We also banded 12 other Swainson's Thrushes, which was the highest number of them that we banded in any one day this season. The Western Tanager and Swainson's Thrush were banded one day apart in 1997 on July 28 and 29 and then recaptured on the same day 6 years later!

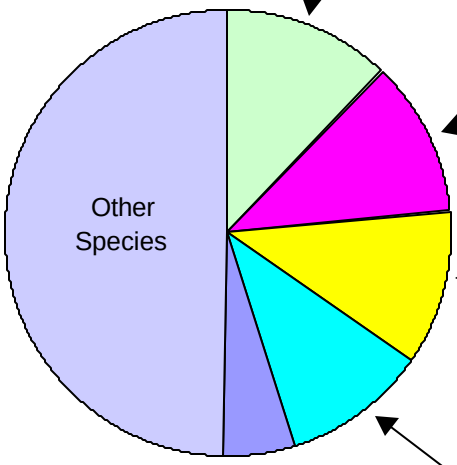
Several days stick out because we banded high numbers of one or more of our species. We banded more than 20 Northern Waterthrushes on 8 different days with the highest numbers on July 30 (25), July 29 (26), and July 24 (25). On July 28 we banded 18 Yellow Warblers and 19 American Redstarts. Other good days for American Redstarts were August 6 (19) and August 7 (23). There were good numbers of Alder Flycatchers banded on August 9 (17) and August 10 (20). A large percentage of our Pine Siskins were banded in just 4 days – August 7 (72), August 8 (120), August 10 (31) and August 14 (27). August 29 was a Common Yellowthroat day with 20 banded. September 3 was our highest day for Dark-eyed Juncos with 13 Oregon Juncos and 5 unidentified Dark-eyed Juncos banded. September 10 was the Yellow-rumped Warbler day with 17 banded. September 17th was our highest day for Golden-crowned Kinglets with 22 banded. We banded 20 plus Ruby-crowned Kinglets on 5 different days with the highest numbers banded on September 15 (48), September 20 (35) and September 10 (26). We did not band for 8 days in August so high days for some species may have been missed. A census was done on 7 of these days so we will have an indication of the movement of birds at the marsh.

Good numbers of Downy Woodpeckers (17) and Hairy Woodpeckers (9) were captured this season compared to only 1 Downy Woodpecker being captured in 2002 (and it was a return) and 2 Hairy Woodpeckers in 2002. A special treat, especially for Cindy, was the Three-toed Woodpecker that was banded on July 29th. It was the 1st Three-toed Woodpecker we had banded at Mugaha., the 2nd for Mackenzie – one had been banded at Gagnon in 1995. We know that the Downy and Hairy Woodpeckers were feeding on the larvae of the weavils that had attacked some of the cottonwoods

Top Five Species Banded at Mugaha During 2003 Fall Banding

1 Northern Waterthrush (411)

2 Ruby-crowned Kinglet (377)



3 Pine Siskin (373)

4 American Redstart (343)

5 Common Yellowthroat (181)

and willows near the netlanes.
The new combination of netlanes produced higher numbers of Varied Thrush , Ovenbirds and Brown

Varied Thrush- photo by John D. Lambie

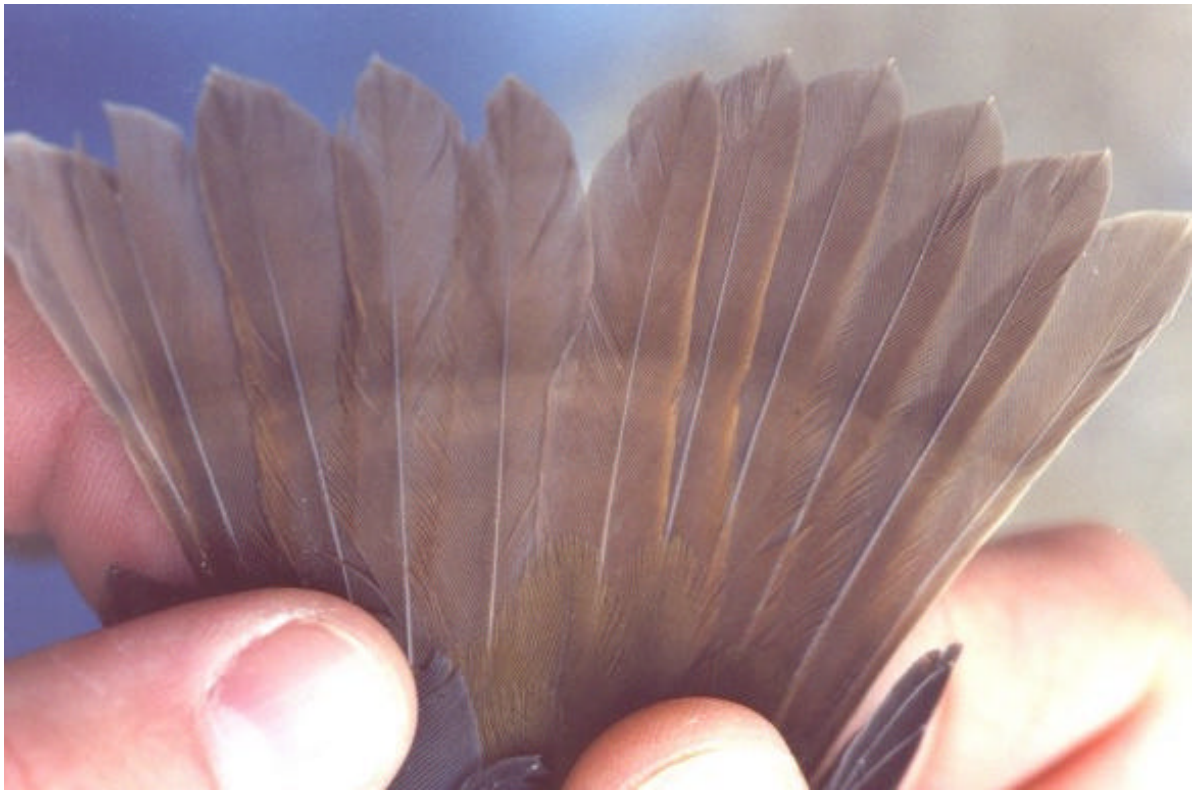
Creepers – the species we had been concerned that we may miss capturing if we didn't use netlanes 5 and 6.

This season we banded our first Eastern Kingbirds since 1998 and the 2nd Winter Wren to be banded at Mugaha was banded on August 15th.

September the 2nd sticks out not because of what we banded but because of what we observed. As I walked in to netlane 12 a young Great Horned Owl called and flew up from near the netlane and landed on a tree at the edge of the pond. As I reached the netlane I could see two more Great Horned Owls sitting near their kill. Tyler checked later in the morning and they had killed a Ring-necked Duck. The owls continued to return to the area throughout the morning to feed – what a treat to see them so close. Earlier in the fall Cindy said one of the owls must have dropped a mouse on top of her trailer in the middle of the night and she awoke to hear the owl hoping around the top of the trailer after the mouse.

Because of the additional net and the different combination of netlanes used it is difficult to compare one season to another. To give us a better understanding of what this migration season was like we have taken the number of birds captured , the nethours each net was open and the top ten species captured by each net since 1998 and put them in a chart (Appendix 2 – page 29). We actually have done up a chart for all species captured by each net since 1998, but that would be too bulky for this report. By comparing these results we will get a better idea , but there is that gap in August which would have impacted the numbers for some species. Looking just at the capture rate for the nethours we were open this year and comparing it to other seasons is also deceptive as the days we remained closed in August would normally be average to slower days and would have lowered our capture rate per net hour. Conditions at some of the netlanes probably impacted the numbers and species caught. In 2002 water was very close to many of our new netlanes (28, 21, 22,19, 20) whereas this year it was considerably drier near them. This may account for the lower numbers of Northern Waterthrushes and Common Yellowthroats captured in these nets. Netlanes 11, 3 & 4 caught higher numbers of these species and they were close to water. We will let the experts interpret the results of this season. We would like CWS to help us modify out protocol to clearly state, which 12 nets are to be used and which ones can be used if some are flooded.

<u>Plumage</u>
Hatch year Orange-crowned Warblers can have a bit of a wing bar – we sometimes see this on our birds early in the season.
Orange-crowned Warbler – photo by Martina Frey



Hermit Thrush's tail with a fault bar - photo by John D. Lambie

Once again this year we tried to get some photos that will help us with aging birds and to help individuals better understand the terminology used in banding. Here are a couple examples – A photo of a Hermit Thrush's tail with a fault bar and the wing of an after hatch year Audubon's Warbler that clearly shows the shape of the primary coverts.

After hatch year Audubon's Warbler's wing - photo by John D. Lambie

Swamp Sparrow - photo by John D. Lambie

Knowing the plumage of hatch year Swamp Sparrows always presents a problem for us as we do not see enough of them to be familiar with them. On August 29 Martina and Vi banded one after comparing it to the photos we took when Jukka was our bander. We captured another when Tyler arrived and above is one of the photos we took.

We captured a Tennessee Warbler with unusual plumage. It had a white spot on the back of its head and its outer two primaries were white.

Rusty Blackbird

Rusty Blackbirds are one species of birds that breed in the Boreal forest that have shown steady declines in recent years. We have a local nesting population - we actually saw two families feeding young when we set up the station for the NIVMA tour. Each spring and fall we see them during migration as well.

Returns

Each year we look forward to seeing birds that return from previous years. This year did not disappoint us with 53 birds of 14 species returning. These were
Dusky Flycatcher – 1 from 2001;
Alder Flycatcher – 1 from 1999, 2 from 2000 and 1 from 2002;
Warbling Vireo – 1 from 1998, 1 from 2002;
Red-eyed Vireo –1 from 2001, 1 from 2002;
Black-capped Chickadee 1 from 2001, 1 from 2002;

Rusty Blackbird - photo by John D. Lambie

Swainson's Thrush 1 from 1997, 1 from 2001 and 3 from 2002;

American Robin 1 from 2002;
Orange-crowned Warbler – 2 from 2000;
Yellow Warbler – 1 from 1998, 7 from 2002;
American Redstart –1 from 2000, 1 from 2001, 12 from 2002;
Northern Waterthrush – 1 from 2000, 5 from 2002,
Common Yellowthroat – 1 from 2002,
Western Tanager – 1 from 1997,
Song Sparrow – 1 from 2001, 1 from 2002;
Oregon Junco – 1 from 2001, 1 from 2002.
Details of when they were banded and recaptured and who the banders were are given in Appendix 3 (page 32).

On the down side

The Merlin family that nested in the forest above the banding lab obviously took its toll on some birds. We caught various birds with old wounds on their wings – we assumed these were from close calls with the Merlins. One Merlin was captured when it was coming in to attack a bird in the net. John was at the net at the time and this is probably what saved the bird in the net for the Merlin swerved when it saw John. To the best of our knowledge no birds were killed in the nets by the Merlins.

This season we captured an Alder Flycatcher with a sore on its one leg, just above the foot. It appeared to have hip chain in the swollen area. A Common Yellowthroat was captured with a broken tip on its lower mandible, but appeared healthy. A Yellow Warbler return had a growth on its foot and leg on the leg with the band on it – CC removed the band and put a new band on its other leg. The bird was recaptured later in the season and seemed to be doing okay.

We had 2 fatalities, which were probably due to sun and heat, 3 fatalities due to predation by a weasel, another fatality which was a starving hatchling that was caught in the net and one more fatality for which the cause is not clear. This was devastating for us as we strive for no fatalities. An awning was put up on the lab so birds wouldn't hang in the sun and sunny netlanes were checked more frequently on hot days. The lower panel on the nets were raised on most netlanes to keep the weasel away from them– this meant putting the top panel as high as the poles would allow and adjusting the ones below accordingly. It worked as we had no more problems. From the condition of the hatchling, its survival was not to be – perhaps its parents had been killed and it was not capable of fending for itself. One more banded bird was found dead several days after it was banded – we do not know its cause of death.

A Special Thanks

Mackenzie Nature Observatory would like to say thanks to all the people who came to our assistance when we requested help with various topics from aging Yellow Warblers, separating difficult species, to priorities of data collection, etc – David Hussell, Jukka Jantunen, Jul Wojnowski, Heidi Hann, Audrey Heagy, Kevin Fort and Paul Prior. A big thanks to those that helped us to find a bander for the last part of the season.

Mackenzie Nature Observatory would like to thank the local volunteers who ran the station on weekends between banders and who spent hours proofing, checking and entering data that had been missed during the first part of the season. Thanks to Charles Francis, Louise Laurin, Wendy Easton and Jul Wojnowski for helping with the questions that arose when we proofed the data.

Looking ahead

If we stick with this new combination of netlanes and they continue to capture such good numbers of birds we will need to have additional help for the station. We will need to have two banders (a bander and an assistant) so there will be the opportunity to train new volunteers. Training people takes time and when it is really busy this is not possible with just one bander. In addition we know that we must try to find someone who is very experienced. We have difficult species (flycatchers) and some that interbreed (flickers, sapsuckers, yellow-rumped warblers, etc) which adds to the confusion. Add to this the one trait about our station which can be difficult – many of the birds captured in any day can come in one or two rounds. Many local volunteers have full time jobs and are only able to assist on weekends. We want to maintain or increase local involvement so we need to be able to make it possible for new volunteers to help – to do this they must have adequate training so there is no risk to the birds.

It is important to collect moult data on birds at the more northern stations and having additional help would permit more of this to be done. Jul Wojnowski is using the moult data we collected and has given us a list of the species he would like us to collect more data on. We have had a request from David Hussell for moult data on Northern Waterthrushes as well.

2003 September Report
Prepared for Mackenzie Nature Observatory
D.T. Tyler Flockhart

September 22, 2003

Northern Saw-Whet Owl - photo by Martina Frey

<u>Mugaha</u>

The whisper pines can not express
What you mean to me
Where Kinglets chatter among themselves
And weary mothers stand attentive
It's the haunting cry on early pond
Dark waters holding dark secrets
Still I might not be convinced
What you mean to me
Is something more than land and water
It's the creation of a painted landscape
Of worried scars on trees
And birds hurried south
In a flash it might be gone
And I have spent my twenty-three
So birds prepare for next years spring
Squirrels drop cones to ground
What you mean to me
Is foretelling the changing seasons
And knowing that the love of nature
Here is in good hands

Summary of banding and monitoring (30 Aug – Sept 21)

Coverage at the Mugaha banding site was generally good between the periods of August 30 to September 21. Banding occurred on 20 of 23 possible days (87%) with 1436.75 net-hours (NH) of a possible 1794 NH (80.1%). During this period, we banded 797 birds during the standard banding (SB) period (Table 1, page 18), with 90 individuals and 24 species banded on September 3rd being the most productive day.

The number of species banded seemed to remain somewhat constant, while the number of birds banded generally varied from one day to the next (Figure 2, page 15). The number of individual birds recorded during monitoring hours seemed to hover around the 150 mark, while a couple of days were over 200 (Figure 1, page 15). Days with poor weather greatly affect the numbers and diversity of birds in the study site.

Interesting captures and the days they were banded (number of birds in brackets if greater than one) included: Gray-cheeked Thrush (Aug 30, Aug 31), Swamp Sparrow (Aug 30, Sept 2, Sept 10, Sept 20), Brown Creeper (Sept 16, Sept 19), Red-breasted Nuthatch (Aug 31, Sept 10), Purple Finch (Sept 2), Red-breasted Sapsucker (Sept 3), Cassin's Vireo (Sept 3, Sept 16), Varied Thrush (Sept 3, Sept 16 [2]), Ovenbird (Sept 8), Townsend's Warbler (Sept 9), Fox Sparrow (Sept 9), Rusty Blackbird (Sept 9), American Tree Sparrow (Sept 17, Sept 19, Sept 20), and Myrtle Warbler (Sept 19).

Sightings of interest during the time period include: Coopers Hawk (Aug 31), Mountain Chickadee (Sept 1), American Coots (Sept 1), three Great-horned Owls with Ring-necked Duck prey near net 12 (Sept 2), Northern Goshawk (Sept 3, Sept 5), Herring Gull (Sept 7), Short-billed Dowitchers (Sept 18), Lapland Longspur (Sept 19), Long-billed Dowitchers (Sept 19), Black-billed Magpie (Sept 21), and Three-toed Woodpecker (Sept 21).

Moult card

Moult cards were filled out as often as possible during banding activities. As banding in northern regions is limited, it is important to gather data and further our understanding on moult cycles, timing, and strategies of neotropical migrants in particular. This data is being collected and shared with the Lesser Slave Lake Bird Observatory (LSLBO) who is conducting a study on primary molt in neotropical migrants. The study is based on scoring feathers as

Gray-cheeked Thrush - photo by Martina Frey

they progress through the moult cycle to determine when moult is initiated, how long moult takes and to further the understanding of energetic requirements in birds. Difficulties arising in knowing how to score the developing feathers and precisely what to look for have been addressed to allow researchers to continue gathering moult data in future years. Data obtained appears in Table 2 (page 18), the most common species for which moult data was collected included American Redstarts (23) and Ruby-crowned Kinglets (11). As birds progress through moult, a scored feather allows a determination of how much that feather has grown. By recapturing birds and re-scoring them, we can determine over time how much of the moult has progressed, and this will give an indication of energy requirements and energy budgets in these birds. For an example of four birds for which we captured twice each (and thus have a change in the moult score), see Table 3, (page 19)

Northern Saw-whet Owls

Northern Saw-whet Owl banding can only be described as very successful. With only 3 nights of trapping, we had eclipsed the previous high of 29 banded in one season. Net lanes 5 and 6 were chosen as they supported good vegetation characteristics for Saw-whet banding: moderate height shrubs surrounded by mature mixed wood forest. Additionally, the net lanes were 90^{o} from each other, another favorable arrangement for banding owls. An extension cord was strung between the banding lab and the net arrangement (250ft), a ghetto blaster with CD player was obtained and a CD with a repeated territorial song was made to use as an audio lure.

Saw-whet monitoring began on the night of September 6^{th} and continued irregularly until September 20^{th}. Initially we planned to owl for 3 hours per night, however, due to the banding duties in the morning we sometimes could not maintain such a rigorous schedule. We did nonetheless band on 9 nights and captured 84 Northern Saw-whet Owls, a new season high for the MNO, as well as one recapture of an owl banded 7 nights before. Additionally, we captured 2 Boreal Owls (Sept 19, Sept 20), a new species for the MNO banding lab, (Table 4 , page 19). Our most productive night was Sept 19 when we captured 19 owls: 17 Saw-whets, 1 recaptured Saw-whet, and 1 Boreal Owl in 2.75 hours or 5.5 NH. Our most successful night as far as birds per net hour was also Sept 19 with 3.45 owls per net hour. Data from table 4 is used in some of the estimation of owl passage through the Mugaha study site (see below). Additionally, a number of volunteers were able to learn more about aging and sexing of Northern Saw-whet Owls and may prove to be invaluable if monitoring is to become a more regular activity at the lab.

The demographics of the owls that were captured were graphed in order to understand how many of which sex and age seem to be passing through the Mugaha banding site. While the majority of owls seem to be Hatch-year females (Figure 3, page 16), it also appears that the proportions of Hatch-year to After Hatch-year seem to be somewhat consistent between sexes and the unknown category (Figure 4, page 16). Generally a wing to mass ratio is used to determine sex of Northern Saw-whet Owls with some area of overlap and thus resulting unknown sexed birds (Figure 5, page 17).

While irregular banding of owls is fun, it also provides some idea as to the number of owls that may pass through the study site, and indeed may suggest that more regulated owl monitoring efforts should be initiated. Data gathered this season is used in the estimation, and while these numbers may be accurate this year, there is no way to guarantee that values will remain consistent from year to year. Likely the number of owls was so high due to the abundance of microtines available this fall. Estimation of passage is based on a number of factors and assumptions. We will assume that all owls passing through the area are captured and that birds captured per net hour will remain consistent throughout the season. Both these assumptions are false; however, it will provide a baseline to help determine that number of owls that may be passing through the site. Factors that influence the number of owls captured include: number of nights owling, duration of owling period, number of nets used (both active nets (AN) with the audio lure and passive nets (PN) without an audio lure nearby are used), weather, moon phase, and wind. The number of nights where owling takes place and the duration will be dependant on availability of volunteers and weather. Additionally, how late the banding season extends will also determine how much owling can occur, although it should be noted that owling into October will likely still be productive.

The estimation of the number of owls that may have passed through the study site for the period September 1^{st} to September 21^{st} is approximately 350 as stated as Estimate 1 in table 5, page 20. This chart can be used to calculate possible numbers of owls that could be banded under a variety of scenarios and some of these scenarios have been added to the chart. It should be noted that this is a rough estimate and may not be very accurate, particularly in future years.

Figure 1: Numbers of individuals and species sighted per day of banding operations

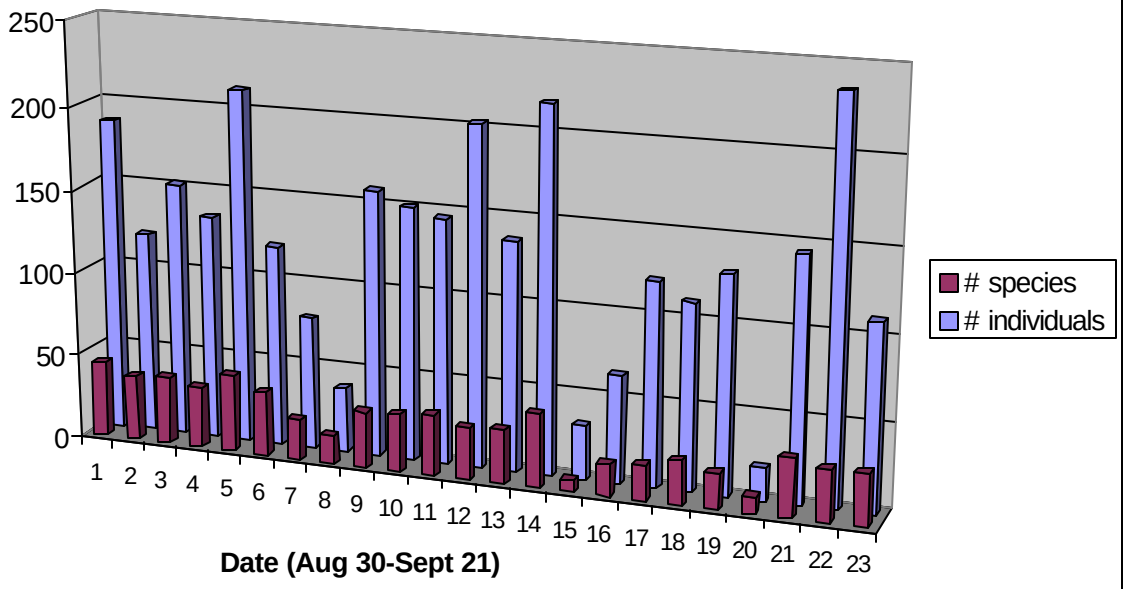
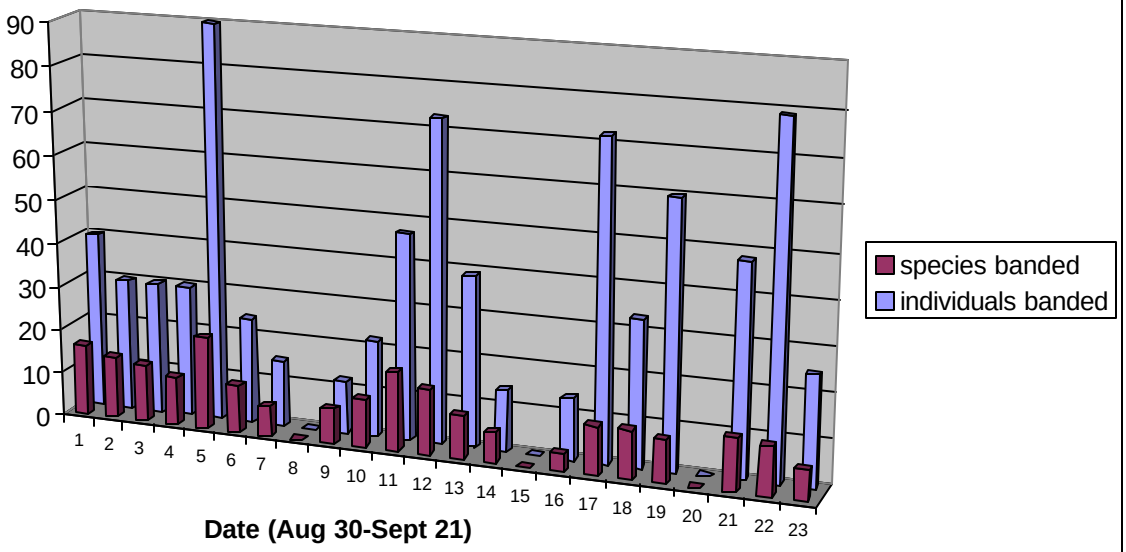
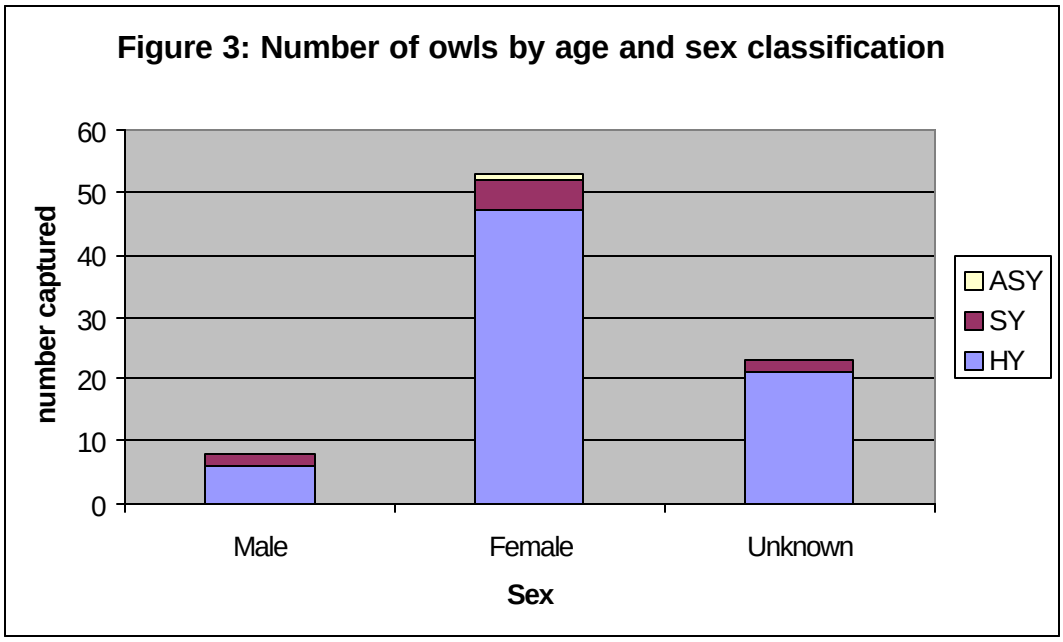


Figure 2: Number of species and individuals of birds banded per day during banding operations





Age Codes: HY= hatch year, SY= second year, ASY = after second year

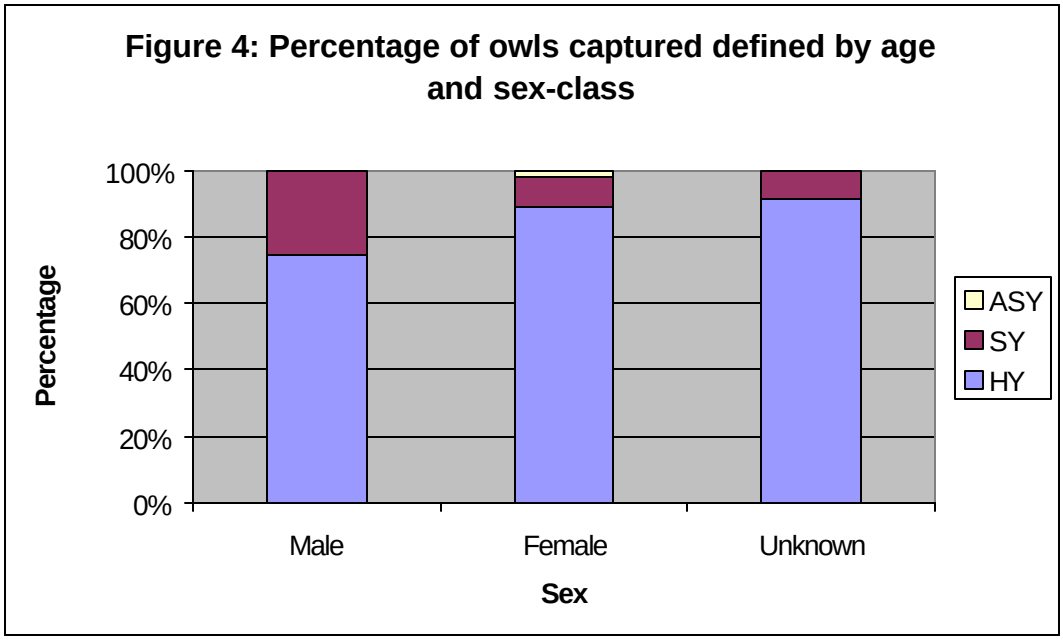


Figure 5: Wing and weight of known sexed individuals

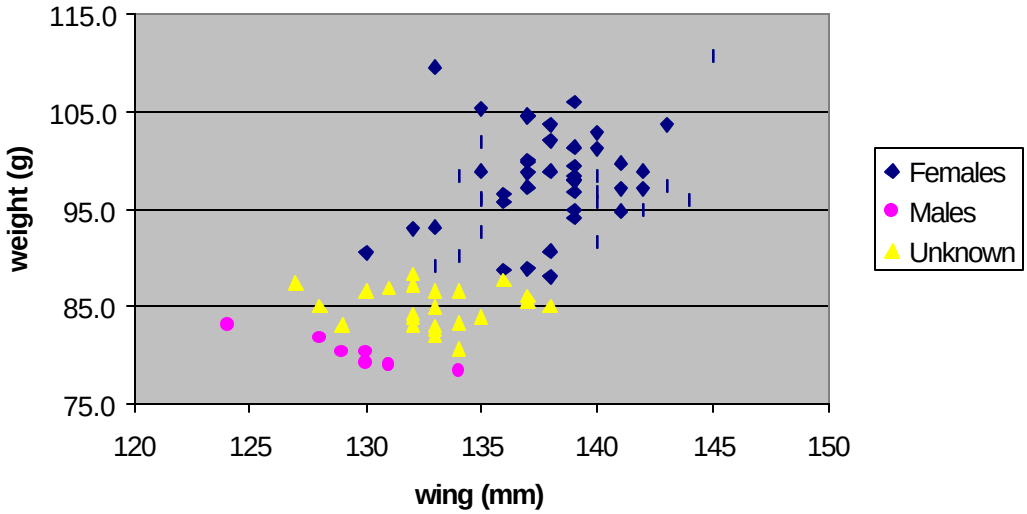


Table 1: Number of individuals and species sighted and banded at the Mugaha banding site

	Sightings		Banding	
Date	# Ind.	# Spp.	# Ind.	# Spp.
30-Aug	187	45	40	16
31-Aug	120	39	30	14
01-Sep	152	40	30	13
02-Sep	134	37	30	11
03-Sep	211	46	90	21
04-Sep	120	38	24	11
05-Sep	79	24	15	7
06-Sep	39	16	0	0
07-Sep	160	33	12	8
08-Sep	151	34	22	11
09-Sep	146	36	47	18
10-Sep	202	31	73	15
11-Sep	137	32	39	10
12-Sep	217	44	14	7
13-Sep	33	7	0	0
14-Sep	65	19	14	4
15-Sep	121	21	72	11
16-Sep	111	26	33	11
17-Sep	129	21	60	10
18-Sep	20	10	0	0
19-Sep	144	35	48	12
20-Sep	235	31	79	11
21-Sep	110	31	25	7
Total	**3023**		**797**	

Table 2: Number of completed moult cards	
Species	**# Ind.**
AMRE	23
AUWA	2
BLPW	3
COYE	4
DOWO	3
MAWA	1
NSWO	10
NOWA	6
OCWA	1
ORJU	1
PISI	1
RCKI	11
RUBL	1
SOSP	3
UYRW	3
WIWA	1
WTSP	1
YWAR	2
Total	**77**

Table 3: The moult scores and percentage of moult completion in four recaptured birds

Species	Band #	Date	S9	S8	S7	S6	S5	S4	S3	S2	S1	P1	P2	P3	P4	P5	P6	P7	P8	% complete
AMRE	2260-90668	4-Sep	5	5	5	0	1	2	4	4	5	5	5	5	5	5	5	5	4	82.222%
AMRE	2260-90668	8-Sep	5	5	5	2	2	3	4	5	5	5	5	5	5	5	5	4	4	86.667%
AMRE	2260-90902	4-Sep	2	3	2	0	0	0	0	0	2	5	5	5	5	3	2	1	0	38.889%
AMRE	2260-90902	9-Sep	5	5	3	0	0	0	0	1	3	5	5	5	5	5	3	2	1	53.333%
RCKI	2260-90976	10-Sep	5	5	5	2	3	4	5	5	5	5	5	5	5	5	5	5	4	90.526%
RCKI	2260-90976	16-Sep	5	5	5	3	4	5	5	5	5	5	5	5	5	5	5	5	5	94.737%
YWAR	2280-76566	3-Sep	5	5	5	1	1	2	3	4	5	5	5	5	5	5	5	4	4	80.000%
YWAR	2280-76566	8-Sep	5	5	5	3	3	4	4	4	5	5	5	5	5	5	5	5	4	90.000%

* a score of 5 means the feather has been fully replaced or new (N)

Table 4: Banding activities for Northern Saw-whet Owls including traps, times and number of owls captured

Date	Open	Close	Active Nets(AN)	Passive Nets(PN)	AN hours	PN hours	AN owls	PN owls	AN owls per NH	PN owls per NH	Total owls
06-Sep	20:45	0:10	5,6	9,25,26	6.833	10.250	10	1	1.463	0.098	11
07-Sep	20:33	0:03	5,6	9,25,26,27	7.000	14.000	6	4	0.857	0.286	10
08-Sep	20:30	22:40	5,6	9,25,26,27	4.333	8.666	8	4	1.846	0.462	12
09-Sep	20:25	22:20	5,6	9,25,26,27	3.666	6.333	2	0	0.546	0.000	2
11-Sep	20:45	22:05	5,6		2.666		3		1.125		3
12-Sep	20:40	23:40	5,6		6.000		16		2.667		16
17-Sep	21:00	23:00	5,6		4.000		8		2.000		8
19-Sep	20:30	23:15	5,6		5.500		19		3.455		19
20-Sep	20:15	22:30	5,6		4.500		6		1.333		6
AVERAGE					**4.944**		**8.667**	**1**	**1.699**	**0.211**	**87**

Table 5: Number of Northern Saw-whet owls estimated to pass though the Mugaha site during 3 weeks of September

	Dates	# nights	# hr/night	# AN	# PN	AN owls/NH	PN owls/NH	# owls AN	# owls PN	Total owls
Estimate 1	Sept 1-21	21	4	2	4	1.699	0.211	285.432	70.896	356.328
Estimate 2	Sept 1-21	15	4	2	4	1.699	0.211	203.88	50.64	254.52
Estimate 3	Sept 1-21	10	4	2	4	1.699	0.211	135.92	33.76	169.68
Estimate 4	Sept 1-21	21	4	2	4	1.000	0.100	168	33.6	201.6
Estimate 5	Sept 1-21	15	4	2	4	1.000	0.100	120	24	144
Estimate 6	Sept 1-21	10	4	2	4	1.000	0.100	80	16	96
Estimate 7	Sept 1-21	21	4	2	4	0.500	0.050	84	16.8	100.8
Estimate 8	Sept 1-21	15	4	2	4	0.500	0.050	60	12	72
Estimate 9	Sept 1-21	10	4	2	4	0.500	0.050	40	8	48
Estimate 10	Sept 1-21	21	3	2	4	1.699	0.211	214.074	53.172	267.246
Estimate 11	Sept 1-21	15	3	2	4	1.699	0.211	152.91	37.98	190.89
Estimate 12	Sept 1-21	10	3	2	4	1.699	0.211	101.94	25.32	127.26
Estimate 13	Sept 1-21	21	3	2	4	1.000	0.100	126	25.2	151.2
Estimate 14	Sept 1-21	15	3	2	4	1.000	0.100	90	18	108
Estimate 15	Sept 1-21	10	3	2	4	1.000	0.100	60	12	72
Estimate 16	Sept 1-21	21	3	2	4	0.500	0.050	63	12.6	75.6
Estimate 17	Sept 1-21	15	3	2	4	0.500	0.050	45	9	54
Estimate 18	Sept 1-21	10	3	2	4	0.500	0.050	30	6	36
Estimate 19	Sept 1-21	21	2	2	4	1.699	0.211	142.716	35.448	178.164
Estimate 20	Sept 1-21	15	2	2	4	1.699	0.211	101.94	25.32	127.26
Estimate 21	Sept 1-21	10	2	2	4	1.699	0.211	67.96	16.88	84.84
Estimate 22	Sept 1-21	21	2	2	4	1.000	0.100	84	16.8	100.8
Estimate 23	Sept 1-21	15	2	2	4	1.000	0.100	60	12	72
Estimate 24	Sept 1-21	10	2	2	4	1.000	0.100	40	8	48
Estimate 25	Sept 1-21	21	2	2	4	0.500	0.050	42	8.4	50.4
Estimate 26	Sept 1-21	15	2	2	4	0.500	0.050	30	6	36
Estimate 27	Sept 1-21	10	2	2	4	0.500	0.050	20	4	24
Estimate 28	Sept 1-21	21	2	2	0	1.699	0.211	142.716	0	142.716
Estimate 29	Sept 1-21	15	2	2	0	1.699	0.211	101.94	0	101.94
Estimate 30	Sept 1-21	10	2	2	0	1.699	0.211	67.96	0	67.96
Estimate 31	Sept 1-21	21	2	2	0	1.000	0.100	84	0	84
Estimate 32	Sept 1-21	15	2	2	0	1.000	0.100	60	0	60
Estimate 33	Sept 1-21	10	2	2	0	1.000	0.100	40	0	40
Estimate 34	Sept 1-21	21	2	2	0	0.500	0.050	42	0	42
Estimate 35	Sept 1-21	15	2	2	0	0.500	0.050	30	0	30
Estimate 36	Sept 1-21	10	2	2	0	0.500	0.050	20	0	20

Good-bye

This year we said good-bye to two of our volunteers who had been involved in the program since we started. Cheryl Omand moved to Penticton and Cheryl Freeman to Fort McMurray. We wish them all the best, but they will be greatly missed.

Christmas Bird Count 2002

by David Lambie & Cheryl Omand

Mackenzie's 10th annual Christmas Bird Count (1982, 1994-2002) was held on Dec. 15.

This year's Christmas Bird Count being very mild 35.6°F (2°C) with very little snow approx. 2 inches (5 cm) was quite a treat in one aspect, as we were able to walk easily in the bush where some years we can have several feet of snow. I think the weather had some impact on the numbers we ended up with. A total of 20 species and 837 individuals in the field compared to last year (2001) of 23 species and 1491 individuals.

The highlight of the count was the WESTERN MEADOWLARK, which hung around town from Dec. 15 – Apr 21. This is a first for the Mackenzie area and I believe Northern BC.

Western Meadowlark – photo by John A. Lambie

Altogether, volunteers spent 45 hrs. 15 min. doing the count - only walking or driving could be done as we did not have enough snow to use any other method of transport. Twenty-eight volunteers participated Ryan, Trish, Dana & Evan Bichon, Linnea Cross-Tallman, Dieter & Judy Dittrich, Gay Doroshuk, Cheryl Freemen, Martina Frey, Wendy Heater, Bob & Janet Groseth, David Lambie, John & Melanie Lambie, John & Vi Lambie, Cheryl Omand, Sharleen & Koren Pitkethly, Ulrike Sliworsky, Kirk Smith, Vida Tattrie & Rae Yeo, Jim & Cynthia Tuck, and Rob Weaver.

Despite the low numbers of birds, 837 individuals of 20 species were counted in the field and 157 individuals of 18 species were counted at the feeders. Six of the 18 species of feeder birds (Hairy Woodpecker, Slate-colored Junco, Red-winged Blackbird, Western Meadowlark, Purple Finch, and Pine Siskin) were different from the field birds bringing our total for the count day to 26 species and 994 individuals. Additional species, a Three-toed Woodpecker and bohemian Waxwings were seen within the Christmas Bird count week, which brings the overall total to 28 species. Even though the numbers were down from other years, which can be seen in Appendix 4 on page 35, the volunteers seemed to enjoy the event as they expressed later on that evening when we got together at Ulrike & Gerry Sliworsky - thank you for having us.

Bird Sightings

By Vi, Martina and David

Last year we had very little snow until well into December and people were able to get out more. Whether it was the weather or the access we did get more sightings last fall. We are still trying to establish early and late records for the birds on our checklist. Sightings of all species are important as they give us a better idea of abundance. Hopefully as we collect more data for all seasons we will be able to make a more detailed checklist. Below are a few sightings from the past year – many are listed simply because we don't see that species very often, others just for interest.

A **Blue Jay** was reported at 21 McIntyre, Mackenzie by Vida Tattrie on October 4, 2002.

A **Townsend's Solitaire** was at John and Mel Lambie's on 6 Carp Crescent in Mackenzie on October 11, 2002

The **hatch year Common Loon** was observed at Mugaha on November 7, 2002 by David Lambie, but was gone the next day.

Brown Creepers were observed in November and December, 2002 at several locations- at Gantahaz Lake, on Tony Mainline, in John Dahl Park, on Morfee Lake Rd, on Chichouyenily Creek mainline, and on Lost Lake Trail to name a few.

Golden-crowned Kinglets were observed on the Tony Mainline on November 30,2002 and December 6, 2002 by John & Vi Lambie and that same week Jim Tuck had heard them on Morfee Lake Rd.

A **Mountain Chickadee** paid regular visits to John & Vi Lambie's feeder throughout the winter

A **Chestnut-backed Chickadee** was observed feeding in regenerating forest (cutblocks were logged about 30 years ago) in the Gagnon on December 8, 2002 by John & Vi Lambie

A **Western Meadowlark** was observed December 15 to April 21 at John & Mel Lambie's feeder at 6 Carp Cres in Mackenzie. On May 24, 2003 Martina Frey and David Lambie saw a Western Meadowlark at approx. 10 km on the Causeway road.

An Eurasian Wigeon was observed by Martina Frey and David Lambie at the first bridge of Carp Lake Road on April 4, 2003

A **Townsend's Solitaire** was observed by John, Vi and David Lambie at Gantahaz subdivision on April 17, 2003.

A **Lapland Longspur** was observed in the field behind Terlesky's office on April 25, 2003

Two **Wood Ducks** were observed at the first bridge on Carp Lake Road on May 3, 2003 by Martina Frey.

Six **Red-breasted Mergansers** were observed on the Pack River on May 11, 2003 by Martina Frey.

A **Surf Scoter** was observed at Gantahaz Lake on May 16, 2003 by Martina Frey

An **American Golden Plover** and a **Pectoral Sandpiper** were seen at Gagnon Bay on May 17, 2003 by Martina Frey and David Lambie.

An **Evening Grosbeak courtship display** was observed by John & Vi Lambie on May 29 and May 31, 2003. The male Evening Grosbeak was displaying for the female. He fluttered his wings, stretched his neck up and tipped his tail upward showing the bright yellow under tail coverts. Some of the crown feathers were raised.

Black Terns were observed at Mugaha on June 14 by Martina Frey and David Lambie and on June 21, 2003 by Vi, John & David Lambie and Martina Frey. Three **Mountain Chickadees** were observed at Mugaha Marsh by Martina Frey on July 14, 2003.

A **Semipalmated Sandpiper** was observed at the Mackenzie Sewage Lagoons on July 20, 2003 by Martina Frey.

A **Say's Phoebe** was observed on Morfee Mountain on July 19, 2003 by Cindy Cartwright and John & Vi Lambie. Two more Say's Phoebes were seen at Schraider's Mill on Aug 12, 2003 by Martina Frey.

Three **Red-necked Phalaropes** were seen at the Sewage Lagoons by Martina Frey on August 15, 2003.

Two **Golden Eagles** were observed at Mugaha Point (Cutblocks south of Mugaha Marsh) by Martina Frey and David Lambie on August 23, 2003

Two **Western Grebes** were observed at Mugaha Point on October 12, 2003 by Martina Frey

A **Townsend's Solitaire** was observed feeding at Kennedy Siding by John, Vi & David Lambie on November 2, 2003

A **Short Eared Owl** was observed at Mugaha Marsh November 11, 2003 by John A. Lambie

This is just a sample of the sightings we are collecting – you can help by phoning us to let us know what special sightings you have (Vi or David at 997-6876 or Martina at 997-4916). If you have the time keep a daily list of what you see and you will be able to help us make a more detailed checklist.

Road & Window Kills – They can be used
For some years our club has had a salvage permit allowing us to possess dead birds – we accept dead birds that are in good condition and preferably fresh so the flies, etc have not got at them. We keep them in the freezer to use at training sessions. This year Ken Otter, Associate Professor (Biology), Ecosystem Science & Management Program, University of Northern British Columbia offered to show us how to mount specimens for freeze drying. Ryan Bichon, John, Vi & David Lambie spent March 8th at the university learning how to pin the specimens and Ken showed us how the specimens would be freeze dried. We would like to thank Ken for donating his time to help us with this and for freeze drying the specimens

for us! The specimens we did ranged in size from a tiny hummingbird to a Bohemian Waxwing.

We took two of the window kills – a ASY/male Purple Finch and a Common Redpoll to Brentwood Taxidermy to have them mounted for display purposes. Last year we had a Merlin and a Yellow-shafted Flicker mounted by Mr. Hayduck. Our thanks to**TD Friends of the Environment Foundation** for donating the funds to cover the cost of the taxidermy work.

Please if you find good specimens don't put them in the garbage – they can be put to good use – if we can't use them we give them to the university.

Banding in Mackenzie

– by Vi Lambie

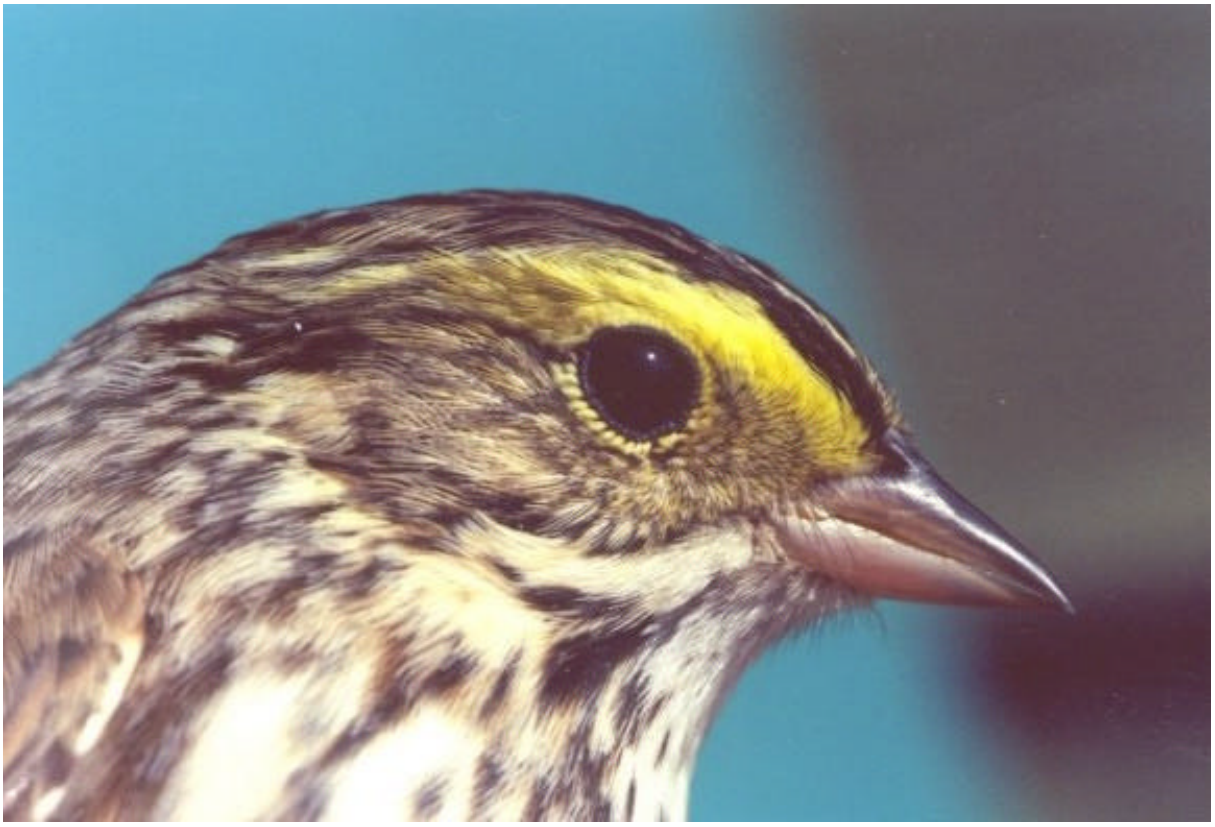
Spring Banding

This spring we banded birds in our backyard on 31 days between April 17 and May 27 using one small baited ground trap for short periods of time for a total of 91 hrs and 50 minutes. We banded 502 birds of 13 species. Similar to 2002 we banded 5.4 birds per hr that we had the trap open.

This spring we banded a few Common Redpolls and two of them had yellow in the crown along with the normal red. We took photos of the one and David took a video of the other. I do not know how common this is, but it is the first we had seen.

Our most common species banded was Gambel's White-crowned Sparrow (202), Purple Finches (135) and Common Redpoll (70). Pine Siskins were numerous, but I only banded 31 because of the shortage of size 0 bands. We banded several firsts for in town – American Tree Sparrow (2), Lincoln's Sparrow (1), Red-winged Blackbird (3), Brown – headed Cowbird (2), and House Sparrow (1). Other birds banded included 3 Savannah Sparrows, 32 Dark-eyed Juncos (25 Oregon, 5 Slate-colored and 2 Dark-eyed Juncos of which I wasn't sure of the subspecies), 19 Evening Grosbeaks, and 1 Steller's Jay. One of the Savannah Sparrows we banded had a real bright yellow supercilium, so much brighter than many of our local Savannah Sparrows.

In addition to the birds banded we recaptured 2 Oregon Juncos that were banded in 2001 and 3 Oregon Junco and 10 Purple Finches that had been banded in 2002. Three of the Purple Finch that had been banded on May 13, 2002 returned on May 14, 2003; two Purple Finches banded on May 11, 2002



Savannah Sparrow - photo by John D. Lambie

returned on May 23, 2003 and two Purple Finches banded on May 15, 2002 returned on May 23, 2003.

Fall Banding

Each fall we try to band a few of the Steller's Jay that are regular visitors at our feeders. This fall we banded 8 Steller's Jay and recaptured 5 we had banded previously, one from 2001 and four from 2002. John keeps telling me that we should apply to use colored bands so we could identify the birds without having to recapture them. We were away for the first half of October so we did not band as many as we could have. There are at least 8 unbanded birds that are coming to our feeder along with some that are banded.

Steller's Jay return from 2002 – photo by John Lambie

Nest Records by Vi Lambie

Each year a few of us try to document the nests and the adults we see with young. At Mugaha this year we found these nests: 2 American Redstart, 1 American Robin, 2+ Canada Geese nests (one nested on the artificial osprey nesting platform and another on the old osprey nest leaving the osprey to search elsewhere for a nest site), 1 Common Snipe, 1 Ruffed Grouse, 1 Killdeer, 1 Merlin, 1 Swainson's Thrush, 1 Lincoln's Sparrow, 1 Song Sparrow, 6 Yellow Warbler and most of the nestboxes at the marsh were used by Tree Swallows. We saw 2 families of Rusty Blackbirds just after they had fledged. The young were begging for food and being fed by the adults.

We found many more nests at other sites, but a few special ones come to mind: The Mountain Bluebirds that nested in one of our nestboxes near Pope & Talbot millsite raised two broods again this year. We don't know if it is the same pair, but the ones using this box regularly raise two broods. We found two Belted Kingfisher nests – one on the bank of Dina Lake and another in the Gagnon. The one at Dina was only a few feet from the nest site of a Northern Rough-winged Swallow. The nest in the Gagnon was along the road and with a flashlight we were able to see the young in the nest.

We saw a pair of Willow Ptarmigan with young. The adults really harassed John when he got too close. The male flew just above his head making its noisy call. If it was meant to distract us while the young got to cover it really worked.

Loon Surveys by Vi Lambie

For several years John and I have monitored Dina 1, Dina 3, Heather Lake, Mugaha Marsh and Gantahaz Lake for the presence of Common Loons and documented whether any young were raised. This year we only saw chicks at Heather Lake (a pair of loons with 2 chicks) and at Gantahaz Lake (a pair of loons with 2 chicks). The chicks were nearly full grown at both sites when we did our last survey. The one time we visited Dina 1 there were 10 adult loons, but we never saw any chicks.

Appendix 1

Birds Banded at Mugaha Marsh

Species	Standard Banding										Non-Standard Banding									
	1995 11 Aug. - 24 Sept	1996 5 Aug. - 28 Sept.	1997 26 July - 26 Sept.	1998 21 July - 20 Sept.	1999 19 July - 19 Sept.	2000 23 July - 24 Sept.	2001 22 July - 23 Sept.	2002 21 July - 22 Sept	* 2003 20 July - 21 Sept	Totals 1995-2003	1994 (sample) 25 - 26 Aug., 11 - 12 Sept.	(5 nets) 1998 16 May - 23 May	1995 11 Aug. - 24 Sept	1996 5 Aug. - 28 Sept.	1998 21 July - 20 Sept.	1999 19 July - 19 Sept.	2000 23 July - 24 Sept.	2001 22 July - 23 Sept.	2002 21 July - 22 Sept	2003 Jul 20 - 21 Sept
Northern Harrier		1								1										
Sharp-shinned Hawk		7	1	1	2	2	1	4		18		1								
Cooper's Hawk				1						1										
American Kestrel		1				1				2					5					
Merlin					1			1	1	3										
Sora			1							1										
Killdeer															1					
Solitary Sandpiper		1								1										
Spotted Sandpiper																				
Semipalmated Sandpiper																	2			
Western Sandpiper		1	1							2										
Least Sandpiper															1		5			
Common Snipe		5	3					4		12					6		2			
Boreal Owl																				2
Northern Saw-whet Owl													17	1	1	2	1		29	84
Belted Kingfisher												2								
Yellow-bellied Sapsucker		2	1	5	2			5	1	16										
Red-naped Sapsucker								1		1										
Red-breasted Sapsucker		1	2	1	2	1	1		4	12	1									
RBSA/RNSA (immature)	1									1										
Hybrid Sapsucker			3	6		1				10										
Downy Woodpecker		1	1	2	6	18	19		17	64								1		
Hairy Woodpecker		1		2	1	2	1	2	9	18										
Three-toed Woodpecker									1	1										
Flicker Intergrade			1	1	3	1			2	8										
Red-shafted Flicker		1		1	2	1	1		1	7										
Yellow-shafted Flicker			3	1	1				1	6					1					
Olive-sided Flycatcher			2							2										
Western Wood Pewee	1	2	13	9	2	2		2	1	32										
Yellow-bellied Flycatcher	1	4	7	4	3	5	4	3	6	37										
Alder Flycatcher	23	87	138	93	77	99	75	52	110	754	2	1					1	1		
Least Flycatcher	13	28	102	97	118	77	74	68	67	644	5	5			2		1	2		
Hammond's Flycatcher	13	25	57	41	51	67	74	64	69	461	3				2		11	1		

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Dusky Flycatcher	5	18	35	24	31	17	26	17	41	214	1	2			1	1	1			
Western Flycatcher		1	8	2	1			1	4	17										
Pacific-slope Flycatcher					2	1				3										
Say's Phoebe				1						1										
Eastern Kingbird		5		3					6	14										
Solitary Vireo	2	6	10	14			1	3		36					1					
Cassin's Vireo				4	5	1	5		5	20							1			
Blue-headed Vireo				1	4	1				6							1			
Warbling Vireo	13	51	61	76	77	49	25	35	33	420		2			2			1		
Philadelphia Vireo						1				1										
Red-eyed Vireo		3	7	5	3	5	8	11	8	50										
Gray Jay	2	2	4	1			2			11										
Steller's Jay					1					1										
Black-billed Magpie				1						1										
Tree Swallow			3	2		3				8		1					1			
Northern Rough-winged Swallow			1							1										
Bank Swallow			2	1						3							2			
Barn Swallow			9	4		2				15										
Black-capped Chickadee	17	18	16	92	20	101	33	22	64	383	6						9			
Chestnut-backed Chickadee				1						1										
Boreal Chickadee		2	2			6				10										
Red-breasted Nuthatch		8	9	12	20	7	19	9	6	90										
Brown Creeper	4		1	2	1	1	1	2	5	17										
Winter Wren								1	1	2										
Golden-crowned Kinglet	3	15	19	123	55	62	50	49	102	478	2									
Ruby-crowned Kinglet	263	317	201	406	187	216	298	433	377	2698	50				6		15	1	1	
Mountain Bluebird															1					
Townsend's Solitaire		1						1		2										
Grey-cheeked Thrush		1		2	1	4		3	2	13										
Swainson's Thrush	39	54	82	62	86	87	87	123	124	744	3	4			1		2	1		
Hermit Thrush	10	8	8	14	15	10	14	23	18	120	3				1		2			
American Robin	3	6	17	31	18	10	1	30	19	135		21					2			
Varied Thrush	1	4	1	2	3	1	2		12	26	1						1			

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American Pipit																	14			
Bohemian Waxwing					1					1										
Cedar Waxwing		6	19	3	9	3		4	4	48						1		2		
Tennessee Warbler	3	2	13	20	13	2	26	40	42	161					1		1	1		
Orange-crowned Warbler	67	88	73	149	111	121	105	175	68	957	9	5			1		11	1		
Yellow Warbler	17	110	156	144	92	64	75	127	151	936	1	6			1		2			
Magnolia Warbler	19	55	66	48	48	30	67	106	70	509	2	1					3			
Unknown Yellow-rumped Warbler	18	3	6	64	109	14	55	110	78	457					3		4			
Audubon's Warbler	42	29	32	51	53	20	28	33	30	318	12	13			3		1		1	
Myrtle Warbler	13	36	30	52	19	4	31	32	3	220	3	4			7		2	1		
Total Yellow-rumped Warblers	*73*	*68*	*68*	*167*	*181*	*38*	*114*	*175*	*111*	*995*	*15*	*17*			*13*		*7*	*1*	*1*	
Townsend's Warbler	17	3	13	14	12	20	42	11	5	137	5				1		2			
Blackpoll Warbler	7	16	21	35	16	22	37	46	30	230	2	1			5					
Black-and-White Warbler			1							1										
American Redstart	56	252	480	216	283	169	408	436	343	2643	4	6					10	29		
Ovenbird	7	2	3	4	4	6	6	3	13	48										
Northern Waterthrush	17	274	379	156	151	65	89	404	411	1946	1	13								
Morning Warbler							1			1										
MacGillivray's Warbler	1	20	27	31	31	17	27	33	31	218		1						1		
Common Yellowthroat	48	65	169	153	58	46	101	151	181	972	6	8					4			
Wilson's Warbler	58	78	88	107	58	168	89	86	90	822	5	28			1		18			
Western Tanager	4	6	11	26	10	6	1	12	29	105										
American Tree Sparrow	10	14	36	22	2	6	2	4	3	99										
Chipping Sparrow	2	11	7	16	18	49	19	10	15	147										
Clay-colored Sparrow		1	2	1						4										
Brewer's Sparrow			1	1	1					3										
Vesper Sparrow						1				1										
Savannah Sparrow	3	21	30	46	25	35	23	11	4	198	2	2			2		1			
Fox Sparrow	3	6	5	4	3	11	2	7	4	45	1									
Song Sparrow	18	13	25	17	16	28	28	17	54	216	2	3					4	2		
Lincoln's Sparrow	17	19	33	20	57	53	51	11	38	299	4	4					10			
Swamp Sparrow	3	2	3	11	2	5	3	2	5	36	2						1			
White-throated Sparrow	6	8	4	9	8	4	9	6	18	72							1			

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Birds Banded at Mugaha Marsh

	Standard Banding										Non-Standard Banding									
Species	1995 11 Aug. - 24 Sept	1996 5 Aug. - 28 Sept.	1997 26 July - 26 Sept.	1998 21 July - 20 Sept.	1999 19 July - 19 Sept.	2000 23 July - 24 Sept.	2001 22 July - 23 Sept.	2002 21 July - 22 Sept	* 2003 20 July - 21 Sept	Totals 1995-2003	1994 (sample) 25 - 26 Aug., 11 - 12 Sept.	(5 nets) 1998 16 May - 23 May	1995 11 Aug. - 24 Sept	1996 5 Aug. - 28 Sept.	1998 21 July - 20 Sept.	1999 19 July - 19 Sept.	2000 23 July - 24 Sept.	2001 22 July - 23 Sept.	2002 21 July - 22 Sept	2003 Jul 20 - 21 Sept
Harris's Sparrow		1								1										
White-crowned Sparrow	27	43	22			1			7	100	4									
Gambel's White-crowned Sparrow				31	31	56	59	52	10	239					3		8			
Golden-crowned Sparrow				2				1		3										
Unidentified Dark-eyed Junco	11	12	26	31	105	63	36	24	78	386	2									
Oregon Junco	71	82	79	57	69	70	43	75	33	579	4				8		1	2		
Slate-colored Junco	5	1	9	5	4	7				31	1									
Total Dark-eyed Junco	*87*	*95*	*114*	*93*	*178*	*140*	*79*	*99*	*111*	*996*	*7*				*8*		*1*	*2*		
Lapland Longspur			1			1				2										
Red-winged Blackbird						2			1	3		5			1					
Rusty Blackbird	3	1	5	8	4	1			2	24		1			1		2			
Common Grackle								1		1										
Brown-headed Cowbird			2	4	1	1	2	1	3	14		2					1			
Pine Grosbeak																				
Purple Finch		3	5	7	4	4	2		2	27		9								
White-winged Crossbill					8					8										
Common Redpoll																	1			
Pine Siskin	14	95	85	1305	295	210	54	2	373	2433	1	5			25			9		
Total Number of Individuals	1001	2066	2799	4021	2532	2247	2343	3002	3346	23357	150	156	17	1	95	4	162	56	31	86
Total Number of Species	44	64	67	68	61	63	51	56	59	93	29	27	2	2	28	3	38	17	3	2
Total Nethours *	1851.5	3368	3980	4461	4313	3991	4326	4598	3712										71.5	87.3
Birds/nethour	0.5406	0.6134	0.7033	0.9014	0.5871	0.5630	0.5416	0.6529	0.9014										0.4336	0.9851

* Aug 18-21 and Aug 25-28, 2003 we didn't band due to hiring new personel; had 13 nets all season

Appendix 2: 1998 - 2003 Net Capture Rate Totals plus Top 10 Species by Net

1998-2003 Total Net Capture																			
	1999	1999	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002
	Net 1	**Net 2**	**Net 3**						**Net 4**						**Net 5**				
Total Net Hours	23	23	374	362	337	362	147	284	374	362	337	362	73	285	374	351	336	361	365
Total Individuals:	***19***	***12***	***599***	***318***	***384***	***486***	***258***	***445***	***1389***	***521***	***406***	***328***	***18***	***333***	***59***	***26***	***44***	***26***	***17***
Total Individuals per Net Hour	0.835	0.527	1.602	0.878	1.14	1.341	1.761	1.569	3.716	1.439	1.206	0.905	0.248	1.167	0.158	0.074	0.131	0.072	0.047
Top Ten Captured Species by Net																			
Species	**Net 1**	**Net 2**	**Net 3**						**Net 4**						**Net 5**				
Pine Siskin	2		201	28	29	15		78	917	181	76	27		103	27				
Ruby-crowned Kinglet			57	22	51	90	70	67	65	31	35	48	11	10	1		7		
American Redstart	2	2	37	45	33	84	11	18	41	27	18	18		11	2		2	8	
Northern Waterthrush	2	2	24	15	8	11	3	78	39	29	16	9		40	2	1		2	3
Orange-crowned Warbler			24	17	34	17	30	10	19	13	15	20	1	6	1		1		
Common Yellowthroat			25	6	5	17	25	14	16	5	14	24	2	38					
Yellow-rumped Warblers			22	15	5	33	51		30	64	8	39	2		2	1			1
Yellow Warbler			22	10	6	10	4	14	25	16	15	8		11	1		1		
Wilson's Warbler			19	12	30	27	7	11	20	4	21	17		5	1		9	1	
Dark-eyed Juncos			16	21	23	11	8		28	21	40	9	1		2	4	1	4	1

1998-2003 Total Net Capture																
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2003
	Net 6					**Net 9**						**Net 11**				
Total Net Hours	374	351	336	361	365	374	362	337	362	366	288	374	365	337	363	289
Total Individuals:	***71***	***65***	***63***	***57***	***39***	***307***	***312***	***322***	***269***	***302***	***209***	***498***	***368***	***307***	***457***	***585***
Total Individuals per Net Hour	0.19	0.185	0.187	0.158	0.107	0.82	0.861	0.956	0.743	0.826	0.726	1.33	1.008	0.911	1.26	2.026
Top Ten Captured Species by Net																
Species	**Net 6**					**Net 9**						**Net 11**				
Pine Siskin	14			1		19	44	96	5	1	15	116	26	9	6	74
Ruby-crowned Kinglet		1	4			56	36	36	16	60	24	57	17	24	78	38
American Redstart	5	15	7	14	8	26	60	34	128	63	31	27	33	22	43	44
Northern Waterthrush	3	2	1	4	2	8	11	2	19	28	21	35	30	12	15	96
Orange-crowned Warbler	1		4			4	16	7	4	14	3	26	17	16	33	12
Common Yellowthroat					1	1	6	1		11	4	35	11	8	49	63
Yellow-rumped Warblers	1		4	1	1	3	9	5	5	12		15	21	3	14	
Yellow Warbler	2	1		1		12	2	5	7	5	15	30	26	15	22	43
Wilson's Warbler		3	4	1		12	7	33	3	8	2	14	6	29	23	23
Dark-eyed Juncos	5	7	2	5	1	7	14	5	5	9		10	32	15	16	

Appendix 2: 1998 - 2003 Net Capture Rate Totals plus Top 10 Species by Net

1998-2003 Total Net Capture

	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	1998	1999	2000	2001	1998	1999	2000	2001
	Net 12						**Net 13**				**Net 14**				**Net 15**			
Total Net Hours	368	346	329	361	36	282	371	364	329	358	370	364	329	358	369	363	329	359
Total Individuals:	***198***	***115***	***185***	***130***	***23***	***218***	***109***	***106***	***89***	***67***	***168***	***130***	***81***	***98***	***142***	***174***	***72***	***111***
Total Individuals per Net Hour	0.538	0.333	0.563	0.36	0.639	0.774	0.294	0.291	0.271	0.187	0.454	0.357	0.247	0.274	0.385	0.479	0.219	0.309

Top Ten Captured Species by Net

Species	**Net 12**						**Net 13**				**Net 14**				**Net 15**			
Pine Siskin	8					23	1	1				1				8		
Ruby-crowned Kinglet	15	5	9	9	1	14	26	12	12	5	23	8	9	10	20	15	7	9
American Redstart	6	1	6	9	1	13	8	10	5	8	12	15	10	20	7	24	4	15
Northern Waterthrush	6	7	4	9	4	40	3	9	6	4	8	11	3		8	12	6	2
Orange-crowned Warbler	9	5	6	3			7	7	3	1	13	7	7	6	8	6	7	4
Common Yellowthroat	39	17	9	3		16	8	1	4		7	3	2	2	3	3		2
Yellow-rumped Warblers	4	5					10	1		4	10	8		2	12	30	4	7
Yellow Warbler	13	4	6	13	5	12	5	10	5	2	3	6	3	3	7	4	1	1
Wilson's Warbler	11	8	23	2		4	5	3	2	2	1	4	1	4	6	1	4	1
Dark-eyed Juncos	2	5	18	5	1		4	9	3	1	2	16	1	3	7	15	4	10

1998-2003 Total Net Capture

	1998	1999	2000	2001	1998	1999	2000	2001	2003	2002	2003	2002	2003	2002	2003	2002	2002	2002
	Net 16				**Net 17**					**Net 19**		**Net 20**		**Net 21**		**Net 22**	**Net 23**	**Net 24**
Total Net Hours	370	363	329	359	369	361	329	360	288	366	284	366	286	366	286	60	364	364
Total Individuals:	***186***	***167***	***117***	***152***	***267***	***167***	***159***	***147***	***134***	***307***	***177***	***543***	***288***	***254***	***181***	***42***	***68***	***79***
Total Individuals per Net Hour	0.503	0.46	0.356	0.424	0.723	0.463	0.484	0.408	0.466	0.839	0.622	1.484	1.006	0.694	0.633	0.7	0.187	0.217

Top Ten Captured Species by Net

Species	**Net 16**				**Net 17**					**Net 19**		**Net 20**		**Net 21**		**Net 22**	**Net 23**	**Net 24**
Pine Siskin	2	3							6				3		3			
Ruby-crowned Kinglet	39	19	13	19	46	17	8	14	8	50	37	74	53	13	26	1	4	5
American Redstart	14	19	15	32	28	28	11	26	20	37	25	77	47	29	33	11	11	16
Northern Waterthrush	8	9	3	5	8	10	4	8	18	61	9	67	25	63	30	19	5	6
Orange-crowned Warbler	9	9	6	11	27	12	13	6	1	23	3	44	16	15	1		2	1
Common Yellowthroat	8	2			11	3	3	4		36	10	40	16	7	7		2	
Yellow-rumped Warblers	21	18	7	6	35	8	2	3		7		22		31			1	1
Yellow Warbler	8	8	2	3	15	4	4	4	3	17	11	37	19	28	11	4		
Wilson's Warbler	8	1	4	5	9	9	7	3	3	9	4	19	9	6	4		2	1
Dark-eyed Juncos	8	15	4	3	1	15	24	7		3		6		2			4	3

Appendix 2: 1998 - 2003 Net Capture Rate Totals plus Top 10 Species by Net

1998-2003 Total Net Capture

	2002	2003	2002	2003	2002	2003	2002	2003	1998 - 2003 Totals	
	Net 25		Net 26		Net 27		Net 28			
Total Net Hours	365	288	365	286	329	282	305	285	25450.7	**Net Hours**
Total Individuals:	***201***	***185***	***345***	***248***	***198***	***179***	***303***	***158***	17387	**Individuals**
Total Individuals per Net Hour	0.551	0.643	0.945	0.869	0.602	0.635	0.993	0.554	0.68	**Ind/Net/Hr**

Top Ten Captured Species by Net

Species	Net 25		Net 26		Net 27		Net 28		**Individuals**	**Code**
Pine Siskin		13		2	1	42		1	2228	PISI
Ruby-crowned Kinglet	30	28	44	37	48	24	22	10	1910	RCKI
American Redstart	28	20	80	37	14	14	48	30	1843	AMRE
Northern Waterthrush	12	10	14	10	10	10	107	24	1270	NOWA
Orange-crowned Warbler	8	2	15	6	15	3	7	5	724	OCWA
Common Yellowthroat	5	3	8	3	1	2	12	5	688	COYE
Yellow-rumped Warblers	12		9		15		10		672	YRWA
Yellow Warbler	5	2	5	2	9	3	8	5	649	YWAR
Wilson's Warbler	5	9	22	10	5	3	2	2	595	WIWA
Dark-eyed Juncos	16		14		24		6		584	DEJU

Appendix 3

Returns from Previous Years

(Bander's Initials are in brackets: AR- Amélie Rousseau, CC- Cindy Cartwright, DCB – David Bostock, DTF – Tyler Flockhart, DWL – David Lambie, JPJ – Jukka Jantunen, LCT – Linnea Cross Tallman, LL-Laird Law, MF – Marina Frey, PM – Patti Matsushita, SK –Sandra Kinsey, TH – Todd Heakes, VL –Vi Lambie, US – Ulrike Sliworsky)

From 1997:

Swainson's Thrush, band number 1461 20062, banded 29 July 1997 as AHY/U , recaptured 21 July 03 as an AHY/F (VL)

Western Tanager, band number 1461 20059, banded 28 July 97 as an AHY/M, recaptured on 21 July 03 (CC) and on 23 July 03 (CC)

From 1998:

Warbling Vireo, band number 2120 50185, banded as AHY/F 24 July 98 (PM), recaptured 24 July 03 (VL) and 26 July 03 (MF)

Yellow Warbler, band number 2120 50152, banded as AHY/F 23 July 98 (LL), recaptured 27 July 03 (CC), 7 August 03 (VL) and 12 August 03 (SK)

From 1999:

Alder Flycatcher, band number 2160 69211, banded as HY/U (DCB) and recaptured 10 August 03 (VL)

From 2000:

Alder Flycatcher, band number 2160 69887, banded 23 July 00 as AHY/U (AR), recaptured 10 August 03 (VL) and 11 August 03 (VL)

Alder Flycatcher, band number 2160 70033, banded 2 August 00 as AHY/F (JPJ), recaptured 2 August 03 (CC) – *in same net, on same date, 1 hour later in day.*

Orange-crowned Warbler, band number 2160 70024, banded 2 August 00 as AHY/F (SK), recaptured 7 September 03 (DTF)

Orange-crowned Warbler, band number 2160 70028, banded 2 August 00 as AHY/F (JPJ), recaptured 3 August 00 (SK) and 17 September 03 (DTF)

American Redstart, band number 2130 33976, banded 6 September 00 as AHY/M (AR) and recaptured 26 July 03 (VL)

Northern Waterthrush, band number 1651 13148, banded 23 July 00 as AHY/U (SK), recaptured 25 July 00 (SK), 2 August 00 (JPJ), 7 August 00 (LCT), 16 August 00 (AR), 22 August 01 (JPJ), 25 August 01 (JPJ) and 24 August 03 (VL)

From 2001:

Dusky Flycatcher, band number 2170 90143, banded 5 August 01 as AHY/U (JPJ) and recaptured 12 August 03 (CC)

Red-eyed Vireo, band number 1561 38746, banded 23 July 01 as a AHY/F (AR), recaptured 24 July 03 (VL)

Black-capped Chickadee, band number 2170 90427, banded 23 August 01 as a HY/U (JPJ), recaptured 8 September 01 (JPJ) and 20 September 01 (DTF)

Swainson's Thrush, band number 1591 95368, banded 22 July 01 as HY/U (MF), recaptured 27 July 03 (MF)

American Redstart, band number 2180 14120, banded 21 August 01 as AHY/M (VL), recaptured 1 August 03 (SK)

Song Sparrow, band number 1591 95409, banded 30 July 01 as HY/U (JPJ), recaptured 8 September 01 (JPJ), and 20 July 03 as AHY/M (CC)

Oregon Junco, band number 2170 90639, banded 4 September 01 as a HY/U (AR), recaptured 19 September 03 (DTF) Banded as Unidentified Dark-eyed Junco and identified to subspecies when recaptured

From 2002:

Alder Flycatcher, band number 2280 76533, banded 8 August 02 as AHY/U (AR), recaptured 26 July 03 (MF and 2 August 03 (LCT)

Warbling Vireo, band number 2280 76730, banded 24 August 02 as AHY/F (MF), recaptured 27 July 03 (VL)

Red-eyed Vireo, band number 2161 21096, banded 28 July 02 as AHY/U (JPJ), recaptured 10 August 03 (VL)

Black-capped Chickadee, band number 2220 15068, banded 2 September 02 as HY/U (VL), recaptured 16 September 03 (DTF)
Swainson's Thrush, band number 1591 95580, banded 22 July 02 as SY/U (JPJ) and recaptured 24 August 03 (VL)
Swainson's Thrush, band number 1591 95603, banded 25 July 02 as AHY/U (VL), recaptured 23 July 03 (VL) and 22 August 03 (VL)
Swainson's Thrush, band number 1591 95618, banded 28 July 02 as HY/U (JPJ), recaptured 6 August 03 (VL)
American Robin, band number 962 99511, banded 8 August 02 (JPJ) as an AHY/F, recaptured 21 July 03 (CC)
Yellow Warbler, band number 2170 90910, banded 21 July 02 as AHY/M (JPJ), recaptured 22 July 03 (VL) and 25 July 03 (MF)
Yellow Warbler, band number 2170 90913 replaced with band number 2220 15916, banded 21 July 02 as AHY/ F (AR), recaptured 29 July 02 (VL), 14 August 02 (DWL), 29 July 03 (CC) and 14 August 03 (LL)
Yellow Warbler, band number 2170 90945, banded 25 July 02 as AHY/F (JPJ), recaptured 27 July 03 (VL)
Yellow Warbler, band number 2280 76535, banded 8 August 02 as HY/U (AR), recaptured 7 August 03 as AHY/F (VL)
Yellow Warbler, band number 2280 76566, banded 10 August 02 as AHY/U (AR), recaptured 3 September 03 as AHY/M (DTF) and 8 September 03 (DTF)
Yellow Warbler, band number 2280 76750, banded 25 August 02 as AHY/M (JPJ), recaptured 3 August 03 (VL) and 15 August 03 (LL)
Yellow Warbler, band number2280 76840, banded 30 August 02 as AHY/M (AR), recaptured 20 July 03 (DWL) and 7 August 03 (VL)
American Redstart, band number 2180 14794, banded 21 July 02 as AHY/F (JPJ), recaptured 7 September 02 (JPJ) and 28 July 03 (CC)
American Redstart, band number 2180 14827, banded 22 July 02 as a SY/M (JPJ), recaptured 25 July 02 (AR) and 29 July 03 (CC)
American Redstart, band number 2180 14861, banded 24 July 02 as a AHY/F (JPJ), recaptured 29 July 02 (LCT), 1 August 02 (AR), 14 August 02 (VL), 18 August 02 (TH), 4 September 02 (DWL), 8 September 02 (VL), 13 September 02 (MF), 16 September 02 (AR) and 1 August 03 (CC)
American Redstart, band number 2180 14865, banded 25 July 02 as SY/M (JPJ), recaptured 2 August 02 (AR), 20 August 02 (AR) and 15 August 03 (VL)
American Redstart, band number2180 14866, banded 25 July 02 as AHY/F (JPJ), recaptured 20 July 03 (DWL)
American Redstart, band number 2180 14883, banded 25 July 02 as SY/M (JPJ), recaptured 13 August 02 (AR), 22 July 03 (VL) and 5 September 03 (DTF)
American Redstart, band number 2180 14900, banded 27 July 02 as AHY/F (JPJ), recaptured 18 August 02 (VL), 27 August 02 (JPJ), 4 September 02 (VL), 23 July 03 (VL), 7 August 03 (VL) and 13 August 03 (SK)
American Redstart, band number 2180 14968, banded 3 August 02 as a HY/U (JPJ) recaptured 12 August 02 (VL), 14 August 03 as AHY/F (LL) and 17 August 03 (DWL)
American Redstart, band number 2180 15195, banded 12 August 02 as AHY/F (JPJ), recaptured 20 August 02 (VL), 23 August 02 (AR), 2 September 02 (JPJ), 8 September 02 (VL), 10 September 02 (US) and 31 August 02 (DTF)
American Redstart, band number 2180 15253, banded 14 August 02 as SY/M (JPJ), recaptured 15 August 02 (VL), 16 August 02 (AR) and 28 July 03 (LL)
American Redstart, band number 2180 15488, banded 23 August 02 as AHY/M (MF), recaptured 21 July 03 (CC), 30 July 03 (CC) and3 August 03 (VL)
American Redstart, band number 2180 15601, banded as AHY/M 1 September 02 (DWL), recaptured 5 September 02 (VL) and 27 July 03 (CC)
Northern Waterthrush, band number 2161 21224, banded 11 August 02 as AHY/U, recaptured 21 July 03 as AHY/F (MF)
Northern Waterthrush, band number 2161 21254, banded 12 August 02 as AHY/U (JPJ), recaptured 12 August 03 (SK), and 15 August 03 (LL)
Northern Waterthrush, band number 2161 21273, banded 14 August 02 as AHY/U (JPJ), recaptured 5 August 03 (VL)
Northern Waterthrush, band number 2161 21366, banded 18 August 02 as HY/U (LCT) and recaptured 17 August 03

Northern Waterthrush, band number 2161 21403, banded 22 August 02 as AHY/U (AR), recaptured 25 July 03 (MF) and 7 August 03 (VL)
Common Yellowthroat, band number 2280 76889, banded 1 September 02 as a HY/M (JPJ), recaptured 22 July 03 (VL) and 16 September 03 (DTF)
Song Sparrow, band number 1591 95576, banded 21 July 02 as AHY/F (JPJ), recaptured 5 August 03 (VL)
Oregon Junco, band number 2220 15313, banded 11 September 02 (JPJ) as HY/M, recaptured 29 August 03 (VL) and 19 September 03 (DTF)